EUROPEAN COMMISSION
DG Competition

CASE M.7612 - HUTCHISON 3G UK / TELEFONICA UK

(Only the English text is authentic)

MERGER PROCEDURE
REGULATION (EC) 139/2004

Article 8(3) Regulation (EC) 139/2004
Date: 11/05/2016

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EUROPEAN
COMMISSION

Brussels, 11.5.2016
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Public Version

COMMISSION DECISION

of 11.5.2016

declaring a concentration to be incompatible with the internal market

(Case M.7612 - HUTCHISON 3G UK / TELEFONICA UK)

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings[1], and in particular Article 8(3) thereof,

Having regard to the Commission's decision of 30 October 2015 to initiate proceedings in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections raised by the Commission,

Having regard to the opinion of the Advisory Committee on Concentrations[2],

Having regard to the final report of the Hearing Officer in this case [3],

Whereas:

1. INTRODUCTION

(1) On 11 September 2015, the Commission received a notification of a proposed concentration pursuant to Article 4 of the Regulation (EC) No 139/2004 ("the Merger Regulation") by which the undertaking CK Hutchison Holdings Limited ("CKHH"), through its indirect subsidiary Hutchison 3G UK Investments Limited ("H3GI"[4]), acquires, within the meaning of Article 3(1)(b) of the Merger Regulation, control of the whole of the undertaking Telefónica Europe Plc, by way of purchase of its shares (the "Transaction").[5] Unless otherwise specified, the term "Notifying Party" is used in this Decision to refer to both H3GI, CKHH and the other subsidiaries of the latter. Telefónica Europe Plc, which opetares in the United Kingdom under the brand "O2",

[1] OJ L 24, 29.1.2004, p. 1. With effect from 1 December 2009, the Treaty on the Functioning of the European Union (the "TFEU") has introduced certain changes, such as the replacement of "Community" by "Union" and "common market" by "internal market". The terminology of the TFEU will be used throughout this Decision.

[2] OJ C ...,...200. , p....

[3] OJ C ...,...200. , p....

[4] On 9 March 2016, H3GI changed the name of its legal entity to CK Telecoms UK Investments Limited ("CTUI"), which is therefore the addressee of this Decision.

[5] OJ C 310, 19.09.2015, page 5.

is referred to as "O2", and the Notifying Party and O2 are referred to collectively as the "Parties".

(2) After a preliminary examination of the notification and based on the phase I market investigation, the Commission concluded that the Transaction raised serious doubts as to its compatibility with the internal market as regards the market for retail mobile telecommunications services and the market for wholesale access and call origination services in the United Kingdom, and adopted a decision to initiate proceedings pursuant to Article 6(1)(c) of the Merger Regulation on 30 October 2015 ("the Article 6(1)(c) Decision"). On the following working day the Commission shared key documents with the Notifying Party.

(3) On 5 November 2015, the phase II investigation period was extended by 20 working days at the request of the Notifying Party pursuant to the second subparagraph, first sentence, of Article 10(3) of the Merger Regulation.

(4) The Notifying Party submitted its reply to the Article 6(1)(c) Decision on 22 November 2015 (the "Reply to the Article 6(1)(c) Decision"), and a state of play meeting between the Notifying Party and the Commission took place on 24 November 2015.

(5) On 10 December 2015, the Commission adopted a decision pursuant to Article 11(3) of the Merger Regulation, following O2's failure to provide complete information in response to an information request from the Commission (the "Article 11(3) Decision"). The Article 11(3) Decision suspended the time limits referred to in the first subparagraph of Article 10(3) of Regulation (EC) 139/2004. O2 responded to the information request on 15 December 2015 and the suspension expired at the end of that day.

(6) A state of play meeting between the Notifying Party and the Commission took place on 26 January 2016. At that meeting, the Notifying Party was informed about the results of the phase II market investigation undertaken by the Commission.

(7) Based on the phase II investigation which supplemented the findings of the phase I market investigation, the Commission issued a Statement of Objections on 4 February 2016 (the "Statement of Objections"). In the Statement of Objections, the Commission came to the preliminary view that the Transaction would significantly impede effective competition in a substantial part of the internal market within the meaning of Article 2 of the Merger Regulation.

(8) The first access to file was granted on the day of adoption of the Statement of Objections. Subsequent access to the file was provided on 18 February, 29 February, 11 March, 23 March, 7 April, 15 April, 25 April and 26 April 2016. Access to confidential data and information relied upon by the Commission in the Statement of Objections was granted to the Notifying Party's economic advisors in accordance with the data room procedure.[6]

[6] Business secrets and other confidential information of third parties within the meaning of Article 339 TFEU, Article 18(3) of the Merger Regulation and Article 17(3) of the Commission Implementing Regulation (EU) No 1269/2013 of 5 December 2013 amending Regulation (EC) No 802/2004 implementing Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (the "Implementing Regulation", OJ L 336, 14.12.2013, page 1-36) can exceptionally be made available to the addressee of a Statement of Objections within the framework of the data room procedure and under the strict conditions set out in data room rules. The data room procedures are set in

(9) The Notifying Party submitted its written comments on the Statement of Objections on 26 February 2016 (the "Reply to the Statement of Objections").

(10) On 2 March 2016, the Notifying Party submitted commitments pursuant to Article 8(2) of the Merger Regulation in order to address the competition concerns identified by the Commission in the Statement of Objections. The submission of the commitments on 2 March 2016 triggered the automatic extension of the time limit for adopting a final decision by 15 working days pursuant to the first subparagraph, last sentence, of Article 10(3) of the Merger Regulation.

(11) At the request of the Notifying Party, an oral hearing was held on 7 March 2016. Twelve third parties were allowed to be heard as interested third persons in the proceedings for the purposes of Article 18(4), second sentence, of the Merger Regulation and ten of them also participated in the oral hearing.

(12) A State of Play meeting between the Commission and the Parties took place on 10 March 2016.

(13) On 15 March 2016, the Notifying Party submitted a second set of commitments pursuant to Article 8(2) of the Merger Regulation.

(14) On 17 March 2016 and on 23 March 2016 the Commission addressed to the Parties letters where it pointed out additional evidence in the Commission's file in support of the preliminary findings of the Statement of Objections (the "Letter of Facts of 17 March 2016" and the "Letter of Facts of 23 March 2016" respectively). Access to confidential data and information relied upon by the Commission in the Letter of Facts of 17 March 2016 was granted to the Notifying Party's economic advisors in accordance with the data room procedure. Moreover, access to confidential third party submissions and accompanying documents relied upon by the Commission in the Letter of Facts of 17 March 2016 was granted to the Notifying Party's legal advisors in accordance with the data room procedure.[7]

(15) On 29 March 2016 the Notifying Party submitted written comments on the Letter of Facts of 17 March 2016 (the "Reply to the Letter of Facts of 17 March 2016").

(16) A State of Play meeting between the Commission and the Parties took place on 31 March 2016.

(17) On 4 April 2016 the Notifying Party submitted written comments on the Letter of Facts of 23 March 2016 (the "Reply to the Letter of Facts of 23 March 2016").

(18) On 6 April 2016, the Notifying Party submitted a third set of commitments pursuant to Article 8(2) of the Merger Regulation.

(19) The Advisory Committee discussed the draft of this Decision on 27 April 2016 and issued a favourable opinion.[8]

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the Best practices on the disclosure of information in data rooms, 2 June 2015, available at http://ec.europa.eu/competition/mergers/legislation/legislation html#best_practices

[7] Each reference to these confidential third party submissions and accompanying documents in this Decision has been given a confidential ID number [CONF-ID]. A list of correspondence between the CONF-IDs and the document ID number in the Commission's file is provided in Confidential Annex F to this Decision, to which the Notifying Party's legal advisor will be able to have access in accordance with the data room procedure.

[8] At the Advisory Committee all present Member States agreed that that the Transaction must be declared incompatible with the internal market in accordance with Articles 2(2) and 8(3) of the Merger Regulation.

(20) In this Decision, the Commission raises objections as regards the effects of the Transaction with respect to the provision of retail mobile telecommunications services and wholesale services for access and call origination on public mobile telephone networks. Therefore, after providing an overview of the mobile telecommunications sector in the United Kingdom in Section 6, in Section 7 the Commission defines the relevant markets with respect to those services and, in Section 8.1 to 8.3, it sets out its assessment as to why the Transaction is likely to significantly impede effective competition in each of the relevant markets. In Section 8.4, the Commission analyses the efficiencies submitted by the Notifying Party and evaluates the potential countervailing benefit to consumers. On the basis of the assessment contained in Section 8.1 to 8.4, in Section 8.5, the Commission sets out its conclusions that the Transaction is likely to lead to a significant impediment of effective competition. In Section 9 the Commission sets out its assessment of the commitments presented by the Notifying Party. Last, in Section 10, the Commission sets out its conclusions.

2. THE PARTIES AND THE CONCENTRATION

2.1. The Parties

(21) H3GI is an indirect wholly owned subsidiary of CKHH. CKHH is a multinational group headquartered in Hong Kong and listed on the Hong Kong Stock Exchange Limited. CKHH has five core businesses: ports and related services, retail, infrastructure, energy, and telecommunications.

(22) CKHH's indirect wholly owned subsidiary, Hutchison 3G UK Limited ("Three") is a Mobile Network Operator ("MNO") in the United Kingdom. Three offers mobile telecommunications services such as voice, SMS, MMS, mobile internet, mobile broadband, roaming and call termination services.

(23) O2 is also active in the United Kingdom and offers mobile telecommunications services such as voice, SMS, MMS, mobile internet, mobile broadband, roaming and call termination services. O2 belongs to Telefónica S.A. ("Telefónica"), a holding company of a group of companies that operate fixed and mobile communication networks.

2.2. The Concentration

(24) On 24 March 2015, H3GI, Hutchison 3G UK Holdings (CI) Limited (a parent company under the sole control of CKHH), and Telefónica SA entered into a Sale and Purchase Agreement under which H3GI acquires all of O2's shares for a consideration of GBP 9.25 billion.

(25) During the course of the proceedings the Notifying Party presented two alternative Transaction structures which are in turn assessed in the following.

2.2.1. Notified transaction structure

(26) On the basis of the Transaction documents executed on 24 March 2015, post-Transaction, H3GI would acquire all of the shares of O2 and CKHH, via H3GI, and would exercise sole control over O2. At the same time, the ownership and control structure over Three would not change and therefore both Three and O2 would ultimately be solely controlled by CKHH.

2.2.2. Alternative transaction structure

(27) On 11 January 2015 the Notifying Party submitted a letter of intent showing […].

(28) […].

(29) […][9] […].

(30) […].

(31) […].

2.2.3. Conclusion

(32) Therefore, regardless of the structure under which the Transaction would be implemented, the Transaction consists of an acquisition of sole control by H3GI (and ultimately by CKHH) over O2 and accordingly constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

3. EU DIMENSION

(33) In the financial year preceding the notification (2014) the undertakings concerned had a combined aggregate world-wide turnover of more than EUR 5 000 million. The calculation is based on the turnover figures of Cheung Kong Holdings Limited ("CKH") and Hutchison Whampoa Limited ("HWL"), two companies that are currently wholly owned by CKHH, as well as those of O2 (CKH: EUR 3 880 million, HWL: EUR 32 831 million, O2: EUR [5000-10000] million[10]). Each of these companies had an EU-wide turnover in excess of EUR 250 million in 2014 (CKH: EUR [500-1000] million, HWL: EUR [10000-20000] million, O2: EUR [500-1000] million), but they do not achieve more than two-thirds of their aggregate EU-wide turnover within one and the same Member State.

(34) The Transaction therefore has an EU dimension within the meaning of Article 1 of the Merger Regulation[11].

4. REFERRAL REQUEST

(35) On 2 October 2015, the United Kingdom, via the Competition and Markets Authority ("CMA"), the national competition authority of the United Kingdom, requested, on the basis of Article 9(2)(a) of the Merger Regulation, the full referral of the Transaction from the Commission to the CMA (the "Referral Request").

(36) In the Referral Request, the United Kingdom considers that the Transaction threatens to significantly affect competition in the market for (i) the provision of mobile

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9 […].

10 Turnover calculated in accordance with Article 5 of the Merger Regulation.

11 Prior to 3 June 2015, CKHH indirectly owned only 49.97 % of HWL. On 3 June 2015, CKHH and HWL completed a reorganisation as a result of which CKHH acquired indirectly the 50.03 % of the shares of HWL it did not own. HWL's shares were then delisted from the Hong Kong Stock Exchange and parts of its business were spun off to a separately listed company. An alternative basis to calculate the EU dimension is therefore the pro forma figures of CKHH for the year 2014, that is to say as if the reorganisation had taken place on 1 January 2014. The Notifying Party has also provided these figures for CKHH (EUR [30000-40000] million worldwide, EUR [10000-20000] million EU-wide). The Commission has jurisdiction on the basis of Article 1 and Article 3(1)(b) of the Merger Regulation under both sets of figures.

telecommunications services to end customers; (ii) wholesale access and call origination on public mobile networks and (iii) the wholesale market for international roaming. According to the United Kingdom, all these markets present all the characteristics of distinct markets in accordance with Article 9(2)(a). Moreover, the United Kingdom considers that the CMA is the most appropriate authority to deal with the Transaction, in particular as it was in the process of reviewing the acquisition of Everything Everywhere ("EE") by British Telecommunications ("BT").[12]

(37) As the Commission decided to initiate proceedings, by way of the Article 6(1)(c) Decision, there was no need for it to decide on the Referral Request in phase I of its investigation.

(38) On 5 November 2015, the United Kingdom, via the CMA, submitted a reminder of the Referral Request under Article 9(2)(a), pursuant to Article 9(5) of the Merger Regulation.

(39) By letter dated 16 November 2015, the Commission informed the United Kingdom of its intention to reject the Referral Request. By letter dated 20 November 2015, the United Kingdom stated that it disagreed with the Commission's view that there are no grounds for a referral of the case.

(40) On 4 December 2015, the Commission adopted a decision rejecting the United Kingdom's Referral Request. The Commission considers that the criteria for a referral provided for in Article 9(2)(a) of the Merger Regulation are fulfilled with regard to the Transaction. However, in exercising its discretion, the Commission does not consider it appropriate to refer the Transaction to the CMA for a number of reasons, including the need for the Commission to ensure a coherent and consistent approach when assessing mergers in the telecom sector in different Member States falling into the Commission's competence, and its own significant previous expertise in assessing concentrations in the European mobile telecommunications markets.

5. THE INVESTIGATION

(41) Prior to the notification of the Transaction the Commission had sent requests for information to the Parties and their largest competitors in the United Kingdom, as well as requests for internal documents to the Parties. In response to the Commission’s requests, the Parties and third parties submitted extensive information on (i) their tariff sales and tariff characteristics, (ii) their revenue, cost and usage figures per segment (e.g. prepaid private), (iii) their estimates on the incremental costs[13], (iv) their mobile number portability data.

(42) Moreover, following notification of the Transaction, during the phase I investigation the Commission sent over 250 requests for information ("RFIs") to the Parties, third party MNOs, non-MNOs, customers and suppliers as well as requests for internal documents to the Parties.[14] After day 20 of the phase I investigation the Parties also

[12] On 28 October 2018, the CMA published its non-confidential provisional findings report (the "Provisional Findings Report"). The full text of the Provisional Findings Report is available https://assets.digital.cabinet-office.gov.uk/media/56339544ed915d566a00000f/BT-EE_-_Provisional_findings_report.pdf [ID2206 and 2207].

[13] The costs that could be avoided following a permanent decrease in subscriber base.

[14] RFIs 32 addressed to the Notifying Party and RFI 33 addressed to Telefónica and O2. Internal documents submitted by the Parties in response to these internal documents requests, as well as to RFI

submitted over 300 000 internal documents that the Commission reviewed during its investigation.

(43) In addition, during the phase II investigation, the Commission sent over 260 RFIs to the Parties, third party MNOs and non-MNOs, as well as to retail distributors and independent infrastructure providers, including a request for bidding data in the wholesale market.

(44) Further, during its investigation, the Commission received several submissions from, and held several meetings with, the Parties and third parties. The Commission also cooperated very closely with the CMA and with Ofcom, the communications regulatory authority in the United Kingdom.

(45) Finally, during the phase II investigation, the Commission also performed via an external survey company, a customer survey (the "Survey") interviewing 1,200 private retail customers. This consisted of a telephone survey aimed at eliciting switching patterns between each of Three, O2 and Tesco Mobile and the other mobile operators.[15] In the Reply to the Statement of Objections the Notifying Party claims that the Survey used by the Commission suffers from serious design flaws that render its results unreliable and unusable. The Commission rejects this claim and considers the Survey a valuable tool to assess customer switching patterns. More details on the Notifying Party's claims on the flaws of the Survey and the Commission's assessment of those claims are contained in Annex A, which forms an integral part of this Decision.

6. THE UNITED KINGDOM MOBILE TELECOMMUNICATIONS SECTOR

(46) In this Section, the Commission provides an overview of the mobile telecommunications sector in the United Kingdom. In particular, it discusses the level of development of the telecommunications sector in the United Kingdom, the level of 4G roll-out, the evolution of data traffic, the role of convergence, parameters of competition, the main players in the market and expected new entrants, as well as the mobile telecommunications infrastructure, and distribution of mobile subscriptions. The purpose of this Section is to set the framework and provide the context of the competitive dynamics discussed in the Decision.

6.1. Key metrics

(47) Ofcom is the communications regulator in the United Kingdom. It publishes key data reports on the United Kingdom telecoms market annually.[16] The latest report is dated 6 August 2015 and it covers the previous reporting year (2014)[17]. Ofcom also publishes quarterly updates on key developments in the telecommunications sector.

(48) On the basis of data published by Ofcom and other data, the Commission notes that the United Kingdom has traditionally had a well-developed telecommunications

46 to Telefónica and O2, and quoted in this Decision are identified through this Decision with an ID number which corresponds to the bates start number provided by the Parties themselves in their responses, where available (that is to say with the exception of the documents submitted by the Notifying Party to points 4 (a) to (d) and 5 of RFI 32, for which no bates start number was provided).

15 The questionnaire and the methodology used in the Survey are contained, respectively, in Annexes D and E to this Decision.

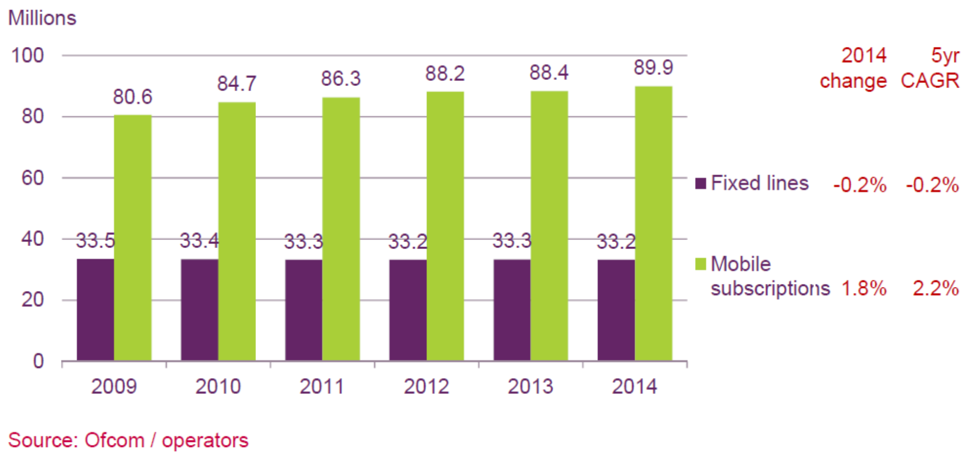
16 Ofcom's annual "Communications Market Report" ("CMR").

17 Ofcom's 2015 CMR, available at http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr15/CMR_UK_2015.pdf [ID4159].

sector. In the fixed telecommunications sector, according to the latest implementation report of the EU regulatory framework[18], fixed broadband and next generation access ("NGA") coverage (>30 Mbps) are above the EU average, while fixed broadband take-up is at 82% of households (the EU average being 70%). In the mobile telecommunications sector, at the end of 2014, there were 89.9 million active mobile subscribers in the United Kingdom, including handsets, dongles, other broadband-only subscriptions and machine to machine ("M2M") connections[19], a 1.8% increase since 2013.[20] Postpaid subscribers accounted for 61.8% of all mobile connections, a 2.4% increase since 2013. 4G[21] coverage in the United Kingdom is higher than the EU average (84% in the United Kingdom, 79% in the EU). The same applies for mobile broadband penetration (United Kingdom: 88%, EU average 72%).[22]

(49) As shown by Figure 1 below, the number of mobile subscriptions has been constantly growing since 2009, while the number of fixed lines has remained generally constant.

Figure 1: Fixed lines and mobile subscriptions



Source: Ofcom's 2015 CMR, Figure 4.29 [ID4159].
Note: "CARG" is the compound annual growth rate, that is to say the annual rate of the growth calculated over several years (in the above Figure 5 years).

(50) Mobile dedicated broadband (data-only) subscriptions[23] and M2M subscriptions are growing but still account only for a small proportion of the total mobile

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18 Data available at: http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc_id=9899 (provided with the access to file on 4 February 2016).

19 An M2M connection is a connection, often wireless, in which human input is not necessarily required. Common examples of M2M include energy metering or a burglar alarm.

20 Ofcom's 2015 CMR, page 27 [ID4159].

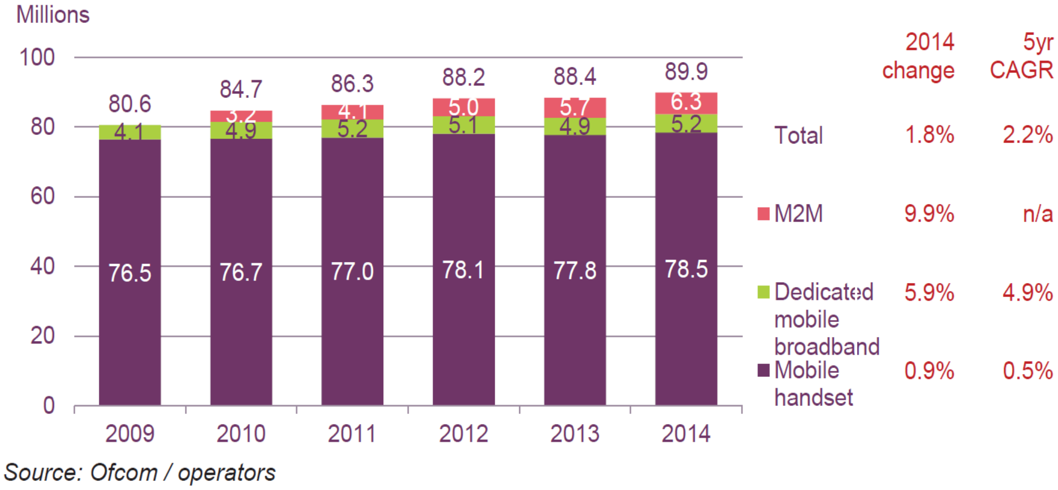
21 4G refers to the latest generation of wireless network currently in the market. 4G includes Long Term Evolution ("LTE") standard technology that is used for data transmission, VoLTE (Voice Over LTE) and Worldwide Interoperability for Microwave Access ("WiMAX") standard technology. 4G most typically refer to networks utilizing LTE. See Commission decision of 24 July 2015 in case No M.7632 – *Nokia/ Alcatel*, paragraph 13.

22 Data available at: http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc_id=9899 (provided with the access to file on 4 February 2016).

23 Data services are also offered on a standalone basis, to be used together with tablets, laptop computers and mobile routers.

subscriptions. In particular, as shown in Figure 2, data-only subscriptions have been not growing much in the past five years and their number have remained constant.

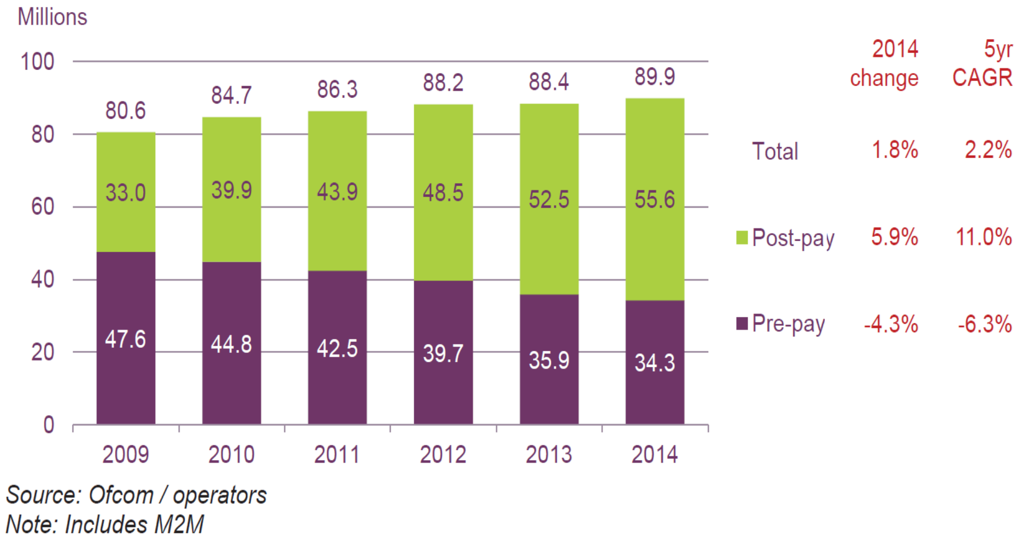
Figure 2: Mobile subscriptions, by connection type



Source: Ofcom's 2015 CMR, Figure 4.49 [ID4159].

(51) As regards payment type, in 2014 postpaid subscriptions accounted for 61.8% of mobile connections, a 2.4% increase from 2013, with prepaid subscriptions making up the rest. This is in line with a general trend of the market in the United Kingdom, which sees the postpaid segment growing at the expense of prepaid subscriptions which are decreasing, as shown in Figure 3.

Figure 3: Evolution of prepaid and postpaid mobile subscriptions



Source: Ofcom's 2015 CMR, Figure 4.50 [ID4159].

(52) Linked to the preference of customers for postpaid contracts, the United Kingdom market has been traditionally characterised by a high demand for mobile subscriptions including a handset. Nonetheless, according to the Notifying Party, in the last few years a shift can be seen from contracts including the purchase of a handset to SIM-only ("SIMO") contracts, that is to say pure mobile subscriptions not including the purchase of a handset and which offer lower monthly payments, and shorter binding periods, than traditional postpaid contracts. According to the Notifying Party, there has been a 12% increase in sales of SIMO contracts between January 2014 and January 2015 in the United Kingdom: the increase in SIMO

contracts has been consistent since 2012 when SIMO contracts took up approximately 28% of the overall postpaid segment and increasing to 39% in 2014.[24] A number of competitors responding to the market investigation also stated that they expect a growth of the volume of the SIMO contracts sold.[25] According to Ofcom, there are elements which suggest that SIMO tariffs are quite attractive to consumers in the United Kingdom: 30 of the 45 tariffs (67%) feeding into the average best-pricing analysis were SIMO contracts.[26]

(53) According to data by Ofcom, average prices of mobile telecommunications services in the United Kingdom remained relatively stable in 2013-2014, after experiencing a continuous decline since 2008.

6.2. Technological development

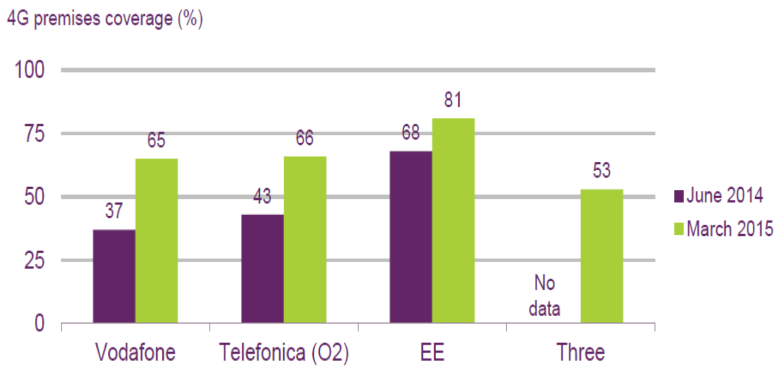
(54) The mobile telecommunications market in the United Kingdom is quite developed and mature.

(55) 4G started to be rolled out in late 2012 but has rapidly reached a large coverage. The first operator to launch 4G in the United Kingdom was EE in October 2012 after securing Ofcom's authorisation to refarm its 1800 MHz spectrum for the use of 4G.[27]

(56) EE, O2, Vodafone, Three and a subsidiary of BT were awarded licenses in the 2.6 GHz and 800 MHz bands for 4G deployment (which, as in previous auctions, included some coverage obligations). Vodafone and O2 launched their 4G services in August 2013 and Three in December 2013.

(57) According to Ofcom's 2015 CMR, EE has the widest 4G coverage in the country (see Figure 4 below). In March 2015, EE had the widest 4G network coverage (outdoor coverage of 81%), higher than O2 (66%), Vodafone (65%) and Three (53%).

Figure 4: 4G coverage in the United Kingdom, June 2014



Source: Ofcom's 2015 CMR, Figure 4.3.

24 Form CO, Section 6, paragraph 179.

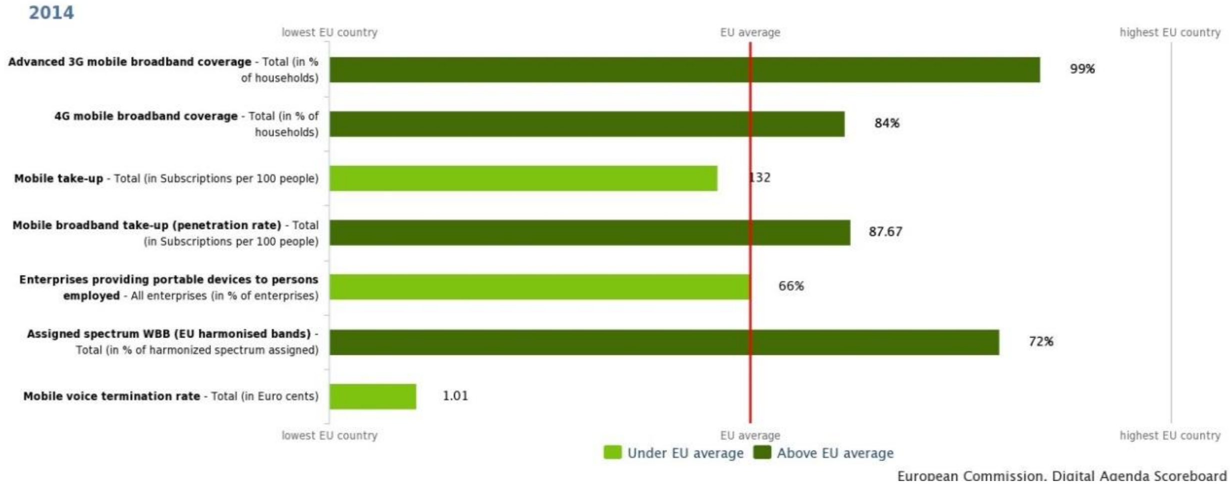
25 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 19 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 18.1 (b).

26 Ofcom's 2015 International Communications Market Report, available at http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr15/icmr15/icmr_2015.pdf, p. 113 (provided with the access to file on 4 February 2016).

27 Spectrum refarming or simply refarming refers to the process of re-deploying spectrum for a different technology. For example, spectrum in the 1 800 MHz band used for 2G or 3G technologies is re-deployed for 4G.

(58) 4G coverage in the United Kingdom is higher than the EU average and the same applies for mobile broadband penetration (United Kingdom: 84%, EU average 72%).[28]According to Ofcom, all MNOs have targeted 98% 4G population coverage by the end of 2015. As of June 2014, Ofcom estimated that 84% of premises were covered by 3G technology by all operators (outdoor coverage), while 1% of premises were not covered by any operator.[29] The advanced level of development of the mobile market in the United Kingdom is evident also from the EU Digital Agenda Scoreboard[30] figures (see Figure 5 below), which show that in 2014, not only 4G coverage in the United Kingdom is above average, but also advanced 3G coverage.

Figure 5: Country profile for United Kingdom, mobile market indicators, 2014



Source: EU Digital Agenda Scoreboard.

(59) At the end of 2014, there were some 24 million 4G subscriptions in the United Kingdom, experiencing a very high growth since 2013 (2.7 million at Q4 2013). In 2014 4G subscriptions represent 28% of all mobile subscriptions, compared to 3% at the end of 2013,[31] which implies that the proportion of 4G subscriptions is liable to be much higher at the end of 2015. Respondents to the market investigation generally expect demand for 4G services, as well as the percentage of subscribers having

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28 Until recently 4G/LTE technology has not been used for telephony in the United Kingdom. Instead, voice calls use 3G or 2G networks. Currently, operators are conducting tests in order to launch voice over LTE ("VoLTE") services and Three launched VoLTE in September 2015 (see http://www.pocket-lint.com/news/133146-vodafone-to-launch-voice-over-lte-and-wi-fi-calling-services-this-summer (provided with the access to file on 4 February 2016), http://uk.pcmag.com/three-uk/41299/news/three-announces-voice-over-lte-for-autumn-arrival (provided with the access to file on 4 February 2016), http://blog.three.co.uk/2015/04/23/volte-comes-to-three/ (provided with the access to file on 4 February 2016)).

29 Ofcom, Infrastructure Report 2014. Ofcom's second full analysis of the UK's communications infrastructure ("Ofcom's Infrastructure Report 2014"), 8 December 2014, available at: http://stakeholders.ofcom.org.uk/binaries/research/infrastructure/2014/infrastructure-14.pdf, page 13 (provided with the access to file on 4 February 2016).

30 Data available at: http://digital-agenda-data.eu/charts/country-profiles-the-relative-position-against-all-other-european-countries#chart={"indicator-group":"mobile","ref-area":"UK","time-period":"2014"} (provided with the access to file on 4 February 2016).

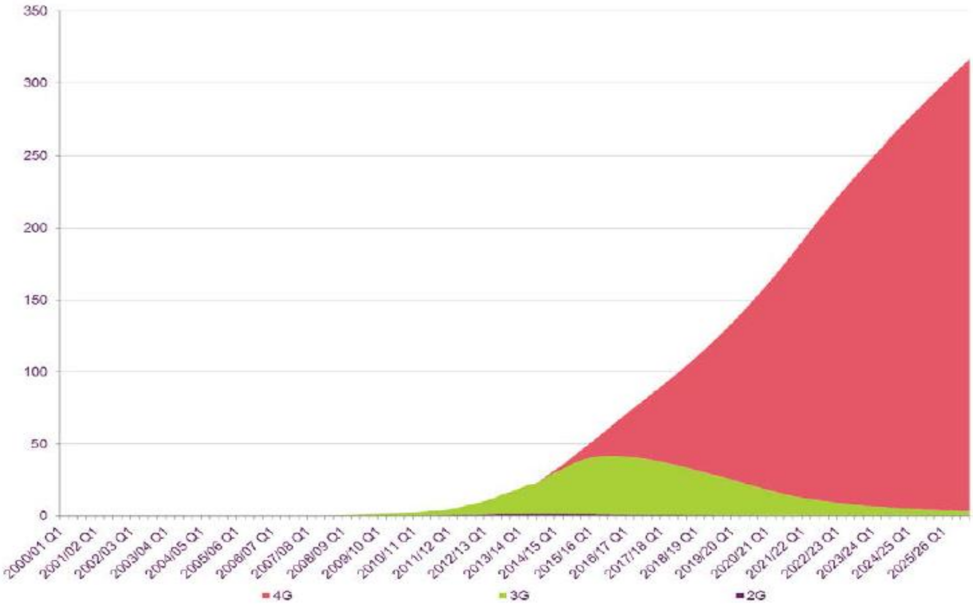
31 Ofcom's 2015 CMR, page 19 [ID4159]. It is noteworthy that this number over-represents the actual number of 4G users, as it includes customers on 4G plans that do not have 4G-enabled handsets or live in areas not covered by 4G.

access to 4G services in the United Kingdom, to significantly increase in the next two to three years.[32]

(60) This development has been driven by increasing smartphone uptake. According to Ofcom and the EU Digital Agenda Scoreboard, 66% of adults (71% of mobile phone owners) in the United Kingdom have a smartphone, a 27% increase since 2012.[33] Mobile take-up is also very high in the United Kingdom, with 132% of the population having a mobile subscription, meaning that several customers in the United Kingdom have more than one SIM card (see Figure 5 above).

(61) The increase in smartphone and 4G uptake in the United Kingdom has been accompanied by an exponential increase in data consumption, as shown by the Figure 6 below.

Figure 6: Evolution of data traffic in the United Kingdom



Source: Ofcom, Mobile call termination market review 2015-18, 17 March 2015, Annexes 7-13, Figure A7.18 [ID4231].

(62) Data traffic is increasing in the United Kingdom, competition in the retail market is now, to a large extent, based on data packages with voice and SMS offered as unlimited services.

6.3. Convergence and multi-play offers

(63) Convergence of mobile and fixed communications is a trend in telecommunications towards removing differences between fixed and mobile networks. There are two aspects to convergence, one related to changes in technology, and the other one to the ability of operators to offer both mobile and fixed services.

(64) As regards the first aspect (technological convergence), the Notifying Party submits that historical differences between fixed and mobile services are becoming blurred

32 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 12, to Questionnaire Q27 to non-MNOs of 11 September 2015, question 12 and to Questionnaire Q29 to Suppliers of Mobile Network Infrastructure Equipment of 11 September 2015, question 8.

33 Ofcom's 2015 CMR, page 63 [ID4159].

due to fixed networks developing towards providing wireless services via Wi-Fi spots and femto cells, and the differences in speed between fixed and mobile lines diminishing due to 4G technology being rolled out. Moreover, at the technical level, convergence has increased through the usage of smartphones which provide customers with the best connection available (mobile or Wi-Fi). To support its view, the Notifying Party also quotes Ofcom's strategic review of Digital Communications where Ofcom had stated that "*It is likely that fixed and mobile technologies and networks will converge over time. End user devices are making increased use of wireless, and networks are making increased use of fibre to provide the necessary network capacity.*"[34] The Notifying Party also claims that the classic approach of running a mobile only business is being questioned and is under competitive pressure from technological and commercial convergence. In particular, converged players can leverage their fixed telecommunications infrstracture to offload a portion of mobile data traffic onto their fixed networks in a cost-efficient manner. According to the Notifying Party, the future 5G mobile technology standard is expected to facilitate these developments given its orientation towards integrating small cells and Wi-Fi networks into existing macro cell RANs.[35]

(65) In this respect, the Commission acknowledges that smartphones have played an important role in driving technical fixed-mobile convergence (smartphone used with Wi-Fi for instance). Nonetheless, the Commission considers that, at the current level of technological development (that is to say 4G roll out), fixed and Wi-Fi services, on the one hand, and mobile services, on the other hand, are still not substitutable for customers and the technologies by which they are provided are still different. In particular, this is because Wi-Fi and femto cells have certain limitations (for example they can only provide coverage at a fixed indoor location). Further details in this regard are provided in Section 7.2.1.2.a. when discussing the relevant markets for the assessment of the Transaction.

(66) With regard to the Notifying Party's claim that fixed-mobile players enjoy an advantage compared to mobile only players due to offload possibilities, as further explained in recital (1077), the Commission notes that the possibility for a provider of mobile services to offload traffic relies on customers' choice to use Wi-Fi when available. The pricing of Wi-Fi compared to the use of mobile networks provides an incentive for users to make use of them when they are available. All MNOs, including mobile only players, already today offload a large proportion of their traffic via Wi-Fi thanks to the customers' decision to do so.

(67) With respect to the impact of 5G, the Commission notes that at this stage 5G technology is still under development. The standardisation process has just begun and 5G standards and associated technology and equipment should be available at the earliest as of 2020.[36] Therefore, it cannot be established at this stage whether fixed-mobile players would actually have an advantage as compared to mobile only players.

(68) As regards the second aspect of convergence (ability to provide fixed-mobile bundles), the Notifying Party points out that a number of players in the United

34 Available at: http://stakeholders.ofcom.org.uk/binaries/telecoms/policy/digital-comms-review/DCR_Terms_of_reference_12_March_2015.pdf, paragraph 1.32 [ID6060].

35 Reply to the Statement of Objections, of 26 February 2016, paragraph 18 and following.

36 See https://ec.europa.eu/digital-single-market/news/more-smartphones-white-paper-shows-how-5g-will-transform-eu-manufacturing-health-energy, [ID6165].

Kingdom are increasingly adopting a strategy based on convergence, by offering bundles, including fixed-mobile bundles.

(69) Bundles are a combination of mobile telecommunications services comprising one or more fixed telecommunications services, such as fixed telephony, fixed broadband internet or television and which are purchased from the same provider. Such combinations, also referred to as multi-play offers, include (i) pure bundles (multiple services are sold together for a single price), (ii) tied services (customers that purchase one service are required to purchase another service from the same operator), and (iii) mixed bundles (services are sold individually, but incentives are offered to buy them together, such as beneficial commercial conditions).

(70) The Commission has assessed whether the take-up of bundles in the United Kingdom is likely to take off in the next couple of years and whether fixed-mobile operators would have an advantage over mobile only operators.

(71) First, as shown below, the extent to which fixed-mobile bundles will pick-up in the next few years remains uncertain. So far, the Commission notes that their adoption in the United Kingdom has been very limited.

(72) As in most EU countries, bundles of fixed communication services have become popular in the United Kingdom. At the beginning of 2014, most households subscribed to a bundle of services (63%), with double-play (fixed voice and broadband) and triple-play (fixed voice, broadband and pay-television) being the most popular (28% and 23% respectively, see Figure 7). However, unlike in other EU countries, fixed-mobile converged bundles have not become widespread in the United Kingdom.

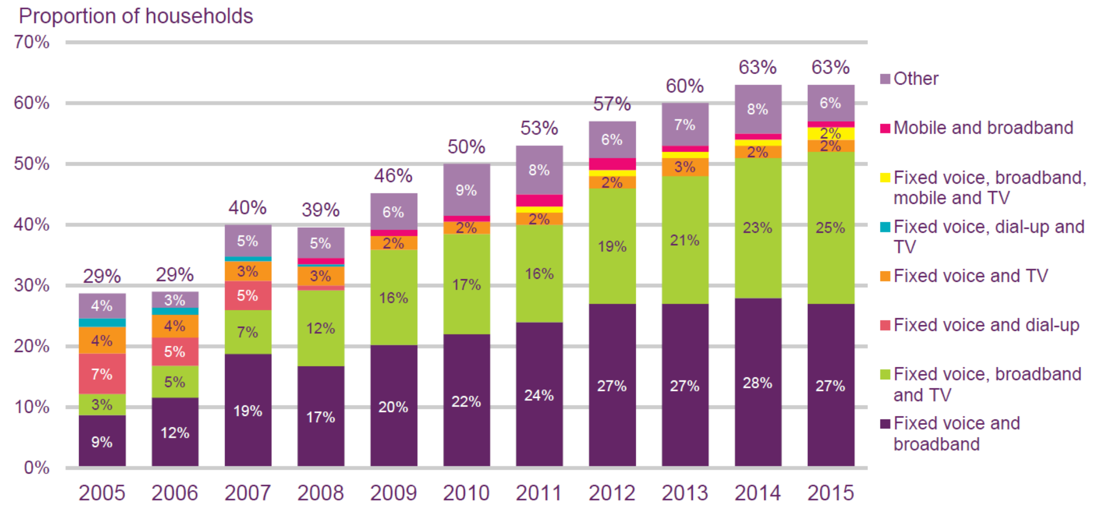
(73) As the CMA noted in its Final Findings Report regarding the acquisition of EE by BT, the supply of fixed-mobile bundles in the United Kingdom is in a nascent phase.[37] Indeed, according to Ofcom's estimates, the take-up of bundles including a mobile component has remained low at 2% of households, as shown by Figure 7.[38] Furthermore, among the households buying fixed and mobile services from the same provider, a smaller proportion are doing so as part of a single contract (pure bundles).[39]

[37] CMA, Final Findings Report, paragraph 14.183 [ID4112].

[38] See also Ofcom, Anticipated acquisition by BT plc of EE Limited. Ofcom's Phase 2 submission to the CMA. Non confidential version, submitted to the CMA on 31 July 2015, available at https://assets.digital.cabinet-office.gov.uk/media/55cc79abe5274a547300002f/Ofcom_Phase_2_submission.pdf, paragraph 1.19 (provided with the access to file on 4 February 2016).

[39] CMA, Final Findings Report, Appendix H, paragraph 5 [ID4114].

Figure 7: Take-up of bundled services in the United Kingdom, Q1 2014



Source: Ofcom Technology Tracker. Data from Q1
Base: All adults aged 16+ (2015 n=3756)
QG1. Do you receive more than one of these services as part of an overall deal or package from the same supplier?

Source: Ofcom's 2015 CMR, Figure 1.14 [ID4159].

(74) In relation to the take-up of such bundles so far, Ofcom noted that: "*The current take-up of bundles containing mobile has been relatively limited — 1% of households have mobile and fixed broadband bundles and only 2% have quad-play bundles (fixed voice, broadband, mobile and TV).*"[40]The proportion of these bundles has remained roughly the same over the past five years.

(75) Data collected by Eurobarometer shows that, out of a sample of 1,326 households interviewed, only 5% had purchased a bundle comprising both fixed and mobile service from the same operator. This figure shows that in the United Kingdom, these types of bundles are less popular than in the rest of the EU (EU 28 media: 13%). [41]

(76) A report by Enders Analysis commented that the United Kingdom is very different to the other large European markets in terms of fixed-mobile operators ownership, in that no large fixed operator has more than 4% share of the mobile market. It also showed that even the two operators that do have significant cross-holdings –Virgin Media and EE –obtained their positions through acquisition, and have lost share since.[42]

(77) Moreover, as regards the evolution of multi-play uptake, the market investigation showed that the majority market participants, including some of the fixed-mobile operators, are sceptical that the take-up of bundles with a mobile component will increase significantly over the next two-three years.[43]

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40 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, Confidential version for Hutchison 3G UK Limited, 5 October 2015, paragraph 9.124 [ID2069].

41 Source: http://ec.europa.eu/public_opinion/archives/ebs/ebs_414_fact_uk_en.pdf [ID 6062].

42 Enders Analysis, UK broadband, telephony and pay TV trends Q3 2014, Quad play and convergence focus, 5 December 2015, page 16 [ID 3456].

43 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 11 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 11.

(78) For instance, […] considers that the take-up of bundles that include mobile services will grow but will still remain limited in the next two to four years.[44] Likewise, […] expects that whilst the number of subscribers to bundles will continue to gradually increase over the next two to three years, uptake will remain limited and such subscribers will continue to represent only a small percentage of all mobile subscriptions in the United Kingdom.[45]

(79) Another provider […] explained that although the importance of quad-play will grow, it will remain a relatively small proportion of overall demand for mobile products, in particular since there are far more mobile phones than landlines in the United Kingdom (83.7 million mobile subscriptions versus 23.7 million fixed broadband connections). Many mobile subscribers who are not the fixed line bill payer in a household are likely to continue to want their own subscriptions– for example, people in house shares, mobile only households, or young adults living at home with their parents are all likely to have strong preferences to have a separate mobile account. While it will become vital for fixed line operators to offer fixed-mobile bundles, MNOs will be able to continue to operate successfully in the absence of a fixed product offering.[46]

(80) The Commission has also looked into the take of Parties' internal documents on this issue. According to a number of […] For example, […] states that […][47] and that […][48], which is not the case in the retail mobile telecommunications market in the United Kingdom.

(81) In another recent internal document, [49] dating from April 2015, […]. The same document also states that […]. This view is confirmed by the CMA. The CMA remarked in relation to bundling that "*Heavy discounting was a driver of take-up in France and Spain, whilst the evidence suggests that for most operators in the UK neither their existing profits (which appear to be lower in the UK than in France and Spain) nor the possible future cost savings associated with bundling (which most operators told us would be limited) would provide substantial incentives for sustaining big discounts in future. This is reflected in the limited discounts for bundling that are seen at present in the UK, which do not generally imply mobile prices that are significantly cheaper than those available on a stand-alone basis from other mobile operators*."[50]

(82) The CMA also pointed out that current data suggests that discounting in the United Kingdom is modest. For example, data it gathered in August 2015 showed that none of BT's multiplay offers were cheaper at the relevant data allowance, while Talk Talk's multiplay offers were modestly cheaper in some categories.[51]

(83) In another internal document, […] O2 pointed out that […] and that […].[52]

(84) […].[53]

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44 […].
45 […].
46 […].
47 Annex 134 to Form CO, page 10.
48 O2's internal documents, […] [ID000065478]. See also in O2's internal documents, […] [ID000065479].
49 O2's internal documents, […], [0000.65478].
50 CMA, Final Findings Report, paragraph 14.146 [ID4112].
51 CMA, Final Findings Report, Annex H, paragraph 64 and Table 6 [ID4114].
52 O2' internal documents, […] [ID0000.65478].

(85) Likewise, David Dyson, CEO of Three, in an interview with the Financial Times, acknowledged that customers in the United Kingdom do not seem to have a large interest in multi-play products including a mobile component and stated that "*There doesn't look like a huge demand [for quad-play] but it depends on how aggressively people push it through discounting*".[54] Furthermore, in an email of 26 November 2014 from David Dyson, to Canning Fok, the managing director of the Hutchison Whampoa Group, Dyson explains that […].[55]

(86) In its submission to the Commission, Ofcom pointed out that it is unclear whether the market in the United Kingdom will move to a similar pattern as some other EU countries or whether country specific factors will lead to bundling in the United Kingdom remaining relatively uncommon. Mobile services are somewhat different from other common bundle elements. Typically in the United Kingdom the decision to subscribe to a mobile service is an individual decision rather than a household decision. This factor is likely to dampen household preferences for bundles containing mobile, since the individuals may prefer to make their own personal decisions over mobile contracts.[56]

(87) Furthermore, an Enders Analysis' report noted that there remains very little evidence of significant underlying consumer demand for buying fixed and mobile services from the same supplier, in the United Kingdom or elsewhere, with most consumers expecting high discounts to even consider the offer. There is thus little evidence of fundamental consumer demand for quad play (or fixed + mobile). "*Consumer survey evidence backs this up, with over 70% of consumers not even willing to take mobile from their broadband provider even with a big discount. Some reasons include:*

– *Fixed and mobile products are seen quite differently by consumers, and it is well understood that the networks are separate and different*

– *Fixed products are bought on a household basis whereas mobile is bought on an individual basis*

– *Mobile is mostly bought in shops whereas fixed line is mostly bought online or via telesales, leading to technical difficulties in cross-selling*

– *Combined product features, such as the ability to call home for free, have been offered but never gained traction.*"[57]

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53 O2's internal documents, […], Annex B5.8 to the Reply to the Statement of Objection, […].

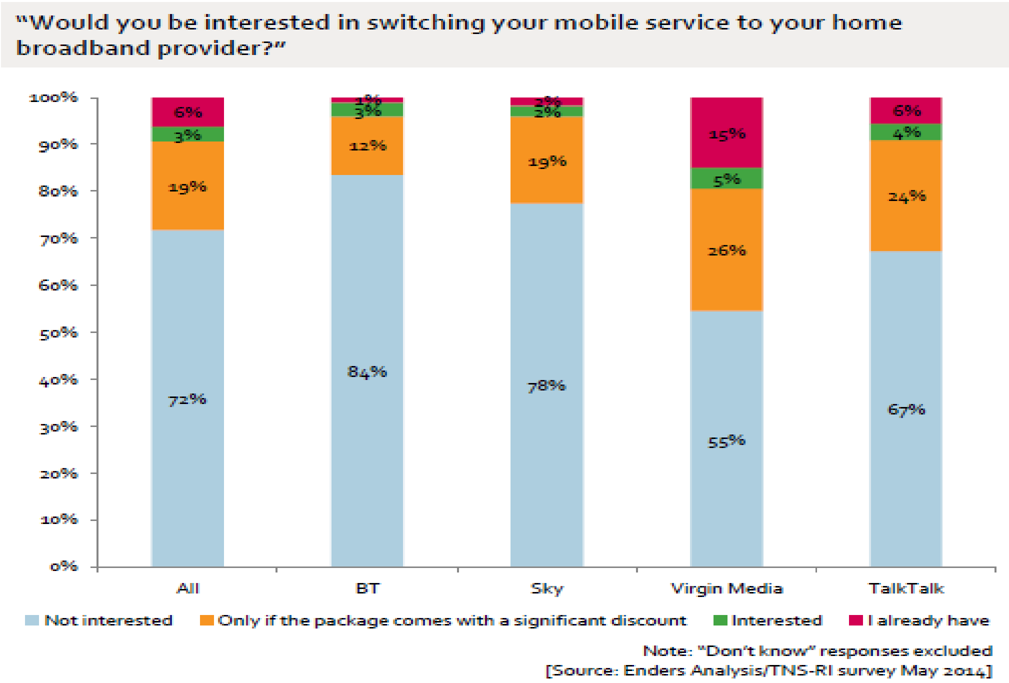
54 Daniel Thomas, "Three chief Dyson questions consumer appetite for 'quad play'", Financial Times, 2 February 2015 [ID1861].

55 Three's internal documents, email of David Dyson dated 26 November 2014 […] [ID 013403004].

56 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, Confidential version for Hutchison 3G UK Limited, 5 October 2015, paragraphs 9.128 and 9.129 [ID 2069].

57 Enders Analysis, UK broadband, telephony and pay TV trends Q3 2014, Quad play and convergence focus, 5 December 2015, pages 3 and 19 [ID 3456].

Figure 8: Interest in fixed-mobile bundles



(88) The report also shows that there was particularly low interest taking mobile from BT, which is seen as reliable for fixed line services, but uninspiring for mobile. The other brands are more 'stretchy', especially the Virgin brand, but strong interest is limited. Comparing the two active operators in the United Kingdom –Virgin Media and TalkTalk – to the other European fixed-mobile players such as ONO, Jazztel, Numericable or Iliad, they are the two weakest performers in this list, although they have priced their offerings rationally and are likely making a good margin on the service.[58] In early 2015, BT Mobile launched its consumer mobile offer. Enders Analysis remarked that: "*The product is as notable for what it does not include as much as what it does, with no 'convergent' elements at all*", and that "*We would argue that taking a measured demand-led approach makes the most sense in any case, given the uncertainty around the level of demand for convergent features and their failures in the past*".[59] As regards Vodafone, Enders Analysis considered that its residential broadband launch is relatively unthreatening given its relatively small consumer base and difficulties in cross-selling.[60]

(89) Enders Analysis also pointed out that previous attempts at cross-selling between fixed and mobile have largely failed.[61] In particular, BT has had three separate launches of a consumer mobile product in the United Kingdom since it spun off O2 in 2001, failing to gain any traction and withdrawing the product each time.[62]

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58 Enders Analysis, UK broadband, telephony and pay TV trends Q3 2014, Quad play and convergence focus, 5 December 2015, page 17 [ID 3456].

59 Enders Analysis, "BT Mobile goes fourth", 26 March 2015, [ID 3456].

60 Enders Analysis, UK broadband, telephony and pay TV trends Q3 2014, Quad play and convergence focus, 5 December 2015, page 23 [ID 3456].

61 Enders Analysis, UK broadband, telephony and pay TV trends Q3 2014, Quad play and convergence focus, 5 December 2015, pages 3 and 19 [ID 3456].

62 Enders Analysis, UK broadband, telephony and pay TV trends Q3 2014, Quad play and convergence focus, 5 December 2015, page 17 [ID3456].

(90) Lastly, in its final findings report on the acquisition of EE by BT, published on 15 January 2016 (the "Final Findings Report")[63], the CMA concluded that, while operators are forecasting substantial growth in the proportion of consumers buying their fixed and mobile services from the same operator, from around 3% today to perhaps 44% of households or more in 2019, this would account for only 12% of mobile subscriptions bought by residential customers.[64] Further, the CMA stated that "*the number of customers buying fixed and mobile products from the same provider [is] likely to increase over time, but that there [is] uncertainty over the drivers of that increase (eg cross-selling as compared to sales of bundles) and the extent to which customers would develop a preference for bundles as compared to purchasing the products on a stand-alone basis.*"[65]

(91) Therefore, the Commission considers that multi-play products including a mobile component have a limited importance in the United Kingdom and are not set to play a particularly important role in the next two to three years.

6.4. Customer switching

(92) An important element of a healthy retail mobile market is the ability of consumers to choose between competing providers and to switch between providers quickly and easily.

(93) In the United Kingdom, under Ofcom's General Conditions of the Communications Act of 2003,[66] the maximum initial duration of a consumer telecommunications contract is 24 months (General Condition 9.4). Moreover, under General Condition 9.5, Ofcom imposes an obligation on operators to offer customers contracts with no more than 12-month binding period.[67] In practice, most operators also offer shorter contracts, for example with a binding period of only one month. Whilst early termination fees may apply, this is not a reason that a mobile operator can use to delay or deny switching.

(94) When switching, consumers have the right to keep their mobile telephone number. The facility that enables consumers to keep their mobile telephone number whilst switching provider is a centralised mobile number portability ("MNP") system which all operators must use to process mobile number porting requests. This system is operated by Syniverse (a third-party organisation), with the administration of the system managed by operators through the MNP Operator Steering Group ("OSG").[68]

(95) In the United Kingdom, the powers that enable Ofcom to set conditions requiring communications providers to provide number portability are set out in sections 51 and 58 of the Communications Act 2003.

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63 The full text of CMA's non-confidential Final Findings Report, published on 15 January 2015, is available at: https://assets.digital.cabinet-office.gov.uk/media/56992242ed915d4747000026/BT_EE_final_report.pdf [IDs 4112 and 4114].

64 CMA, Final Findings Report, 15 January 2016, paragraph 11.62 [ID4112]. According to Annex H to the Final Findings Report, the figure of 12% is the result of CMA's analysis based on the operators' forecasts.

65 CMA, Final Findings Report, 15 January 2016, paragraph 14.147 [ID4112].

66 In this regard see paragraph (187).

67 Ofcom's General Conditions, available at: http://stakeholders.ofcom.org.uk/binaries/telecoms/ga/CONSOLIDATED_VERSION_OF_GENERAL_CONDITIONS_AS_AT_28_MAY_2015.pdf (provided with the access to file on 4 February 2016).

68 See Three's response to the RFI 3, question 35.

(96) Obligations imposed on a communications provider to provide number portability to its subscribers and to provide portability to other communications providers are set out in Condition 18 of Ofcom's General Conditions of Entitlement titled "Number Portability". Ofcom has powers to enforce any breach of this condition under sections 94 to 103 of the Communications Act.

(97) Porting from one operator to another (from the so-called Donor Network Operator to the Recipient Network Operator) involves a sequence of transactions, which are outlined in the detailed process manual compiled by the OSG and published by Ofcom. Ofcom also publishes information for customers about the operation of MNP, including how to obtain a unique identifier to facilitate switching (referred to as the Porting Authorisation Code or "PAC") and the circumstances in which a customer can apply (or not) to start the process.

(98) Furthermore, Ofcom is conducting a review of the porting process[69] as the current process for MNP in the United Kingdom is ‘donor-led’. This means that consumers are required to approach their existing operator for authority to take their mobile phone number to a new provider and consumers are responsible for passing on the PAC to their new provider. The current regulations relating to MNP are set out in General Condition 18(3) which requires that MNP takes place within one business day from the receipt by the recipient provider of the subscriber request to port from its new subscriber.[70]

(99) The United Kingdom is almost unique within Europe in having an MNP process of this type. Most countries operate a "recipient-led" process. Under those arrangements, the transfer of a mobile number to a new network is dealt with by the new provider and there is no need for the consumer to contact their old provider in order to obtain a PAC, nor pass on the PAC to the new provider. As shown in Section 8.2.3.1 on buyer power, some market participants pointed out that number porting remains a barrier to switching in the United Kingdom, as compared to other European countries.

(100) However, recently Ofcom has outlined proposals to make it quicker and easier for mobile phone customers to switch provider, in a public consultation.[71]

(101) The document explains Ofcom’s plans to overhaul mobile switching processes, after having conducted in-depth research into the difficulties customers face when changing provider.

(102) Ofcom is consulting on two alternative options. Its preferred option is a simple ‘gaining provider-led’ process for switching. This would place responsibility for the switch, including the transfer of a customer’s mobile phone number, entirely in the hands of their new provider.

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69 See Ofcom, Mobile number portability, Review of the porting process, 3 August 2009, available at: http://stakeholders.ofcom.org.uk/binaries/consultations/gc18_mnp/summary/mnpcondoc.pdf (provided with the access to file on 4 February 2016).

70 See Ofcom decision of 9 July 2012, available at: http://stakeholders.ofcom.org.uk/binaries/consultations/gc-usc/statement/GC18-Notification.pdf [ID6077].

71 See Ofcom Consultations at: http://stakeholders.ofcom.org.uk/consultations/consumer-switching-mobile/?utm_source=updates&utm_medium=email&utm_campaign=Simpler-speedier-switching-for-mobile-customers&utm_term=switching%2C%20mobile [ID6078].

(103) Such option would potentially have a positive impact on the customer's ability to switch provider swiftly.

6.5. Mobile telecommunications services providers in the United Kingdom

6.5.1. MNOs

(104) There are four MNOs in the United Kingdom, which are described in turn in the following recitals. Two essential inputs are necessary in order to be active as an MNO: the authorisation to use spectrum band(s) for mobile telecommunications and a mobile network.[72] The MNOs' spectrum holdings are described in Section 6.5.1.5, while their network infrastructure arrangements are described in Section 6.5.1.6.

6.5.1.1. EE

(105) EE was established on 1 April 2010 when Orange and Deutsche Telekom ("DT") combined their respective mobile businesses in the United Kingdom into a joint venture. EE, which operates exclusively in the United Kingdom, delivers mobile and fixed communications services to consumers, businesses, as well as government, and provides non-MNOs with wholesale access to its network. Mobile communication services are offered under the core brands EE, Orange and T-Mobile.

(106) EE had 27.5 million mobile subscribers and revenues of GBP 6.5 billion in 2014.

(107) EE’s mobile network is based on 2G, 3G and 4G technology. According to Ofcom, EE had the highest 4G outdoor coverage in March 2015 (81%).[73] EE provides wholesale access to its network to several non-MNOs as it is the second largest supplier of wholesale access in the United Kingdom by revenues.

(108) EE sells its subscriptions in its branded stores (EE operated around 550 stores in the whole of the United Kingdom in 2015[74]) as well as via independent retailers, such as Dixons Carphone ("Dixons").

(109) On 5 February 2015 it was announced that BT had agreed to acquire EE.[75] BT is the incumbent fixed line service provider in the United Kingdom. It launched mobile services in 1985, but it discontinued its mobile operations after divesting O2 in 2001. Nonetheless, it retained some mobile assets and launched a business-oriented MVNO, BT Mobile, in 2004. In 2014, it signed a wholesale agreement with EE and in 2015 it started addressing also private customers. BT also acquired spectrum at the last auction in 2013. […].[76]

(110) In its Final Findings Report, the CMA cleared the acquisition of EE by BT. The CMA cleared BT’s acquisition of EE without conditions, as it found that the BT/EE transaction is not expected to result in a significant lessening of competition. As BT has closed its acquisition of EE, for the purposes of the assessment of the Transaction, the Commission considers BT and EE as a single entity.

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72 A mobile network is composed of a number of mobile sites, essentially a mast with an antenna and a radio-frequency system, linked to a core network by backhaul connections. Each mobile site covers a limited area and has a maximum capacity.

73 Ofcom's 2015 CMR, Figure 4.3 [ID4159].

74 See: https://storefinder.ee.co.uk/ee/stores.html (provided with the access to file on 4 February 2016).

75 Pursuant to the agreement, while BT would acquire sole control over EE, DT and Orange would remain as minority shareholders, holding respectively 12% and 4% of BT's shares.

76 […].

6.5.1.2. O2

(111) O2 was established in 1985 as Cellnet, a joint venture between BT Group and Securicor. The O2 brand was created in the context of a demerger from the BT Group in 2002. O2 was subsequently acquired by Telefónica in 2006. O2 owns the sub-brand "giffgaff"[77] and is also a co-owner of Tesco Mobile, a non-MNO that operates on the O2 network.

(112) Tesco Mobile is a 50/50 owned limited liability joint venture between the general retailer Tesco plc ("Tesco") and O2, which started in 2003-2004. The joint venture agreement was renewed […] (amended and restated […]) for an additional […]. According to the Shareholders Agreement, […][78] […]. In light of the above, the Commission considers that Tesco Mobile is jointly controlled by Tesco and O2.

(113) The acquisition of O2 by the Notifying Party includes O2's shares in Tesco Mobile. Hence, post-Transaction, Tesco Mobile would come under the joint control of the merged entity and Tesco. It follows that, for the assessment of the Transaction, Tesco Mobile should be considered as being under the joint control of O2 and Tesco before the Transaction and under the joint control of the merged entity and Tesco after the Transaction. In line with previous Commission decisions,[79] Tesco Mobile's market share is aggregated with that of O2 when assessing market concentration.[80]

(114) O2 is the second largest MNO in the British mobile market by number of subscribers ([…] million subscribers). It had revenues of EUR […] billion in 2014. Tesco Mobile is the largest MVNO in the United Kingdom by revenue and number of subscribers ([1-5] million subscribers and GBP [500-1000] million of revenue). Attributing Tesco Mobile's subscriber base and revenues to O2, O2 becomes the […] MNO in the British mobile market by number of subscribers and the […] largest by revenues.

(115) O2's mobile network is based on 2G, 3G and 4G technology and it also operates O2 Wi-Fi. O2 provides wholesale access to its network to several non-MNOs as it is the largest supplier of wholesale access in the United Kingdom by revenues. According to Ofcom, O2's 4G outdoor coverage was 66% in March 2015, up from 43% in June 2014.[81] In addition, O2's acquisition of a 800 MHz spectrum block at the 2013 auction requires it to provide indoor 4G coverage to at least 98% of the population of the United Kingdom by the end of 2014 at the latest.[82]

(116) As regards Tesco Mobile, it started offering 4G services to its postpaid customer base at no extra cost in January 2014, and extended it to prepaid customers in July 2014.

(117) O2 does not have consumer fixed-line or television offerings; however, O2 resells retail fixed-line broadband to businesses.

(118) O2 sells its subscriptions in its 475 branded retail stores.[83] Moreover, O2 sells its subscriptions via independent retailers, such as Dixons. Tesco Mobile is offered for sale in the Tesco outlet network, which consists of close to 8 000 outlets.

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77 Giffgaff is a fully online business with no retail outlets.

78 […].

79 Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*.

80 […] [ID 000074183.00001].

81 Ofcom's 2015 CMR, Figure 4.3 [ID4159].

82 Form CO, Section 6, footnote 138.

83 O2's response to RFI 61, question 11.

6.5.1.3. Vodafone

(119) Vodafone was the first MNO entrant on the mobile market of the United Kingdom in 1985. It offers mobile communications services to consumers and business customers in the United Kingdom under the brand name "Vodafone" and the sub-brand "Talk Mobile".

(120) With 18 million subscribers Vodafone is the third largest MNO by number of subscribers. It had revenues of GBP 4.3 billion in 2014. Vodafone provides wholesale access to its network to some non-MNOs.

(121) Vodafone's mobile network is based on 2G, 3G and 4G technology. According to Ofcom, Vodafone's 4G coverage of premises was 65% in March 2015.[84]

(122) In 2012, Vodafone acquired the cable operator Cable and Wireless Worldwide plc, which enabled it to offer both fixed and mobile services. Vodafone launched a fixed communication service, notably high speed broadband and home phone services, in June 2015.

(123) Vodafone sells its subscriptions in its branded stores (Vodafone operated around 500 stores in the whole of the United Kingdom in 2015[85]) as well as via independent retailers, such as Dixons.

6.5.1.4. Three

(124) Three is an indirectly and wholly owned subsidiary of CKHH. CKHH is a multi-national conglomerate headquartered in Hong Kong. Three entered the mobile market in the United Kingdom in 2003.

(125) Three has historically been a data-centric MNO, offering low-priced data price packages. With a customer base of approximately [5-10] million, Three is the smallest MNO by number of customers, but carries [40-50]% of data traffic. It had revenues of GBP [1-5] billion in 2014.

(126) Three's mobile network is only based on 3G and 4G technology (for 2G services, Three currently relies on a national roaming agreement with EE). Three's 4G outdoor coverage was 53% in March 2015, according to Ofcom.[86] According to the Notifying Party, Three 4G coverage currently reaches over […] of the population and, at the time of the notification, was on track to reach […] by the end of 2015, aiming to reach over […] of the population by the end of 2017.[87]

(127) Three does not have any fixed-line, Wi-Fi or TV offerings. Three provides wholesale access to its network to some non-MNOs.

(128) Three does not use any indirect distribution partners like Dixons, but only its own branded shops. It operated 338 retail shops throughout the United Kingdom in 2015.[88]

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84 Ofcom's 2015 CMR, Figure 4.3, page 44 [ID4159].

85 Vodafone's Annual Report 2015, page 44. Available at http://www.vodafone.com/content/annualreport/annualreport15/assets/pdf/full_annual_report_2015.pdf (provided with the access to file on 4 February 2016).

86 Ofcom's 2015 CMR, Figure 4.3 [ID4159].

87 Form CO, Section 6, paragraph 242.

88 Notifying Party's response to RFI 60, question 11.

6.5.1.5. Spectrum holdings

(129) Spectrum, that is to say the range of available radio frequencies, is part of the Member States' public property. In the United Kingdom, Ofcom is responsible for spectrum allocation.

(130) The radio spectrum is divided into sections called bands. Different bands have different characteristics when it comes to coverage and data speeds. In general, frequencies below 1000 MHz enable an operator to offer a good geographic coverage and indoor penetration, while higher frequencies have the advantage of high speeds for data communication.

(131) Currently, 72% of spectrum in the EU-harmonised bands has been assigned. Licences are tradable and, as opposed to most EU countries, licenses in the United Kingdom run indefinitely, with initial terms of 20 years. During the initial term, licences can only be revoked for a narrow range of reasons including breach of licence conditions and non-payment of the licence fee. Beyond the initial term, licensees continue to have the rights to use the spectrum unless Ofcom decides to revoke the licence on spectrum management grounds after giving 5 years notice.

(132) Figure 9 below gives an overview of the current allocation of spectrum, following the approval by Ofcom of the acquisition of 20 MHz of Qualcomm's 1 400 MHz spectrum ("L-band")[89] by each Three and Vodafone[90] and after completion of the acquisition of EE by BT. It also shows the post-Transaction spectrum holding of the merged entity.

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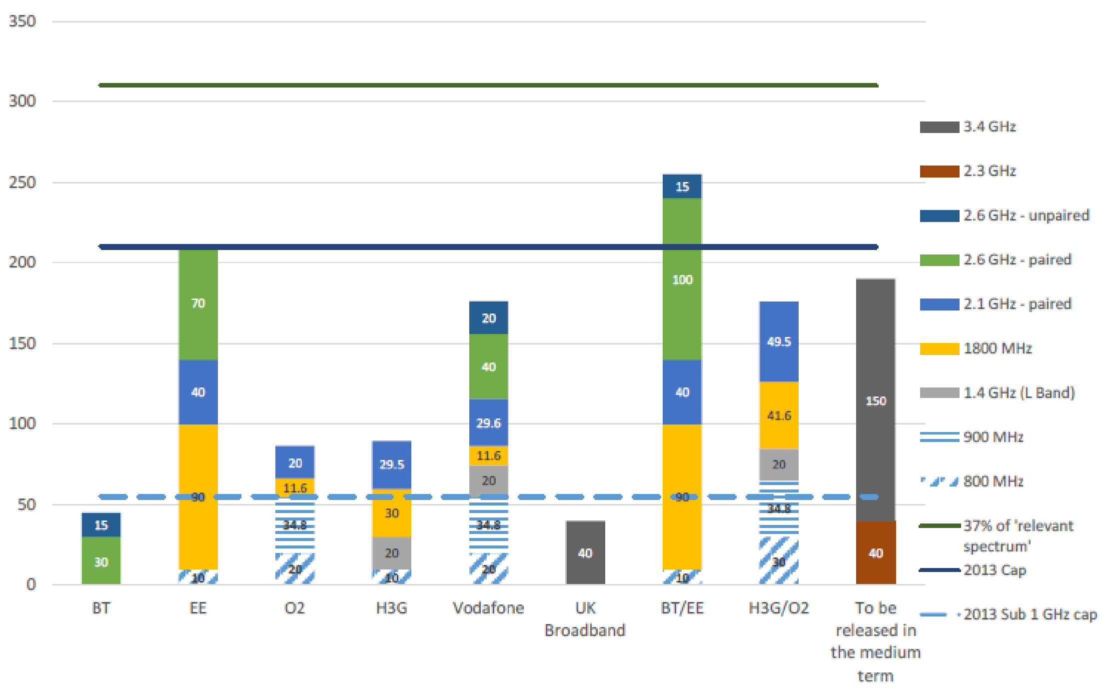
89 Harmonized and mandated for mobile broadband by the European Union in May 2015, L-Band spectrum can be used for Supplemental Downlink (SDL), helping MNOs to meet the global demand for increased mobile data traffic. Qualcomm press release of 26 August 2015, available at: https://www.qualcomm.com/news/releases/2015/08/25/qualcomm-agrees-sell-uk-l-band-spectrum-vodafone-and-h3g (provided with the access to file on 4 February 2016).

90 The approval was granted on 22 September 2015 and it is available at: http://stakeholders.ofcom.org.uk/binaries/consultations/mobile-trading-regs-apr-15/statement/trade-of-frequencies-statement.pdf (provided with the access to file on 4 February 2016).

Figure 9: Mobile spectrum holdings (in MHz)



Source: CMA, Final Findings Report, Appendix G, Figure 2 [ID4114].

(133) On 26 October 2015, Ofcom published a statement of its intention to award 190 MHz of spectrum in the 2.3 GHz and 3.4 GHz bands and conduct an auction in early 2016.[91] That auction forms part of the United Kingdom Government's commitment to release 500 MHz of spectrum under 5 GHz frequency from the public to the private sector. On 3 December 2015, Ofcom announced its decision to delay the start of the auction process until the Commission has taken its decision as to whether the Transaction is compatible with the internal market.[92] On 10 March 2016, Ofcom submitted that it "*would propose including competition measures in the PSSR award where we (Ofcom) considered it to be necessary and proportionate to promote effective and sustainable competition. A proposal to include competition measures would be subject to consultation.*" In addition, Ofcom submitted that "*when considering competition measures, we would expect to revisit the question of whether to distinguish between the 2.3 GHz and 3.4 GHz bands for the purpose of competition measures*".[93]

(134) Going forward, Ofcom intends to license additional spectrum to increase the capacity of mobile networks as part of its mobile data strategy. In this regard, on 19 November 2014, Ofcom published a statement setting out its decision to change

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[91] Ofcom, Public Sector Spectrum Release: Competition and auction design issues for the 2.3 and 3.4 GHz spectrum award, including reserve prices, 26 October 2015. Available at: http://stakeholders.ofcom.org.uk/binaries/consultations/2.3-3.4-ghz-auction-design/statement/pssr-statement.pdf (provided with the access to file on 4 February 2016)

[92] See: http://stakeholders.ofcom.org.uk/spectrum/public-sector-spectrum-release/?utm_source=updates&utm_medium=email&utm_campaign=Ofcom-update-on-auction-of-spectrum-in-the-2.3-and-3.%20GHz-bands&utm_term=spectrum%2C%20auction%2C%20update%2C%20statement (provided with the access to file on 4 February 2016).

[93] Ofcom's letter (signed by Mr. Philip Marnick, Group Director, Spectrum Group) to the European Commission (Mr. Piergiovanni), [ID5187].

the use of the 700 MHz band from digital terrestrial television and programme-making and special events to mobile data. Ofcom's objective is to make the band available for mobile services by the start of 2022 and sooner if possible. Ofcom is also exploring the possibility of releasing the 700 MHz band for mobile use on a region-by-region basis as Ofcom clears it of Digital Terrestrial Television uses.[94]

6.5.1.6. Network sharing agreements

a) Background to network sharing

(135) A mobile network includes a large number of radio base station sites. Each of them has a mast on which there are antennas as well as a base transceiver station system. The antennas and transceiver station equipment are the main elements of the Radio Access Network ("RAN") equipment. This equipment transmits and receives voice and data signals between the masts and subscribers' devices. Radio base station sites are either linked to their respective controller nodes (for 2G and 3G) or directly to the core network (for 4G) via a backhaul transmission connection[95] which consist of copper, microwave or fibre links. To ensure sufficient capacity in the connection between the mobile site and the core network, mobile networks are increasingly making use of fibre backhaul.

(136) MNOs can roll out their network by themselves, independently from other MNOs, or together with other MNOs.

(137) In a network sharing agreement, MNOs agree to share some of the network elements in order to reduce costs and improve coverage and capacity. The degree of integration within network sharing agreements varies depending on whether the MNOs only share the site infrastructure (passive sharing) or also the RAN equipment at the sites (active sharing).

(138) Passive sharing involves sharing the basic infrastructure, such as masts, cabins and sometimes antennas and power supplies (passive infrastructure), as well as the cost of the site itself (rent and rates). Active sharing involves also sharing the RAN equipment (active equipment), meaning the base transceiver station and the controller nodes (for 2G and 3G), or the base transceiver station (for 4G) in addition to the passive infrastructure. Transmission (backhaul to the MNOs' core networks) may also be shared under passive or active sharing agreements. It is also possible for MNOs to integrate further and share spectrum, however there are no such agreements in the United Kingdom.

(139) Network sharing can provide substantial CAPEX[96] and OPEX[97] cost savings in achieving a certain level of coverage and capacity, and also can make it economically

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[94] Ofcom, The award of 2.3 and 3.4 GHz spectrum bands Information Memorandum, 26 October 2015, available at: http://stakeholders.ofcom.org.uk/binaries/consultations/2.3-3.4-ghz-auction-design/information-memorandum/info-memorandum.pdf, paragraphs 9.22 and 9.23 (provided with the access to file on 4 February 2016).

[95] Mobile backhaul provides connectivity between the radio access network and the mobile core network and is supplied using several media (for example fibre and microwaves) and technologies (for example time division multiplexing ("TDM") and Ethernet). BT Wholesale, a subsidiary of BT, is the main provider of managed mobile backhaul to all MNOs in the United Kingdom.

[96] Capital expenditure is funds used by a company to acquire or upgrade physical assets such as property, industrial buildings or equipment. It is often used to undertake new projects or investments by the company.

[97] Operating Expense is a category of expenditure that a company incurs as a result of performing its normal business operations.

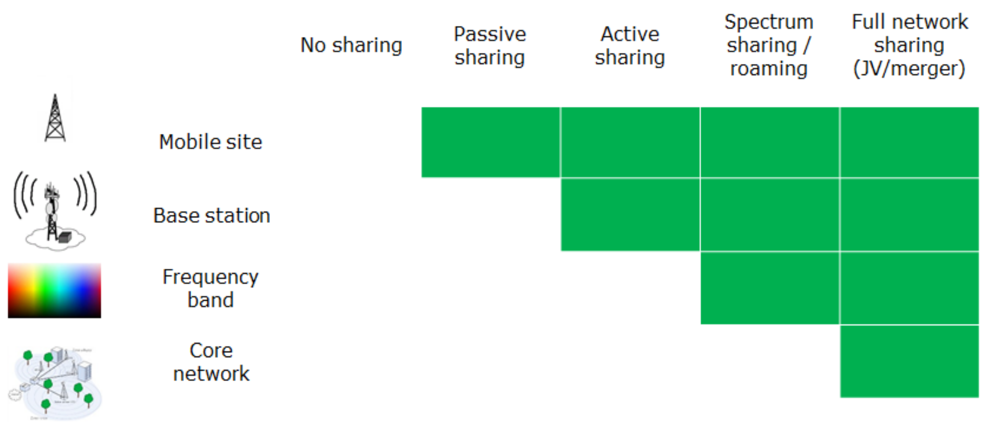
viable to extend coverage to less densely populated rural areas. By reducing costs and improving returns on capital, network sharing also allows for further network investments that might not otherwise be undertaken. Network sharing can also speed up network deployment, as the human resources required are shared between two MNOs.

(140) More specifically, passive sharing allows for a substantial decrease in the costs of building, operating and maintaining passive assets for each of the MNOs. Sharing sites reduces the overall number of sites required, allowing for significant OPEX cost savings on rent, rates, power and maintenance, in addition to reducing the CAPEX in acquiring and developing sites and masts.

(141) Active sharing gives rise to further CAPEX cost savings associated with the roll out of a piece of RAN equipment for multiple operators,[98] as well as OPEX savings from maintaining less RAN equipment in total.

(142) Figure 10 below provides an overview of the different forms of network sharing.

Figure 10: Extent of sharing under different forms of network sharing



Source: Commission's decision of 28 May 2014 in case No M.6992 – Hutchison 3G UK/Telefónica Ireland, Figure 8.

b) Network sharing in the United Kingdom

(143) Mobile network sharing agreements play an important role in the mobile telecommunications sector in the United Kingdom. There are two main network sharing agreements in the United Kingdom.[99] First, MBNL, which is a 50/50 joint venture between Three and EE. MBNL provides a shared site portfolio which supports both shared (3G) and non-shared (2G/3G/4G) technologies used by Three and EE. Second, the so called "Beacon" agreements between O2 and Vodafone, which comprise (i) Cornerstone Telecommunications Infrastructure Limited ("CTIL"), a 50/50 joint venture between O2 and Vodafone, providing a shared site portfolio, and (ii) a contractual arrangement which provides shared 2G/3G/4G technologies used by O2 and Vodafone. Further details on these agreements are set out below.

[98] The cost of a piece of RAN equipment for a single operator is more than half the cost of a multiple operator RAN equipment ("MORAN").

[99] Form CO, Section 6, paragraph 122.

(144) This Section provides an overview of the Commission's understanding of these network sharing agreements on the basis of the Notifying Party's submission.

i. MBNL

(145) MBNL was initially formed in 2007 as a joint venture between the subsidiary of T-Mobile and the Notifying Party in the United Kingdom, through a series of agreements which established a 3G active network sharing arrangement. The original MBNL agreements have subsequently been subject to a variety of revisions. This includes amendments in order to address the creation of EE in 2010 (through the creation of a joint venture between T-Mobile and Orange) and to implement the conditions to the Commission's approval of the merger. The main MBNL agreements consist of […].[100]

(146) MBNL's main objective was to create a shared 3G radio access network with a larger site footprint, significantly faster than either of the parties could achieve on their own in order to deliver improved geographic coverage at lower network cost.[101]

(147) More particularly, MBNL created (i) a site share on the MBNL grid, which entails the passive sharing of network sites and site infrastructure across an agreed grid of approximately […] sites (the "Shared Grid"). […].[102] MBNL also created (ii) a 3G technology share, which entails the active sharing of 3G technology. […].[103]

(148) MBNL does not involve the sharing of the parties' core network elements. The parties' traffic is fully separated. The MBNL agreements are national in scope […].[104]

(149) MBNL manages the design and operation of the shared network, including […].[105] […].[106]

(150) MBNL materially completed the roll-out of the Shared Grid and the Shared 3G RAN in […], and continues today to manage the ongoing operation. In high traffic areas, EE and Three deployed separate 3G networks to deal with the increased traffic. Thus the core objective has been achieved and the arrangement is evolving towards passive site sharing.[107]

(151) Following the merger between Orange and T-Mobile in 2010, EE wished to integrate additional sites into the Shared Grid. It is currently intended that around […] sites will be maintained as part of the Shared Grid ([…]).[108] […].[109] EE also has around […] ex-Orange sites that it holds independently outside the Shared Grid.[110]

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100 Annex 14 to the Form CO, "Details on MBNL arrangements", paragraph 2.1.
101 Form CO, Section 6, paragraph 124.
102 Form CO, Section 6, paragraph 125.
103 Form CO, Section 6, paragraph 125.
104 Form CO, Section 6, paragraphs 126 and 127.
105 Annex 14 to the Form CO, "Details on MBNL arrangements", paragraph 4.2.
106 Annex 14 to the Form CO, "Details on MBNL arrangements", paragraph 4.4.
107 Form CO, Section 6, paragraphs 128 and 131.
108 Form CO, Section 6, paragraph 132.
109 Form CO, Section 6, paragraph 132.
110 Under the commitments given to the Commission at the time of the Orange/T-Mobile merger, EE committed to provide a 3G service to Three as a wholesale customer on 3,000 of these independent sites. Form CO, Section 6, paragraph 132.

(152) According to the Notifying Party, the MBNL agreements do not prevent either party from […]; and/or from […].[111] MBNL agreements allow for […].[112] […].[113] It is also possible under the MBNL agreements for one party to […].[114]

(153) As regards the governance of MBNL, the relationship between EE and the Notifying Party is […].[115] The board of directors of MBNL is responsible for […][116] and takes decisions by […].[117] The parties have […].[118] […].[119]

(154) Certain key decisions of MBNL are […]. These include […].[120] […].[121]

(155) As shareholders, EE and the Notifying Party are required by the MBNL agreements to […]. […][122].

(156) The term of the Co-operation Agreement is […].[123] […].[124]

(157) Termination of the Co-operation Agreement by either EE or the Notifying Party is […]: (a) […];[125] (b) […];[126] (c) […];[127] (d) […].[128]

(158) […].[129]

(159) […].[130] […],[131] […].[132] […].

(160) […]. […]:[133] […]; […]; […]; […]. […].[134]

ii. Beacon

(161) The current Beacon agreements entered into force on […] 2012, replacing previous […] network sharing agreements which had been entered into between Vodafone and O2 on […] 2008 and […] 2009.[135] The main Beacon agreements consist of […].[136] The main rational for entering into the Beacon agreements in 2012 was to implement a network grid optimised for forward looking technology, to allow the rapid

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111 Form CO, Section 6, paragraph 137.
112 Form CO, Section 6, paragraph 141.
113 […].
114 Form CO, Section 6, paragraph 144.
115 […].
116 […].
117 […].
118 Form CO, Section 6, paragraph 129.
119 […].
120 Annex 14 to the Form CO, "Details on MBNL arrangements", paragraph 7.1.
121 Annex 14 to the Form CO, "Details on MBNL arrangements", paragraph 7.1.
122 Form CO, Section 6, paragraph 145.
123 […].
124 […].
125 […].
126 […].
127 […].
128 […].
129 […].
130 […].
131 […].
132 […].
133 […].
134 […].
135 Form CO, Section 6, paragraph 151.
136 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 3.2.

deployment of this grid and the latest technology upon it and to reduce the fixed costs of coverage.[137]

(162) Under the agreements, Vodafone and O2 combine their respective site grids by setting up a non-full function joint venture company, CTIL, to acquire and consolidate the ownership of the parties' shared network sites […] in order to achieve a single integrated grid.[138] In addition, Vodafone and O2 engage in active sharing of assets and transmission via mutual network reliance for 2G, 3G and 4G.[139] Beacon excludes sharing of the parties' core networks, Wi-Fi, corporate systems or fixed broadband.[140]

(163) Presently the Beacon network sharing arrangement is working towards a contractually agreed Single Grid plan of […] sites ([…]) by […].[141] […] of these sites will be based on existing sites used by Vodafone and O2 today and […] of these network sites are already part of the Beacon network.[142]

(164) […], Vodafone and O2 each provide an active network in half of the country and rely on the other party's network for the other half of the country.[143] […], Vodafone operates the network in the West of the United Kingdom including Wales, while O2 operates the network in the East of the United Kingdom, Northern Ireland and most of Scotland.[144]

(165) The host is responsible for the following activities for both O2 and Vodafone in its respective region of the United Kingdom: […].[145]

(166) […].[146] […].[147] […].[148] […].[149]

(167) The Beacon agreements contain certain […] provisions and […]. For instance, the Beacon agreements provide that each party may not […].[150]

(168) As regards the governance of Beacon, under the Shareholders' Agreement, each party […]. Board decisions are taken by […] and […].[151] […].[152]

(169) The executive management of CTIL comprises […]. The CEO is […]. […].[153]

(170) Certain matters are specified as […] and […].[154] […] include […].[155]

(171) CTIL's budget is […]. […].[156]

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137 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 1 (submitted by Telefónica in response to RFI 110).
138 Form CO, Section 6, paragraph 152.
139 Form CO, Section 6, paragraph 152.
140 Form CO, Section 6, paragraph 160.
141 Form CO, Section 6, paragraph 153.
142 Form CO, Section 6, paragraph 153.
143 Form CO, Section 6, paragraph 154.
144 Form CO, Section 6, paragraph 154.
145 Form CO, Section 6, paragraph 154.
146 Form CO, Section 6, paragraph 155.
147 Form CO, Section 6, paragraph 155.
148 Form CO, Section 6, paragraph 155.
149 Form CO, Section 6, paragraph 158.
150 Form CO, Section 6, paragraph 161.
151 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 3.11.
152 Shareholders' Agreement, paragraph 6.11.
153 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 3.11.
154 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 3.11.
155 Shareholders' Agreement, Schedule 2, paragraphs 5 and 8.

(172) […].[157]

(173) […].[158]

(174) […].[159]

(175) […].[160]

(176) […].[161]

(177) The […] term of the […] and the […] is […], following which […]. […].[162]

(178) […].[163]

iii. Site sharing

(179) Finally, all MNOs in the United Kingdom take advantage of the opportunity to use each other's passive infrastructure under a cross-operator site sharing agreement, with approximately […] MBNL sites and over […] (ex-Orange) EE sites currently used by either Vodafone and/or O2; and around over […] Beacon sites shared by Three and/or EE.[164]

6.5.2. Other mobile telecommunications service providers in the United Kingdom

6.5.2.1. MVNOs and branded resellers (together "non-MNOs")

(180) While MNOs own their mobile network, there are other mobile operators in the United Kingdom which offer mobile telecommunications services without having ownership of a network. These are Mobile Virtual Network Operators ("MVNOs") and branded resellers.

(181) MVNOs obtain access to a host MNO's network through a wholesale access agreement and use the host MNO's network to provide their services. There are different types of MVNOs, ranging from so-called "full (thick) MVNOs" that typically own some of the core infrastructure but do not own radio network access or spectrum, to "partial (light) MVNOs", which do not own any network infrastructure. Light MVNOs are also known as service providers.

(182) Branded resellers sell services on behalf of an MNO and do not operate independently on the market. [165]

(183) Figure 11 below shows the ten largest non-MNOs in the United Kingdom by number of subscribers. According to the Notifying Party's estimates, these ten non-MNOs account for 90% of all revenue generated by non-MNOs in the United Kingdom.

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156 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 3.21.
157 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 3.11.
158 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 5.3.
159 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 5.4.
160 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 5.5.
161 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 5.6.
162 Annex 15 to the Form CO, "Details on Project Beacon arrangements", paragraph 3.4.
163 Form CO, Section 6, footnote 124.
164 Form CO, Section 6, footnote 85.
165 The Commission notes that, as opposed to MVNOs and Service Providers, Branded Resellers are not active on the demand-side of this market, as Branded Resellers essentially act as distribution / marketing agents of MNOs. Branded Resellers do not purchase wholesale services with a view to re-selling them. Instead, they limit themselves to distributing mobile telecommunications services on behalf of MNOs using their own brand and their own distribution channels.

(184) For the purposes of this Decision, all mobile operators which do not own their network (that is MVNOs and branded resellers) are referred to collectively as non-MNOs.

Figure 11: The ten largest non-MNOs listed by subscriber number (approximate number of subscribers for the years 2012/2013/2014)

MVNO	Network	Launch	Approximate number of subscribers
Tesco Mobile (jointly controlled by O2)	O2	2003	[1-5] million
Virgin Media	EE	1999	[1-5] million
Lycamobile	O2	2006	[1-5] million
Lebara Mobile	Vodafone	2007	[1-5] million
BT Mobile (business)	EE	2004	[0-4] million
TalkTalk	Vodafone (migrating to O2)	2007	[0-4] million
Amazon Kindle	Vodafone	2009	[0-4] million
Vectone Mobile	EE	2009	[0-4] million
Mobile by Sainsbury's	Vodafone (but termination announced on 14 October 2015)	2013	[0-4] million
Asda Mobile	EE (up to 2013 on Vodafone's network)	2007	[0-4] million

Source: Form CO, Section 6, Table 3.

(185) In the following paragraphs the Commission, first, assesses the regulatory regime relevant for the provision of mobile telecommunications services by non-MNOs, and in particular full and partial MVNOs, and then describe in turn the main non-MNOs.

a) Regulatory regime

(186) As regards the regulatory regime applicable to non-MNOs, one can distinguish between (i) possible obligations with which non-MNOs would have to comply when entering the market in the United Kingdom and (ii) obligations imposed upon MNOs to facilitate market entry of non-MNOs.

(187) As regards the first above-mentioned obligations, in order to enter the market for retail provision of mobile communication services, non-MNOs do not need any particular authorisation or license. Under the European Regulatory Framework[166], the general authorisation for communications providers to provide communications

[166] The EU's regulatory framework for electronic communications is a series of rules which apply throughout the EU Member States. It encourages competition, improves the functioning of the market and guarantees basic user rights.

networks and services may be subject to the conditions specified in the Annex to the Authorisation Directive[167]. In the United Kingdom, pursuant to section 45 of the Communications Act 2003, Ofcom is responsible for setting the conditions for the provision of telecommunication services. These conditions are known as General Conditions and may apply to all communications providers or a particular type of communications provider (for example providers of mobile services). The General Conditions include, for example, rules on sales and marketing to domestic and small business customers, arrangements for number portability between communications networks, and rules for the adoption and use of telephone numbers.

(188) Hence, from a legal perspective, it is sufficient for a new entrant planning to be active as a non-MNO to negotiate a wholesale access agreement with an MNO and to comply with Ofcom's General Conditions.

(189) As regards the second above-mentioned obligations, currently in the United Kingdom no regulatory obligation has been imposed on MNOs with respect to the provision of wholesale access. Ofcom has indicated in its submission that it does not have any current plan to impose obligations in this respect.[168]

b) Main non-MNOs active in the United Kingdom

(190) In this Section, the Commission describes the main non-MNOs active in the United Kingdom with the exception of Tesco Mobile, which has been described in recitals (112) to (114) as part of the description of O2's mobile operations in the United Kingdom.

i. Virgin Media

(191) Virgin Media is a light MVNO. It is the largest cable operator in the United Kingdom, owned by Liberty Global plc. It was launched in 1999 in the United Kingdom, when it was a joint venture between T-Mobile and the Virgin Group. In 2014 it had 3 million customers and GBP 484 million in revenues.

(192) Its host operator is EE. It offers 2G and 3G (but not 4G) mobile services to private customers and 2G, 3G and 4G to business customers. Moreover, Virgin Media has offered fixed line and TV services and bundles of them with mobile services ("quadruple-play services") since May 2014.[169]

(193) […].[170]

(194) Virgin Media sells its mobile subscriptions not only via its own physical retail outlets but also through Dixons retail stores.[171]

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167 Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services (Authorisation Directive), OJ L 108, 24.04.2002, page 21. This directive creates a legal framework to ensure the freedom to provide electronic communications networks and services throughout the European Union.

168 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 2.9 [ID2069].

169 See http://about.virginmedia.com/press-release/9428/virgin-media-goes-big-with-uks-first-true-quad-play-bundles (provided with the access to file on 4 February 2016).

170 […].

171 Liberty Global's response to Questionnaire Q67 to non-MNOs of 4 December 2015, question 19 [ID3206].

ii. *TalkTalk*

(195) TalkTalk is a full MVNO and a large provider of fixed line services in the United Kingdom, serving 4 million fixed line customers. It was founded in 2003 as a subsidiary of Carphone Warehouse plc and was demerged as a standalone company in March 2010.

(196) TalkTalk was launched as an MVNO in 2007, hosted on the Vodafone network. It offers 2G and 3G services. It has recently reached a wholesale agreement with O2, which will enable it to also offer 4G services to its customers, and plans to […]. It launched its first quadruple-play offer in November 2014.

(197) All its mobile products are exclusively available to its broadband customers.[172]

iii. *Other non-MNOs*

(198) *Lebara Mobile* is an international brand with non-MNO operations in various countries, mainly targeting international communities of expatriate workers in eight European countries since 2004. It entered the market in the United Kingdom in 2007. If focuses on low-cost international calls and prepaid services. At the end of 2013, it had approximately 1 million customers in the United Kingdom and offers 4G services.

(199) *Lycamobile* is another non-MNO with a strong focus on international calls and communities with ties to other countries. It launched in 2006 and now has approximately 2 million subscribers (revenues of GBP 50.4 million). Lycamobile has a large international presence (18 countries). In the United Kingdom, Lycamobile is a full MVNO hosted using O2's network and offers 4G services.

(200) *Amazon Kindle* using Vodafone's 3G network for e-book delivery to Kindle users.

(201) *Vectone Mobile* is the United Kingdom's first full MVNO.

(202) *Mobile by Sainsbury's* is a joint venture between Sainsbury's (second largest retailer in the United Kingdom) and Vodafone. On 14 October 2015 it was announced in the press that the Sainsbury's and Vodafone joint venture, the Mobile by Sainsbury's non-MNO will be terminated after a strategy fall out.[173]

(203) *Asda*, owned by the US retailer Walmart, is the United Kingdom's third largest supermarket chain, and operates a non-MNO under the Asda Mobile brand. The Asda Mobile non-MNO was, until 2013 a wholesale customer of Vodafone, but is now hosted on EE's network.

(204) *Dixons* is the largest independent specialist electrical and telecommunication retailer in the United Kingdom, and recently launched an MVNO on Three's network under the brand "iD".

(205) The *UK Post Office*, the largest mail provider in the United Kingdom with over 11 500 branches, launched mobile services in the summer of 2015 on EE's network.

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[172] Data available at: http://www.talktalkgroup.com/~/media/Files/T/TalkTalk-group/2015/Annual%20Report%202015/Annual%20Report%202015%20Final.pdf (provided with the access to file on 4 February 2016).

[173] See http://www mobilenewscwp.co.uk/2015/10/14/mobile-by-sainsburys-pulled-after-two-years-in-service/ [ID1788].

iv. *Expected new entrants*

(206) *Sky*, the United Kingdom's leading Pay-TV provider and a major provider of fixed telecommunication services, plans to launch an MVNO in 2016 providing 2G, 3G and 4G services over O2's network.

(207) UK Broadband Limited ("UKB") is s a wholly owned subsidiary of PCCW Limited, the holding company of HKT Group Holdings Limited, Hong Kong's telecommunications provider. In the United Kingdom it owns spectrum (as shown in Figure 9). UKB builds and operates business-critical LTE wireless networks for business campuses such as Heathrow airport and Felixstowe port. Further, it has built a 4G LTE fixed wireless broadband data network in central London using 3.5 and 3.6 GHz licensed spectrum and offers fixed wireless broadband to consumers and businesses over this network through the "Relish" consumer brand. Relish also offers a mobile data service via a personal Wi-Fi hotspot device. UKB has a roaming agreement with Three, whereby Relish customers can roam onto Three's network when they move outside of the Relish network coverage area. UKB is expanding this LTE network across the Greater London area and intends to expand into other towns and cities in the United Kingdom in 2016.

(208) On 6 April 2016 CTUI and UKB signed a letter of intent setting out their intention to enter into a reciprocal 4G Multi-Operator Core Network ("MOCN") network access agreement in respect of 4G (and future technologies) capacity (the "Reciprocal 4G MOCN Agreement"). The Reciprocal 4G MOCN Agreement is ultimately conditional upon closing of the Transaction.

6.5.2.2. MVNEs and MVNAs

(209) In addition, MNOs provide wholesale access to Mobile Virtual Network Enablers ("MVNEs") and Mobile Virtual Network Aggregators ("MVNAs").

(a) An MVNE is a company that provides network infrastructure and related services, such as network subsystems, business support systems, provisioning, administration and operations support systems to non-MNOs. MVNEs provide systems, processes and technology to enable non-MNOs to produce SIM cards, activate and bill their customers. This enables non-MNOs to offer services to their own customers with their own brands.

(b) MVNAs are resellers of wholesale services, whereby the MVNA purchases mobile airtime in bulk from the MNO and wholesales this airtime to multiple non-MNOs, which in turn supply mobile services to end users. An MVNA has its own master wholesale access agreement, all the necessary infrastructure and hosted systems and can set up a client as their own non-MNO in a much shorter time and at a lower cost than them getting their own wholesale access agreement.

(210) The Notifying Party submits that from a technical and commercial perspective, Three does not distinguish between an MVNA and an MVNE. Both MVNAs/MVNEs are entities which act as intermediaries between the host network (such as Three) and the wholesale MVNO customer.[174]

(211) In practice it is now often the case that intermediaries offer both MVNA and MVNE services to potential wholesale customers in the United Kingdom. The Notifying

[174] Notifying Party's response to RFI 81, question 44.

Party provides as an example Limitless, an intermediary customer of Three which provides MVNA services (that is access to Three's network) to its own MVNO customers. In addition, Limitless may also provide MVNE services to those MVNO customers. An intermediary may be both an MVNA and an MVNE at the same time, but the extent of the services it provides to its customers will vary on a case by case basis.[175]

(212) MVNEs and MVNAs are not mobile operators in the sense that they do not have a relationship with consumers and do not compete on the retail market for mobile telecommunications services, but rather are suppliers of network enablement platforms and/or intermediary wholesale access services.[176] They facilitate non-MNO entry in the market, especially for small non-MNOs.

(213) On the other hand, to the extent that they supply and resell wholesale services from MNOs, MVNEs/MVNAs are customers of the MNOs for wholesale access and call origination. MNOs would respond to a tender from an MVNE/MVNA or negotiate directly in the same way as they would respond to a tender directly from a non-MNO. Thus, the Commission will assess the specific effects of the Transaction related to MVNAs/MVNEs as part of its assessment of the effects of the Transaction to the wholesale market for access and call origination to public mobile networks.

6.6. Parameters of competition at retail level

6.6.1. Notifying Party's view

(214) According to the Notifying Party, for many years the United Kingdom market has been characterised by strong price competition, which has significantly reduced the ARPU[177] for mobile operators. The Notifying Party claims that pricing for mobile services is complex in particular because of the existence of different tariff packages. Even where mobile operators offer tariffs with similar monthly fees, they will typically seek to differentiate their tariff by offering more units, free allowances or add-ons, etc., in order to gain a competitive advantage.

(215) The Notifying Party argues that there are also important non-price aspects which influence a customer's decision in their choice of mobile provider. According to the Notifying Party, there are differing views on the precise range of non-price factors that mobile providers compete on and their relative importance to customers, but the key factors are generally considered to be: (i) network quality; (ii) quality of customer service; (iii) brand; and (iv) handset range.

(216) The Notifying Party also submits that network quality in the United Kingdom is the most important criterion for customers to choose a mobile operator, followed by the quality of the customer service. Price and handset range would be respectively the third and fourth criteria considered by customers. Within network quality, the most important element when assessing network quality is reliability followed by coverage and data speeds.

(217) Given network quality is such a key component in consumers' perception of a network operator, the Notifying Party expects that its principal components, such as

175 Notifying Party's response to RFI 81, question 44.

176 Therefore for the purposes of this Decision they are not included in the reference to "non-MNOs".

177 Average revenue per user. It is a measure used primarily by consumer communications and networking companies, defined as the total revenue divided by the number of subscribers.

coverage, capacity, average data speeds and reliability, will be increasingly important in consumers' choice of provider.

6.6.2. *Commission's assessment*

(218) The Commission has investigated the relative importance of different parameters of competition in the retail market for mobile telecommunications services in the United Kingdom. To this aim it has contacted not only the Parties' competitors, but it has also interviewed retail customers in the context of the Survey.[178]

(219) On the basis of the results of the market investigation, the Commission considers that price is a primary parameter of competition, in particular as regards data allowances.[179]

(220) The results of the Survey, summarised in Figure 12 below, clearly indicate the significant role of price as a parameter of competition in the United Kingdom.

Figure 12: Relative importance of factors considered by customers in their choice of mobile operator

Customers of	Criterion	% Responses
	Postpaid private customers	
H3G	Ability to provide a landline	1,4%
H3G	Quality of the customer service	4,8%
H3G	Handsets range and quality	6,8%
H3G	Brand has good reputation	9,3%
H3G	Network performance	10,8%
H3G	Network reliability	13,3%
H3G	Attractiveness of the price plan	53,6%
O2	Ability to provide a landline	
O2	Handsets range and quality	5,4%
O2	Brand has good reputation	10,3%
O2	Quality of the customer service	10,9%
O2	Network reliability	13,8%
O2	Network performance	17,0%
O2	Attractiveness of the price plan	42,6%
Tesco Mobile	Ability to provide a landline	0,6%
Tesco Mobile	Handsets range and quality	3,2%
Tesco Mobile	Quality of the customer service	5,0%
Tesco Mobile	Brand has good reputation	6,5%
Tesco Mobile	Network performance	8,5%
Tesco Mobile	Network reliability	11,2%
Tesco Mobile	Attractiveness of the price plan	65,0%
	Prepaid private customers	
H3G	Ability to provide a landline	2,6%
H3G	Handsets range and quality	5,1%
H3G	Quality of the customer service	5,1%
H3G	Brand has good reputation	8,2%

178 In this regard see Section 5.
179 See paragraph (62) above.

H3G	Network performance	15,3%
H3G	Network reliability	15,3%
H3G	Attractiveness of the price plan	48,5%
O2	Ability to provide a landline	1,5%
O2	Handsets range and quality	4,3%
O2	Quality of the customer service	5,7%
O2	Brand has good reputation	5,8%
O2	Network performance	12,8%
O2	Network reliability	14,6%
O2	Attractiveness of the price plan	55,2%
Tesco Mobile	Ability to provide a landline	2,1%
Tesco Mobile	Handsets range and quality	5,9%
Tesco Mobile	Brand has good reputation	6,9%
Tesco Mobile	Quality of the customer service	8,7%
Tesco Mobile	Network performance	12,1%
Tesco Mobile	Network reliability	14,1%
Tesco Mobile	Attractiveness of the price plan	50,3%

Source: Responses to the Survey, question 7.[180]

(221) As shown by Figure 12 above, a high proportion of customers participating in the Survey, both prepaid and postpaid, consistently considered the attractiveness of the price plan as the most important criteria in their choice of mobile operator. On the basis of the responses to the Survey, network performance related criteria are second in terms of importance for customers' choice, brand is the third and customer service the fourth.

(222) The Commission considers that this result does not contradict, but is in line with the evidence submitted by the Notifying Party. In particular, Enders Analysis' 2014 survey shows that network reliability, customer service and price are the most important parameters of competition for customers and that the importance of price is relatively stable.[181]

(223) Moreover, the results of the Survey are in line with Ofcom's 2015 CMR, according to which in a survey carried out by YouGov,[182] 44% of respondents said that price was the most important factor when choosing a 4G plan. Figure 13 below, taken from Ofcom's 2015 CMR, shows the rankings that respondents gave to six factors when choosing a 4G contract. The factors were scored 1 to 6, with 1 being the most important and 6 the least. Price was the most important factor overall, being ranked 1 by 44% of respondents. In comparison, contract length was seen as least important, ranked 1 by only 6% of respondents and ranked 5 or 6 by 57%. Unlimited

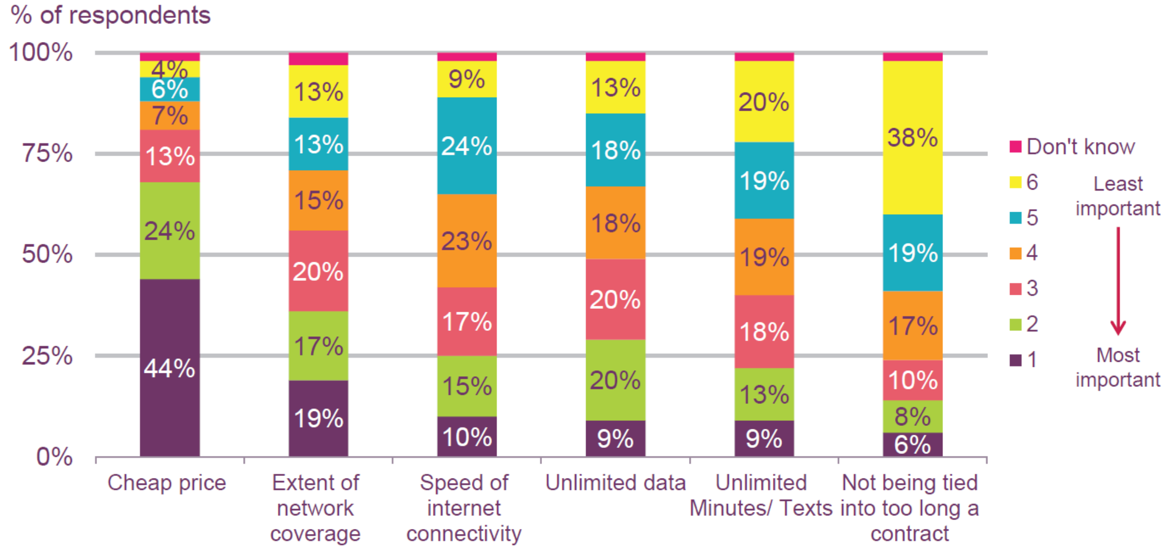
180 Customers were asked to identify which factor they took into account in the choice of their current prepaid or postpaid mobile subscription. If they indicated to have considered more than one option, customers were asked to identify which factor was the most important in their choice.

181 Annex 100 to the Form CO, page 11 and 15. This survey was based on the interview of 878 mobile users. At page 19 the report states that "*the relative hierarchy of priorities does not necessarily correspond to a low-value user segment*," for which then price could have a higher importance than the other parameters. In Enders Analysis sample over 55% of the switchers had an high end iPhone or premium Android smartphone, while smartphone users represented 74% of the mobile user at the time of the survey and 43% of then had an high end iPhone or premium Android smartphone.

182 Yougov is an international internet-based market research firm.

minutes/texts, unlimited data and speed of internet connectivity were similar in rankings, ranked at 1 by 9%, 9% and 10% of respondents respectively. Network coverage was ranked higher; 19% of respondents stated that this was their most important factor.

Figure 13: Importance of factors when deciding to take up a 4G plan

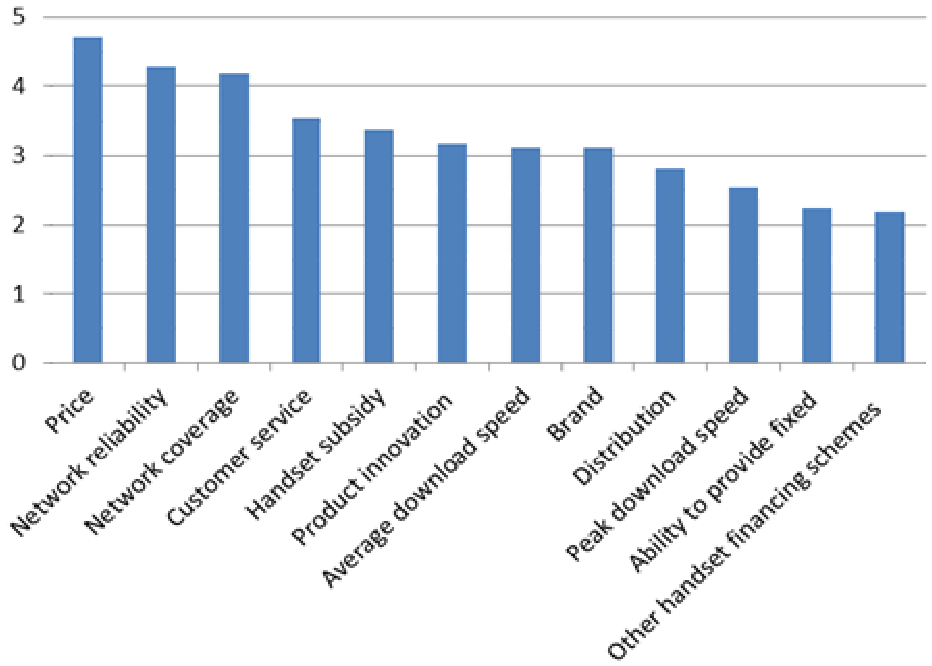


Source: YouGov, 4G tariffs 22-28 May 2015
Base: Online UK adults 16+ who do not currently have 4G (388)
Q40. Which of these would be most important when deciding which 4G plan to take up? Please put in rank order of 1-6 where 1 = most important and 6 = least important.

Source: Ofcom's 2015 CMR, Figure 4.7 [ID4159].

(224) Figure 14 below provides an overview of the replies of the Parties' competitors with respect to the relative importance of different parameters of competition.

Figure 14: Relative importance of parameters of competition



Source: Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 23 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 24.[183]

(225) According to the majority of the Parties' competitors, the most important parameter of competition is price. Network performance related parameters, and in particular reliability and coverage, are respectively the second and third most important parameters of competition, followed by customer service and handset subsidy. Download speed plays a less important role in driving customer choice. The limited interest of customers for multi-play products in the United Kingdom is evidenced by the low rating obtained by the ability of a provider to provide fixed telecommunications services as parameter of competition: indeed, the majority of respondents rated such parameter with the lowest level of importance.[184]

(226) The majority of the Parties' competitors consider that all of these parameters will remain stable in the future in terms of their relative importance, with the exception of (average and peak) download speed, the importance of which is likely to grow in the next two to three years.[185]

(227) In light of the above, whilst the Commission cannot exclude that the importance of network performance related parameters would grow in the next future, as the Notifying Party claims, it also considers that price would continue to be a very important parameter guiding customers' choice.

183 MNOs and non-MNOs were asked to rate the current importance of the various competitive parameters in the United Kingdom retail market for mobile telecommunications services (that is to say the relative importance of those factors for private customers' decision of what provider to choose). Rating had to be provided on a 5-point scale ranging from very unimportant (1) to very important (5).

184 Responses to Questionnaire Q26 to MNOs of 11 September 2015, questions 24 and to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 23.

185 Responses to Questionnaire Q26 to MNOs of 11 September 2015, questions 25 and to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 24.

6.7. Mobile telecommunications infrastructure in the United Kingdom

(228) Communication towers provide the essential passive infrastructure on which public communication network operators such as MNOs and other network operators place active equipment which is used to transmit data to enable mobile and other network services.

(229) There are approximately 27 thousand communications towers in the United Kingdom. These are owned by the MNOs which own and control them primarily for their own network purposes, as well as by independent wireless infrastructure providers, known as "TowerCos" (such as Arqiva, the Wireless Infrastructure Group ("WIG") and Shere Group). MBNL and CTIL rely on MNOs' request for access to passive assets to develop their national RANs. Whilst the majority of those assets are owned and/or managed by the joint venture themselves, part of their networks also rely on access to assets and infrastructure services provided by these independent TowerCos. [186]

(230) TowerCos develop, acquire and operate communications towers, providing the passive infrastructure needed for telecommunications and media services to be provided to end users. Their specific infrastructure services include site share (the main product provided by the TowerCos which comprises the provision of space towers, masts or rooftops for wireless network operator customers to install their network equipment, including equipment cabins or cabinets on the ground), as well as installation services, power management, site access etc. [187]

(231) As shown in the Figure 15 below,[188] in the United Kingdom, about a third of the passive wireless infrastructure is under the control of the TowerCos. Approximately [60-70]% remains under the control of the two network shares (MBNL and CTIL), established and controlled by the MNOs.[189]

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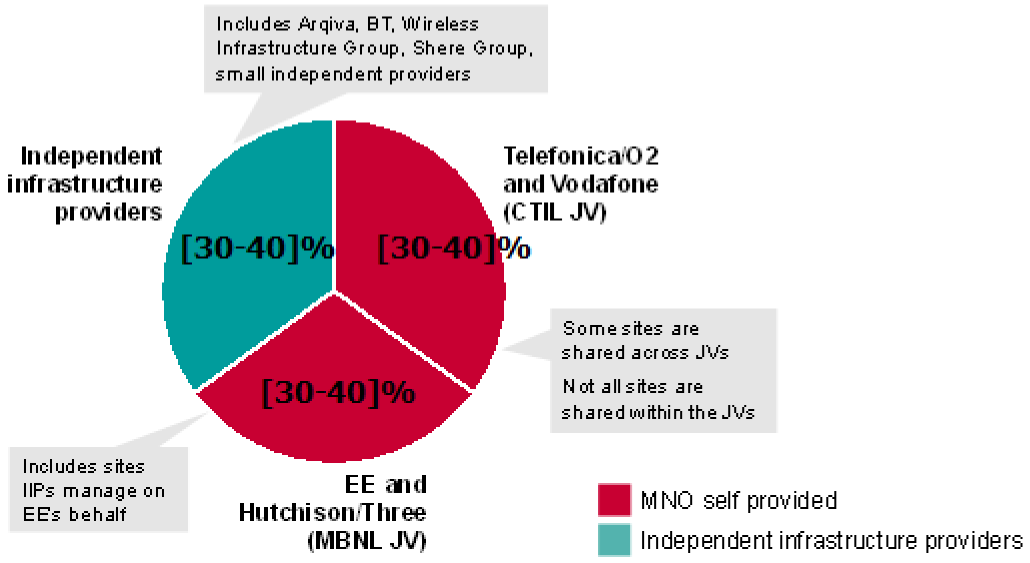
186 […].

187 […].

188 […].

189 Another [0-5]% is owned by others.

Figure 15: Market share of mobile microsites in the United Kingdom



[ ]

Source: […].

6.8. Distribution system

(232) MNOs and non-MNOs sell mobile contracts to end customers directly through their own retail outlets, online or by telemarketing. They also sell mobile contracts indirectly through independent retailers, with those retailers selling mobile subscriptions through their own retail stores, online and through telesales.

(233) Within independent retailers, a distinction can be drawn between independent specialist retailers, on the one hand, and generalist retailers and specialist electrical retailers, on the other hand.

(234) Generalist retailers and specialist electrical retailers sell mobile connections and handsets as a small proportion of their overall sales of other products (e.g. Asda and Argos).

(235) Independent specialist retailers are retailers that specialise in the sale of mobile phone connections and handsets, have large networks of stores and account for significant volumes of connections. At the beginning of 2014 there were two large independent specialist retailers: Phones 4U and Dixons. Dixons is the result of the merger between Carphone Warehouse plc and Dixons Retail plc, a transaction which was cleared by the Commission on 25 June 2014.[190] Phones 4U was a large independent specialist retailer in the United Kingdom created in 1996. On 14 September 2014, Phones 4U went into administration[191] following subsequent decisions by O2, Vodafone and EE to not renew their connectivity agreements with the company. As a result, Dixons is currently the sole remaining large independent specialist retailer.

(236) Independent specialist retailers sell mobile contracts on behalf of MNOs, offering similar packages to those sold by MNOs through their direct distribution channels.

190 Commission decision of 25 June 2014 in case No M.7259 – *Carphone Warehouse/Dixons.*
191 Administration is a procedure under insolvency laws applicable to companies.

The independent specialist retailer receives a commission for each MNO contract entered into from the relevant MNO. This commission is the margin of the independent specialist retailer. Often independent specialist retailers pass-on part of this margin to their customers, for example through discounts, cheaper handsets etc., which means that they can offer highly competitive offers. Therefore, independent specialist retailers' business models consist in targeting the same mainstream customers as the MNOs and in particular customers who purchase a handset and contract for voice and data.

(237) In addition, independent specialist retailers act as a price comparison hub for different tariff plans between MNOs and provide advice to help customers make informed choices between MNOs. Therefore, their business model is predicated upon their ability to provide choice, which requires it to be able to secure connectivity agreements with several MNOs.

7. RELEVANT MARKETS

7.1. Analytical framework

(238) Market definition is a tool to identify and define the boundaries of competition between firms.[192] It has both a product and a geographic dimension.

(239) A relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable, by reason of the products' characteristics, their prices and their intended use.[193] In determining the relevant product market, the Commission assesses demand substitution by determining the range of products which are viewed as substitutes by the consumers.[194] Demand-side substitutability is the focus of the Commission's assessment when defining the relevant markets. The Commission may also take into account supply-side substitutability, namely when its effects are equivalent to those of demand substitution in terms of effectiveness and immediacy.[195] This is the case when suppliers are able to switch production to the relevant products and market them in the short term without incurring significant additional costs or risks in response to small and permanent changes in relative prices.

(240) The relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas.[196]

(241) It is within the analytical framework set out in recitals (238) - (240) that the Commission considered the definitions of the relevant markets to assess the Transaction.

(242) Based on the overall evidence in its file, the Commission considers that the Transaction is likely to significant impede effective competition with respect to the

[192] Commission Notice on the definition of relevant market for the purposes of Community competition law ("Market Definition Notice"), OJ C 372, 09.12.1997, paragraph 2.
[193] Market Definition Notice, paragraph 7.
[194] Market Definition Notice, paragraph 15.
[195] Market Definition Notice, paragraph 20.
[196] Market Definition Notice, paragraph 7.

provision of retail mobile telecommunications services and wholesale services for access and call origination on public mobile telephone networks in the United Kingdom. Therefore, in the following section only the product and geographic markets relating to these services are defined.

7.2. Retail mobile telecommunications services

(243) The Parties' activities overlap in the provision of retail mobile telecommunications services, that is to say the provision of subscriptions to access public mobile telecommunications networks to end users. Such access allows different types of communications services, that is to say make voice calls, send and receive text messages and use mobile data. End users can use their subscriptions for telecommunications within the Member State where their provider is authorised to provide mobile telecommunications services. End users can also use their subscriptions for telecommunications when abroad, by "roaming" on the network of another mobile operator. Finally, end users can use their subscriptions for international telecommunications, for example to call abroad. All these services may be included in a mobile subscription, subject to specific tariffs or included in a bundle.

7.2.1. Product market definition

7.2.1.1. Notifying Party's view

(244) The Notifying Party considers that there is one single product market for retail mobile telecommunications services. Hence, the Notifying Party submits that no distinction should be made between prepaid and postpaid services or according to the type of customer, for instance between private customers and business customers. Likewise, the Notifying Party submits that it is not appropriate to sub-divide the market for retail mobile telecommunications services neither on the basis of the type of technology used in the mobile networks (such as 2G, 3G and 4G), nor on the basis of the type of service (voice, SMS, MMS and data).

(245) Furthermore, the Notifying Party considers that handset contracts and SIMO contracts are regarded as substitutable by consumers, and therefore belong to the same economic market. In the Notifying Party's view, a handset contract is effectively a bundle of two products - an airtime contract (for minutes, text and data), bundled with a handset finance plan. Increasingly, customers are choosing to unbundle these components and purchase them separately.

(246) Therefore, in the Notifying Party's view, the growth in the penetration of SIMO contracts over recent years is not indicative of the emergence of a new market segment, but rather demonstrates that customers who have a variety of options for purchasing their handsets separately from their airtime contract. To support this argument, the Notifying Party points to data from the Kantar Worldpanel survey showing that significant switching takes place between the SIMO and contract handset: in the 12 months to December 2014, around 40% of switchers from contract handset chose to move to a SIMO option and around 70% of switchers from SIMO chose to move to a contract handset option.[197]

[197] Three's response to RFI 60, question 1.

(247) In relation to distribution channels, the Notifying Party considers that distribution by physical shops and distribution by online channels are substitutable by consumers and therefore belong within the same economic market.[198]

(248) As regards the distinction by type of service, the Notifying Party submits that, given recent developments, the question arises whether so-called Over The Top ("OTT", such as Viber, WhatsApp or Skype) services form part of the same product market for retail mobile telecommunications services. According to the Notifying Party, OTT messaging and voice services are increasingly seen by customers as an alternative to traditional mobile voice and SMS services. However, the Notifying Party submits that this question can be left open as long as the impact of OTT services is taken into account as part of the competitive assessment.

(249) Further, the Notifying Party submits that bundled offers including dual-play (fixed/mobile), triple-play (mobile/fixed/broadband) and quad-play (fixed/mobile/ broadband/television) are playing an important role in competition in the United Kingdom and are poised to have an ever-increasing role following new entry and expansion of fixed-line players into the mobile market. The Notifying Party submits that competition from such multi-play offers is a relevant factor which should be taken into account in assessing the effects of the Transaction. Nonetheless the Notifying Party submits that it can be left open whether multi-play bundles with a mobile component constitute a separate product market as the Parties are not currently offering any bundles.

(250) Finally, the Notifying Party submits that recent technological developments are blurring the formerly clear distinction between mobile and fixed telecommunications services. This is in particular because fixed-line is developing towards providing a wireless and thus more mobile service by means of an increasing number of Wi-Fi hotspots outside the home. Moreover, with the roll out of 4G services, mobile data services are available at high-speed. Nonetheless the Notifying Party submits that the question of whether the relevant product market already includes both fixed and mobile telecommunications services (or would do so in a few years) can be left open.

(251) In conclusion, the Notifying Party submits that, in line with the Commission's decisional practice regarding mobile telecommunications services,[199] the relevant product market is a single market for retail mobile telecommunications services to end customers.

7.2.1.2. Commission’s assessment

a) Retail fixed vs mobile telecommunications services

(252) Consistent with its previous decisional practice in the mobile telecommunications sector, the Commission considers that mobile telecommunications services constitute

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198 Three's response to RFI 60, question 8.

199 The Notifying Party refers to Commission decision of 2 July 2014 in case M.7018 – *Telefónica Deutschland/E-plus*, recitals 30 to 71; Commission decision of 28 May 2014 in case M.6992 – *Hutchison 3G UK/Telefónica Ireland*, recital 141; Commission decision of 12 December 2012 in case M.6497 – *Hutchison 3G Austria/Orange Austria*; Commission decision of 1 March 2010 in case M.5650 – *T-Mobile/Orange*; Commission decision of 27 November 2007 in case M.4947 – *Vodafone/Tele2 Italy/Tele2 Spain*; Commission decision of 26 April 2006 in case M.3916 – *T-Mobile Austria/Tele.ring*; Commission decision of 24 September 2004 in case M.3530 – *TeliaSonera/Orange*; and Commission decision of 16 September 2003 in case M.3245 – *Vodafone/Singlepoint*.

a separate market from fixed telecommunications services.[200] Indeed, among other things, mobile services provide end users with different functionalities from those offered by fixed services, in particular with the ability to communicate on the go. This is supported by the results of the market investigation: the overwhelming majority of respondents stated that fixed and mobile services are complementary rather than substitutable. This is because there are still important differences in terms of functionality of the two services, one being stationary and the other allowing communications "on-the-move". Moreover, with respect to data services, respondents explain that mobile services are still characterized by usage caps, slower speeds and higher prices compared to fixed broadband.[201]

(253) The Commission also considers that mobile telecommunications services constitute a separate market from public Wi-Fi services. Indeed, mobile telecommunications services cannot be substituted by public Wi-Fi services, given in particular the differences in terms of geographic coverage and quality. The majority of respondents to the market investigation explain that, while customers can and do choose to offload data on public Wi-Fi hotspots in certain situations, public Wi-Fi and mobile services are complementary. This is because, while mobile network coverage is largely ubiquitous across the United Kingdom, public WiFi connectivity services are primarily focused on towns and city centres and even there the density of public Wi-Fi networks is not sufficient to enable them to be substitutable for mobile telecommunications services. Moreover, public WiFi services cannot compare in terms of quality with mobile services. Indeed, public WiFi services in the United Kingdom are provided over unlicensed spectrum, which everybody (every company and private person) has the right to use, therefore congestion issues cannot be controlled. By contrast, mobile services are provided over licensed spectrum, meaning that a MNO has much greater control over the quality of service. For these reasons the overwhelming majority of respondents stated that public Wi-Fi and mobile services are complementary.[202] Finally the Commission notes that public Wi-Fi services are still a very limited phenomenon compared to mobile services. Indeed, according to the Ofcom 2014 infrastructure report, the volume of data on public Wi-Fi networks is relatively small: in June 2014 there were 44 million GB of data transferred on mobile networks, compared to 2.2 million GB on the public Wi-Fi networks (comprising around 42 000 hotspots).[203] Moreover, […] explains that "usage of public WiFi hotspots by mobile customers is falling as a proportion of total usage, as MNOs and mobile customers favour the use of MNOs' 4G networks – in other words, consumption of data over mobile networks is growing faster than consumption of data via public WiFi hotspots. […] expects this to continue as 4G uptake continues and 4G coverage becomes more widely available."[204]

[200] Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recital 64.

[201] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 5 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 5.

[202] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 7 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 7.

[203] Ofcom's Infrastructure Report 2014, figures 64 and 71. See also Ofcom, Anticipated acquisition by BT plc of EE Limited. Ofcom's Phase 2 submission to the CMA. Non confidential version, submitted to the CMA on 31 July 2015, available at: https://assets.digital.cabinet-office.gov.uk/media/55cc79abe5274a547300002f/Ofcom_Phase_2_submission.pdf, paragraph 3.62 (provided with the access to file on 4 February 2016).

[204] […].

(254) As discussed in Section 6.3, mobile telecommunications services can be offered in combination with fixed services, such as fixed-line telephony and fixed-line internet access, as well as TV services. Combined offerings of these services are sometimes referred to as dual, triple or quadruple play offers (depending on the number of offers included in the package), or collectively as multiple-play offers. In previous decisions the Commission has so far left open the question as to whether a separate market for multiple-play offers comprising, e.g. fixed internet access, fixed telephony and TV (triple play) or fixed internet access, fixed telephony, TV and mobile services (quadruple play), should be defined.[205] The Commission notes that, as explained in recital (63), in 2014 take up of multi-play offers including a mobile component has remained low at 2% of households in the United Kingdom.[206] Respondents to the market investigation confirm that consumers in the United Kingdom have shown little interest to date in fixed-mobile bundles and uptake has therefore been relatively modest.[207] In this regard, […] explains that the "*limited uptake of fixed-mobile bundles reflects the fact that mobile services are purchased on a different purchasing cycle to fixed services and, in the consumer segment, on an "individual" basis, rather than a "household" basis. The purchasing cycle for mobile contracts is also different to that of fixed services such as broadband, as it is driven by factors such as new handset launches.*"[208] Moreover, the Commission notes that the Parties do not offer any multi-play fixed-mobile bundles in the United Kingdom. Therefore, the Commission concludes that, for the assessment of the effects of the Transaction, it is not necessary to define a separate product market for multiple-play offers including a mobile component, as it would not change the competitive assessment. Indeed, if fixed-mobile bundles were to be a separate market, the Parties' activities would not overlap, nor would the merged entity be active, on that market, while, if fixed-mobile bundles were included in the retail market for mobile telecommunications services, then the Transaction would still give rise to a significant impediment to effective competition in the internal market. The Commission will nonetheless analyse in its competitive assessment the possible impact of fixed/mobile convergence on competition in the retail market for mobile telecommunications services.

b) Segmentations within the retail market for mobile telecommunication services

(255) As regards the retail market for mobile telecommunication services, in previous decisions, the Commission did not further divide this market by type of service (voice, data, SMS), by type of network technology or end-user. The Commission therefore assessed previous cases on the basis of a single market for the provision of mobile telecommunications services to end customers.[209]

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205 Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recital 59; Commission decision of 21 October 2011 in case No M.5900 – *LGI/KBW*, paragraph 186; Commission decision of 13 February 2010 in case No M.5734 – *Liberty Global Europe/Unitymedia*, paragraph 48.

206 Ofcom's 2015 CMR, Figure 1.14 [ID4159].

207 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 11 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 11.

208 […].

209 Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recitals 31 to 55; Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*, recital 141; Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 58.

(256) In line with the approach adopted in its previous decisions, the Commission has assessed whether the same considerations remain valid in respect of the provision of mobile telecommunications services at the retail level in the United Kingdom.

(257) Moreover, the analysis of the internal documents submitted by the Parties has shown the possible competitive significance of a segmentation between SIMO and handset contracts and therefore during the phase II investigation the Commission has investigated whether a distinction between SIMO and handset contracts should be made.

(258) Finally, the market investigation has revealed the importance of independent distributors of retail mobile telecommunications services in the United Kingdom. Therefore, the Commission has investigated whether segmentation on the basis of distribution channels would be appropriate when assessing the effects of the Transaction.

i. Type of technology (2G, 3G and 4G)

(259) In previous decisions the Commission rejected a finding of separate markets for the provision of retail mobile communication services according to the network technology used (2G, 3G or 4G) in view of the limited customer differentiation between different types of technology and the fact that, in those cases, all MNOs offered a combination of mobile services over networks using all technologies.[210]

(260) The Commission notes that all MNOs[211] and some non-MNOs in the United Kingdom offer 4G services in parallel with 2G and 3G services at no extra surcharge.[212] Spectrum allocations in the United Kingdom are technology neutral. Further, customers are served with all types of technology with no distinction: importantly, customers moving from an area of coverage by one type of network technology to another will experience continuity in the mobile services available to them.

(261) Therefore, in line with its previous decisions, for the purpose of the present case, the Commission concludes that the market for the provision of retail mobile telecommunications services should not be segmented according to the type of technology.

ii. Voice, SMS and data services

(262) In previous cases, the Commission considered that it would not be appropriate to define separate markets for voice services, SMS/MMS services and data-only services, due to the fact that all providers offer all these types of services to their customers.[213]

(263) The Commission notes that, in the United Kingdom, voice communication, SMS/MMS and data services are often provided together in the same mobile

[210] Commission decision of 1 March 2010 in case No M.5650 – *T-Mobile/Orange*, paragraph 24 (with respect to 2G and 3G); Commission decision of 26 April 2006 in case No M.3916 – *T-Mobile Austria/tele.ring*, recital 18 (2G and 3G); Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 43 to 46 (2G, 3G and 4G); Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recitals 46 to 50.

[211] Accounting for close to 90% of all the retail subscriptions in 2014. See Figure 19.

[212] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 12 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 12.

[213] Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recitals 53 to 55.

subscription. Ofcom data shows that most mobile telecommunications subscriptions are sold as a bundle with voice, data and unlimited SMS/MMS, while mobile broadband only subscriptions still account for about 5% of the total number of mobile subscriptions, as indicated in Section 6.3. Therefore it does not appear appropriate to distinguish separate markets on the basis of the type of service, as all services are normally provided jointly and the parameters of competition are the same for all types of services. Therefore, in line with previous decisions, for the purpose of the present case, the Commission concludes that no separate markets should be defined for the provision of voice, SMS/MMS and data services.

(264) As regards substitutability between OTT services and mobile services, the views of mobile operators responding to the market investigation were mixed. As regards SMS services, a clear majority cannot be established between those respondents that consider OTT instant messaging as substitutable to SMS and those who are of the opposite view. Nonetheless, respondents stated that there are still many differences between the two services, including in terms of functionality and interoperability (for example, Viber users cannot communicate with WhatsApp users, customers of one MNO can communicate with customers of another MNO or non-MNO).[214] As regards mobile voice services, the majority of respondents do not consider that they can be substituted by OTT voice services, as the latter are not yet sufficiently developed to constitute a viable alternative to mobile voice services.[215] In any event, respondents to the market investigation explained virtually unanimously that, in order to use OTT services, a data connectivity (be it fixed or mobile) is always needed.[216]

(265) Therefore, the Commission considers that, for the purposes of the assessment of the effects of the Transaction, OTT services cannot be considered to be part of the same product market as retail mobile telecommunications services. Indeed, OTT services cannot substitute mobile telecommunications services, as OTT services rely on mobile telecommunications (data) services (and fixed broadband services) to function. As they depend on data services to function and voice, SMS and data services are part of the same market, OTT services cannot substitute mobile telecommunications services. Moreover, the Commission considers that the out-of-the-market constraint exerted by OTT services, in particular on text messaging, is not relevant for the assessment of the effects of the Transaction. Competition in the mobile market in the United Kingdom is increasingly "data centric", that is to say based on sale of data packages,[217] which are used by OTT services, who do not sell data packages in competition with MNOs.

iii. Prepaid and postpaid services

(266) Postpaid mobile telecommunications services are those charged after services have been used, whilst prepaid mobile telecommunications services are those for which payment is made before services are used.

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214 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 8 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 8.

215 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 9 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 9.

216 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 10 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 10.

217 See paragraphs (61) and (62).

(267) In its decisional practice, the Commission found that the distinction between prepaid and postpaid services is becoming blurred due to the development of different types of offers.[218] It also found that postpaid services are often combined with handset promotions, whereas prepaid services are not.[219] Finally, the Commission concluded that both types of services are part of the same market in view of supply-side substitution.[220] At the same time, in previous decisions the Commission distinguished the effects that a transaction can have also at the level of the postpaid and prepaid segments.[221]

(268) In the present case, the Commission notes that the distinction between prepaid and postpaid services is also becoming blurred in the United Kingdom: on the demand side, customers are increasingly trying to avoid longer binding periods by purchasing SIMO postpaid contracts (see recital (52)), and, on the supply side, this trend is pushing mobile providers to offer postpaid contracts with shorter binding periods (as explained in recital (93), some mobile providers in the United Kingdom offer postpaid contracts with binding period of only one month). Ofcom also points to giffgaff's tariffs as innovative products which exemplify the blurred distinction between prepaid and postpaid services.[222]

(269) Nonetheless, on the basis of the results of the market investigation, the Commission considers that prepaid and postpaid services may not be substitutable from the demand side. In this regard, the majority of respondents to the market investigation stated that customers would not switch from one type of service to the other in the event of a 5-10% price increase, in particular subscribers of postpaid services would not be prompted to switch to prepaid services in the event of such a price increase.[223] This is because there are other non-price related reasons that push customers to select one type of mobile subscription over another (such as cost control, convenience, etc.): therefore a 5-10% price increase would not be sufficient to make customers switch. By contrast, however, on the supply side, the majority of providers of mobile services responding to the market investigation stated that they could easily switch supply from prepaid to postpaid services and vice-versa in response to a price

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[218] Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 38 and 39; Commission decision of 1 March 2010 in case No M.5650 – *T-Mobile/Orange*, paragraph 21.

[219] Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 40.

[220] Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*, recital 143; Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 41; Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recital 39.

[221] For example, see Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*.

[222] Ofcom, Phase 2 submission, "Closeness of competition between Three and giffgaff" [ID 3704]. In particular, Ofcom considers that giffgaff's "recurring goodybag" tariff should be better qualified as a post-paid contract.

[223] Responses to Questionnaire Q26 to MNOs of 11 September 2015, questions 17 and 18, and Questionnaire Q27 to non-MNOs of 11 September 2015, questions 16 and 17. See also responses to Questionnaire Q28 to Business Customers of 11 September 2015, questions 12 and 13.

increase.[224] Moreover, all MNOs and a number of non-MNOs already offer both prepaid and postpaid subscriptions.[225]

(270) Therefore, taking the elements set out above in their entirety, in line with its previous decisions, for the purposes of the present case, the Commission concludes that prepaid and postpaid services do not constitute separate product markets, but rather constitute market segments within an overall retail market for the provision of mobile telecommunications services.

iv. SIMO and handset subscriptions

(271) As shown in Section 6.1., in the last few years a shift can be seen from contracts including a handset to SIMO contracts, that is to say pure mobile subscriptions not including the purchase of a handset and which offer lower monthly payments, and shorter binding periods. SIMO and handset contracts can be both postpaid and prepaid.

(272) The Commission has not looked into these sub-segments in previous cases.

(273) In the present case, the market investigation has shown that from a supply-side perspective all MNOs and the largest non-MNOs (accounting for virtually the totality of the market by either metric[226]) offer both SIMO as well as handset subscriptions.

(274) From the demand-side perspective the large majority of respondents also pointed out that there is a high degree of substitution between SIMO and handset contracts, and that consumers would switch in response to a material increase in price of either type of contract.[227] […] commented that: "*These two contract types are most substitutable for customers that:*

- *are able and willing to buy a phone outright – and hence can choose between either type of contract because they do not need to spread the cost of the handset over time; and/or*
- *are 'in the balance' between choosing to upgrade their handset, or continuing to use their existing one.*"[228]

(275) The Parties' internal documents do show, however, that MNOs in the United Kingdom monitor the trend in SIMO and handset contracts separately and that the competitive dynamics are somewhat different, with Three for example having a greater share of SIMO than Vodafone, while with respect to other segments and with respect to the provision of mobile services to all private customers Three and Vodafone are respectively the fourth and third player.[229] Therefore, taking the elements set out above in their entirety, for the purposes of the present case, the Commission concludes that SIMO and handset subscriptions do not constitute separate product markets, but rather constitute market segments within an overall retail market for the provision of mobile telecommunications services.

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224 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 16 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 15.

225 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 15 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 14.

226 See Section 8.2.1.2.a).

227 […]Responses to Questionnaire Q67 to non-MNOs of 4 December 2015, question 1, […].

228 […].

229 See Section 8.2.1.2.

v. Private and business customers

(276) Providers of mobile telecommunications services normally offer for sale mobile subscriptions directed at private (or residential) customers and other subscriptions directed at business customers. While private subscriptions can offer prepaid or postpaid services, business subscriptions are only postpaid.

(277) In its decisional practice, the Commission has found that private and business customers present differences from the demand side.[230] However, in all those cases the Commission did not identify separate markets for the provision of retail mobile telecommunications services to private customers and to business customers. This was principally due to supply-side substitutability considerations. Moreover, in those cases the activities of the operators involved overlapped only to a limited extent with respect to business customers.

(278) In the present case, the results of the market investigation suggest that there are differences between services provided to business and private customers in view of the different requirements of the two customer groups.[231] A distinction could potentially also be drawn between large and small business customers, so as to take into consideration their difference in size, requirements and purchasing mechanism. Nonetheless, the replies of business customers were not conclusive as regards their likely reaction in response to a 5-10% price increase of business subscriptions.[232] By contrast, the majority of providers of mobile services responding to the market investigation stated that they could easily switch supply between the supply of business and private subscription services in response to a price increase.[233]

(279) Therefore, for the purpose of the present case, the Commission concludes that mobile services to business and private customers do not constitute separate product markets, but rather market segments within an overall retail market for the provision of mobile telecommunications services.

vi. Distribution

(280) In its past decisional practice, the Commission did not examine in detail the different distribution channels for the retail sale of mobile subscriptions, but it looked into the retail sale of mobile phones and tablets in the United Kingdom when assessing the merger between Carphone Warehouse plc and Dixons Retail plc.[234]

(281) As regards the distribution channel, in that case the Commission considered a distinction between brick-and-mortar shops (also known as "offline retailing") and home shopping (in particular online shopping). However, the decision in that case left the exact product market definition open.

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[230] Commission decision of 1 March 2010 in case No M.5650 – *T-Mobile/Orange*, paragraph 21; Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 34 and 35; Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*, recital 149; and Commission decision of 2 July 2014 in case M.7018 – *Telefónica Deutschland/E-Plus*, recitals 34 and 35.

[231] Responses to Questionnaire Q28 to Business Customers of 11 September 2015, questions 8 and 9. See also responses to Questionnaire Q26 to MNOs of 11 September 2015, question 22 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 21.

[232] Responses to Questionnaire Q28 to Business Customers of 11 September 2015, questions 14 and 15.

[233] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 23 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 22.

[234] Commission decision of 25 June 2014 in case M.7259 – *Carphone Warehouse/Dixons.*

(282) In the present case, the Parties distribute their retail mobile communication services via both distribution channels. Concerning a possible segmentation between offline and online retailing, the majority of the respondents to the Commission's market investigation in the present case considered that customers view brick-and-mortar shops and online channels as substitutable for the purpose of purchasing mobile subscriptions.[235] Moreover, the large majority of respondents confirmed that customers compare prices between internet distribution channels and brick-and-mortar shops before engaging in any purchasing decision. For instance, […] explained that its research shows that both […] and non-[…] customers reach a large variety of "touchpoints" in their decision making journey, from physical stores to call centres and web channels.[236]

(283) However, some respondents highlighted the importance of physical stores, since customers often seek expert advice from an in-store salesperson and/or wish to handle the product before engaging in their purchase.[237] For instance, […] explained that "*whilst […] notes that customers place some value on the ability to physically see and compare handsets before purchasing a handset subscription, and on the ability to compare a number of different brands together in brick-and-mortar shops, […] does not consider that such ability is critical to their decision to purchase. For example, many customers use price comparison websites as the platform from which to compare mobile subscriptions across a number of brands*."[238]

(284) In addition, in *Dixons/Carphone* the Commission also considered a further segmentation of the offline retail market between the following categories of retailers according to the focus of their business: (i) tied specialist retailers (retail outlets owned by MNOs or MVNOs),[239] (ii) independent specialist retailers (retail outlet specialized in the sale of mobile telecommunications devices and services, such as Dixons), (iii) generalist retailers (retail outlets selling different kinds of goods, including mobile phones and tablets, such as Tesco) and (iv) specialist electrical retailers (retail outlets specialized in the sale of electrical devices, such as large and small domestic appliances, audio, video products, computers and communication devices).[240] The Commission in that case concluded that the relevant product market likely included all categories of offline retailers.

(285) The Commission's market investigation in the present case did not support a possible sub-segmentation of the offline retail market based on the type of retailer (along the categories identified in the recital above) in relation to the sale of mobile subscriptions. Indeed, the majority of the respondents to the market investigation confirmed that customers view all types of retailers as substitutes for the purchase of mobile subscriptions.[241] […] explained that: "*Retail customers consider all categories of retailers as substitutable for the purpose of purchasing all types of mobile subscriptions. This is in particular because mobile subscriptions have been*

[235] Responses to RFI 60 to Three, question 8; RFI 61 to O2, question 8; […]; and Questionnaire Q67 to non-MNOs of 4 December 2015, question 10.
[236] […].
[237] […].
[238] […].
[239] "Tied specialist retailers" will be in the following also referred to as "direct" distribution channels.
[240] (ii), (iii) and (iv) will be in the following also referred to as "not-tied specialist retailers" or "indirect" distributors or distribution channels.
[241] Notifying Party's responses to RFI 60, question 9; O2's response to RFI 61, question 9; […] and responses to Questionnaire Q67 to non-MNOs of 4 December 2015, question 11.

available in the UK from a large range of different types of retailer for a considerable period of time. The types of retailers offering mobile subscriptions include specialist retailers such as Dixons Carphone, supermarkets such as Tesco and Asda, and other generalist retailers such as Argos and John Lewis, amongst others." […] also said that price continues to be the most important driver of customers' purchasing decisions.[242] Nonetheless, from a demand-side perspective, in its Reply to the SO, the Notifying Party pointed out that some customers have a strong preference for the indirect channel.[243] […] also noted that "*there is a sizable segment of retail customers that has a strong preference to deal only with non-tied specialist retailers as they consider that these retailers provide independent advice, as well as providing offers from a range of different MNO and MVNO suppliers that the customers can compare*."[244] […], O2 in its internal documents explains that a […][245]

(286) Therefore, for the purpose of the present case, the Commission concludes that the relevant market encompasses all types of distribution channels and retailers. However, in view of the important role played in the retail market by independent specialist retailers (see Section 6.8) and since direct distribution and independent specialist retailers account for the largest part of the market (Section 8.2.1.2.a), in the competitive assessment the Commission takes into account also the segmentation between direct distribution and independent specialist retailers.

c) Conclusion

(287) Therefore, for the purpose of the present case, the Commission considers that the relevant product market is the retail market for mobile telecommunications services (also referred to as "retail market" in the following).

7.2.2. Geographic market definition

7.2.2.1. Notifying Party’s view

(288) The Notifying Party submits that the market for mobile telecommunications services is national in scope and corresponds to the territory of the United Kingdom.

7.2.2.2. Commission’s assessment

(289) According to the Commission's established practice, the retail market for mobile telecommunications is national in scope.[246] The market investigation in the present case[247] has not provided any suggestions that the Commission should depart from its previous decisions.

(290) Indeed, the telecommunications infrastructure of the United Kingdom is independent from that of other Member States and mobile telecommunications services in the

242 […]

243 Reply to the Statement of Objections, of 26 February 2016, paragraph 583.

244 […]

245 O2's internal documents, […] [ID 000075407.00001].

246 Commission decision in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 73; Commission decision in case No M.5650 – *T Mobile/Orange UK*, paragraphs 25 and 26; Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*, recital 164; and Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recital 74.

247 Responses to Questionnaire Q26 to MNOs of 11 September 2015 and Questionnaire Q27 to non-MNOs of 11 September 2015.

United Kingdom (as well as in other Member States) are subject to a national regulatory regime.

(291) Moreover, with respect to the distribution of mobile telecommunications services, from a supply-side point of view, the results of the market investigation gave clear indications that retailers consider a nation-wide market when setting a price strategy for the retail of mobile subscriptions.[248] This is further confirmed by the fact that the large majority of retailers set a national price.[249] On the other hand, from a demand-side point of view, the results of the market investigation were mixed as to the national or local scope of offline retailing.[250] In any event, the Commission considers that also at distribution level the scope of the relevant market and distribution segments can be defined as national, as the Transaction does not give rise to any competitive concerns with respect to the increasing physical store footprint of the merged entity, but only with respect to the merged entity's increased ability and incentives to foreclose other categories of retailers and in particular independent specialist retailers.

(292) Therefore, for the purpose of the present case, the Commission considers that the retail market for mobile telecommunications services is national in scope, that is to say limited to the territory of the United Kingdom.

7.2.2.3. Conclusion

(293) In light of the above, for the purpose of the present case, the Commission considers that the relevant product market is the retail market for mobile telecommunications services in the United Kingdom (also referred to as the "retail market" in the following).

7.3. Wholesale market for access and call origination on public mobile networks

(294) The Parties' activities overlap in the provision of wholesale access and call origination services on public mobile networks. MNOs sell access to their network and the ability to initiate calls to non-MNOs.[251] The type of service sold can be different depending on the type of customers. For example, a light MVNO would require more services from the host MNO, compared to full MVNOs, as they do not own any network infrastructure. MNOs typically provide network access and call origination together to non-MNOs.

7.3.1. Product market definition

7.3.1.1. Notifying Party’s view

(295) The Notifying Party takes the view that the Transaction should be assessed on the basis of a market for network access and call origination on public mobile networks. The Notifying Party considers that the wholesale market for access and call origination should be considered as one overall economic market, without making

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248 Notifying Party's response to RFI 60, question 13, O2's response to RFI 61 question 13; […]; and responses to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 15.

249 Notifying Party's response to RFI 60, question 14; O2's response to RFI 61, question 14; […]; and responses to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 16.

250 Notifying Party's response to RFI 60, question 10; O2's response to RFI 61, question 10; […]; Responses to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 12.

251 MNOs also sell access to their network to MVNAs, which act as intermediaries for small non-MNOs.

any sub-division as regards access provided to non-MNOs, such as access for full or partial MVNOs.

7.3.1.2. Commission's assessment

(296) In previous cases,[252] the Commission defined a wholesale market for access and call origination on public mobile networks. The services provided by MNOs to non-MNOs were considered as the key elements required for the non-MNOs to be able to provide retail mobile communication services. Since both services were considered to be generally supplied together they were seen to be part of a single market.

(297) The Commission also notes that this market definition is the relevant product market suggested by the Notifying Party.

(298) The CMA in its review of the BT/EE transaction investigated the extent to which different aspects of wholesale mobile services to non-MNOs could be aggregated on the basis of demand-side and/or supply-side factors.[253] In its Final Findings Report, the CMA concluded that the relevant product market was no broader than the wholesale market for network access and call origination on public mobile telephone networks and the relevant geographic market was the United Kingdom as a whole.[254]

(299) The market investigation[255] has not provided any indication that the Commission should depart from its previous decisions that the wholesale market for mobile access and call origination constitutes a separate product market. MNOs in the United Kingdom provide network access and call origination together. Wholesale agreements include the provision of both voice and data service. Finally, while there may be differences in the type of wholesale access depending on the type of access seeker (for example full MVNO, rather than partial MVNO), the different types of access imply only a different degree of participation in the activities related to the provision of retail mobile telecommunications services by non-MNOs and all MNOs in the United Kingdom have the technical ability to perform such activities. Therefore, the different types of wholesale access feature supply side substitutability.

(300) In view of the above, the Commission concludes that there is a distinct wholesale market for access and call origination on public mobile telephone networks.

7.3.2. Geographic market definition

7.3.2.1. Notifying Party's view

(301) The Notifying Party submits that the scope of the wholesale market for access and call origination is national in scope. It explains that this market corresponds to the

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[252] Commission decision of 2 July 2014 in case No. M.7018 – *Telefónica Deutschland/E-Plus*, recitals 77 to 79; Commission decision of 28 May 2014 in case No. M.6992 – *Hutchison 3G UK/Telefónica Ireland*, recital 156; Commission decision of 12 December 2012 in case No. M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 61 to 63; Commission decision of 1 March 2010 in case No. M.5650 – *T-Mobile/Orange*, paragraphs 27 to 30; Commission decision of 27 November 2007 in case No. M.4947 – *Vodafone/Tele2 Italy/Tele2 Spain*, paragraph 15.

[253] CMA Provisional Findings Report, paragraphs 13.11 - 13.16; CMA, Final Findings Report, paragraphs 13.4 – 13.20 [ID4112].

[254] CMA, Final Findings Report, paragraph 13.10 [ID4112].

[255] Responses to Questionnaire Q26 to MNOs of 11 September 2015 and Questionnaire Q27 to non-MNOs of 11 September 2015.

dimensions of the MNOs networks, which are in general limited to national borders, essentially owing to regulatory barriers.

7.3.2.2. Commission's assessment

(302) In previous cases, the Commission considered the wholesale market for access and call origination to be national in scope due to regulatory barriers stemming from the fact that licenses granted to MNOs are generally national in scope.[256]

(303) The CMA in its review of the BT/EE merger investigated the geographic scope of the wholesale market for network access and call origination on public mobile telephone networks and concluded that this was the United Kingdom as a whole.[257]

(304) The market investigation[258] has not provided any indication that the Commission should depart from its previous decisions that the wholesale market for mobile access and call origination is national in scope. The wholesale market corresponds to the dimension of the MNOs' networks, which are limited to national borders given that the licenses to mobile operators are granted on national basis.

(305) Based on the above, the Commission concludes the wholesale market for access and call origination on public mobile networks to be national in scope, that is to say limited to the territory of the United Kingdom.

7.4. Affected markets

(306) The retail market for the provision of mobile telecommunications services in the United Kingdom, including its possible segments, as well as the market for the provision of wholesale access and call origination on public mobile telephone networks in the United Kingdom, are horizontally affected since the Parties' combined shares on these markets exceed 20%.

(307) The retail market for the provision of mobile telecommunication services, including its possible segments, in the United Kingdom (downstream) and the wholesale market for the provision of access and call origination on public mobile telephone networks in the United Kingdom (upstream) are also vertically affected, as both Parties are active on both market levels and their combined shares exceed 30% on both the retail and the wholesale level.

8. COMPETITIVE ASSESSMENT

8.1. Analytical framework

(308) Under Article 2(2) and (3) of the Merger Regulation, the Commission must assess whether a proposed concentration would significantly impede effective competition in the internal market or in a substantial part of it, in particular through the creation or strengthening of a dominant position.

(309) In this respect, a merger may entail horizontal and/or vertical effects. Horizontal effects are those deriving from a concentration where the undertakings concerned are

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256 See Commission decision of 12 December 2014 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 74 to 77 with further references.

257 CMA, Final Findings Report, paragraph 13.10 [ID4112].

258 Responses to Questionnaire Q26 to MNOs of 11 September 2015 and Questionnaire Q27 to non-MNOs of 11 September 2015.

actual or potential competitors of each other in one or more of the relevant markets concerned. The Commission appraises horizontal effects in accordance with the guidance set out in the relevant notice, that is to say the Horizontal Merger Guidelines.[259]

(310) The Horizontal Merger Guidelines distinguish between two main ways in which mergers between actual or potential competitors on the same relevant market may significantly impede effective competition, namely non-coordinated and coordinated effects.

(311) For the assessment of the Transaction, it should in particular be recalled that the Horizontal Merger Guidelines describe horizontal non-coordinated effects as follows: "*A merger may significantly impede effective competition in a market by removing important competitive constraints on one or more sellers who consequently have increased market power. The most direct effect of the merger will be the loss of competition between the merging firms. For example, if prior to the merger one of the merging firms had raised its price, it would have lost some sales to the other merging firm. The merger removes this particular constraint. Non-merging firms in the same market can also benefit from the reduction of competitive pressure that results from the merger, since the merging firms' price increase may switch some demand to the rival firms, which, in turn, may find it profitable to increase their prices. The reduction in these competitive constraints could lead to significant price increases in the relevant market.*"[260]

(312) Under the substantive test set out in Article 2(2) and (3) of the Merger Regulation, also mergers that do not lead to the creation or the strengthening of the dominant position of a single firm may be incompatible with the internal market. Indeed, the Merger Regulation recognises that in oligopolistic markets, it is all the more necessary to maintain effective competition.[261] This is in view of the more significant consequences that mergers may have on such markets. For this reason, the Merger Regulation provides that "*under certain circumstances, concentrations involving the elimination of important competitive constraints that the merging parties had exerted upon each other, as well as a reduction of competitive pressure on the remaining competitors, may, even in the absence of a likelihood of coordination between the members of the oligopoly, result in a significant impediment to effective competition*".[262]

(313) The Horizontal Merger Guidelines list a number of factors which may influence whether or not significant horizontal non-coordinated effects are likely to result from a merger, such as the large market shares of the merging firms, the fact that the merging firms are close competitors, the limited possibilities for customers to switch suppliers, or the fact that the merger would eliminate an important competitive force. That list of factors applies equally regardless of whether a merger would create or strengthen a dominant position, or would otherwise significantly impede effective

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[259] Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings ("Horizontal Merger Guidelines"), OJ C 31, 05.02.2004.

[260] Horizontal Merger Guidelines, paragraph 24.

[261] Merger Regulation, recital 25.

[262] Merger Regulation, recital 25. Similar wording is also found in paragraph 25 of the Horizontal Merger Guidelines. See also Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recital 113; Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*, recital 179; Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 88.

competition due to non-coordinated effects. Furthermore, not all of these factors need to be present to make significant non-coordinated effects likely and it is not an exhaustive list.[263]

(314) Finally, the Horizontal Merger Guidelines describe a number of factors, which could counteract the harmful effects of the merger on competition, including the likelihood of buyer power, entry and efficiencies.

8.2. Retail market for mobile telecommunications services

(315) Section 8.2.1. sets out the Commission's concerns in relation to horizontal non-coordinated effects of the Transaction on the retail market arising from the elimination of important competitive constraints.[264] Section 8.2.2., sets out the Commission's concerns in relation to horizontal non-coordinated effects of the Transaction on the retail market arising from network sharing. Finally, the Commission examines the presence of any countervailing factors, namely buyer power and entry in Section (1784).

8.2.1. Horizontal non-coordinated effects arising from the elimination of important competitive constraints

8.2.1.1. Introduction

a) The Legal test

i. Notifying Party's view

(316) The Notifying Party claims that non-coordinated effects giving rise to a significant impediment of effective competition in the absence of dominance are the exceptions and that the competitive harm created by the elimination of "important competitive constraints" must be comparable to that stemming from the creation or strengthening of a dominant position. The Notifying Party suggests that, within this framework, for non-coordinated effects to arise, concerns have to arise on the basis of several of the factors listed in paragraph 27 and following of the Horizontal Merger Guidelines and in particular on the basis of closeness of competition and the elimination of an important competitive force within the meaning of paragraph 37 of the Horizontal Merger Guidelines. On this basis, the Notifying Party makes the argument that the Transaction should not give rise to non-coordinated effects because the Commission has only proved that the merging firms have large market shares under paragraph 27 of the Horizontal Merger Guidelines.[265]

(317) The Notifying Party argues that a finding of closeness of competition giving rise to non-coordinated effects post-Transaction can only arise where the products of the merging parties are the closest substitutes for a substantial number of customers. If available evidence suggests that an alternative product by another competitor can be considered as close or closer to those of the merging parties, then there would be neither the incentive for, nor the sustainability of, any post-Transaction price increase

[263] Horizontal Merger Guidelines, paragraph 26.

[264] Elsewhere in this Decision, the Commission may also refer to horizontal non-coordinated effects giving rise to price increases. This reference should be understood as also encompassing a slower decrease in prices than would occur absent the Transaction, as well as a reduction of output, choice or quality or slower innovation (see paragraph 8 and footnote 7 of the Horizontal Merger Guidelines).

[265] Notifying Party's presentation at the oral hearing, Legal Comments on the Statement of Objections, 7 March 2016, slide 7.

by the merging parties as customers would be expected to switch to the substitutes offered by competing firms. On this basis, the Notifying Party makes the argument that the Transaction should not give rise to non-coordinated effects because the Parties' products are less close substitutes to each other than are the products of their competitors.[266]

(318) Further, the Notifying Party argues that, while other concepts in the Horizontal Merger Guidelines, such as dominance or closeness of competition, can be quantified and assessed against objective benchmarks (such as market shares or diversion ratios), no objective standard exists to determine when a company plays the role of an "important competitive force". According to the Notifying Party, an analysis of the Commission's decisional practice since the introduction of the test based on a significant impediment of effective competition in May 2004 shows that in order for a company to be qualified as an "important competitive force", it must stand out from its competitors in terms of its impact on competition, in that it plays a unique role in the market which enables it to exercise disproportionately strong constraints on the others players (compared to its market share) that are indispensable for the preservation of effective competition.[267] On this basis, the Notifying Party makes the argument that the Transaction should not give rise to non-coordinated effects because neither Three nor O2 can be qualified as important competitive forces.

(319) Finally, the Notifying Party claims that the Commission has failed to substantiate its theory that the Parties' competitors will have an incentive to increase prices post-Transaction, in particular because the Commission has not proved that the Parties are close competitors nor are they important competitive forces. It claims that the Commission's assessment is speculative and not founded on empirical evidence.

ii. Commission's assessment

(320) As explained in recital (311) and following, under the Merger Regulation and paragraphs 24 and 25 of the Horizontal Merger Guidelines, the elimination of competition between two merging firms may give rise to a significant impediment of effective competition resulting from horizontal non-coordinated effects in oligopolistic markets, in particular if they feature a limited number of players and particularly high barriers to entry, where the merging firms exert an important competitive constraint on each other and on the remaining competitors.

(321) The factors listed in paragraphs 27 onwards of the Horizontal Merger Guidelines may influence whether or not significant horizontal non-coordinated effects are likely to result from a merger, but not all of these factors need to be present to make significant non-coordinated effects likely and the list is not exhaustive.[268] The presence of these factors may though have an impact on the degree of horizontal non-coordinated effects arising from the transaction.

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266 Reply to the Statement of Objections, Section 3.1.

267 Form CO, Section 6, paragraphs 837 to 840, cites the following cases: Commission decision of 12 November 2009 in case No M.5549 – *EDF/Segebel*, paragraphs 64 and 65, Commission decision of 21 January 2010 in case No M.5529 – *Oracle/Sun*, recitals 756 to 759; Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/ Telefónica Ireland*, recital 533.

268 Horizontal Merger Guidelines, paragraph 26.

(322) In this context, the Horizontal Merger Guidelines lists closeness as one of the potentially relevant factors for the analysis of the likelihood of non-coordinated effects of a concentration.[269]

(323) The Horizontal Merger Guidelines clearly provide for a relative approach to the question of closeness of competition. According to paragraph 28 of the Horizontal Merger Guidelines, the higher the degree of substitutability between the merging firms' products, the more likely it is that the merging firms will raise prices significantly. The same concept is set out in paragraph 17 of the Horizontal Merger Guidelines, according to which a merger may raise competition concerns based on "*the extent to which the products of the merging parties are close substitutes*". Both wordings set out a positive correlation between the degree of substitutability between the products of the merging parties and the likelihood and seriousness of the competition concerns raised by the proposed merger.

(324) It follows that if the merging parties' products are each other's closest substitutes, the competition concerns may be particularly strong. However, it is not required that the merging parties' products are each other's closest substitutes for competition concerns to be raised. That is, it is not required that the majority of the customers having one of the parties as their first best option, consider the other merging party as the second best option. The fact that for certain customers substitutability is lower between the products of the merging parties than between each of the merging parties' products and those supplied by other competitors, is not sufficient, in itself, to discount the possibility that in an oligopolistic market a transaction can give rise to a significant impediment to effective competition in the internal market.[270]

(325) It should be mentioned that in oligopolistic markets featuring a limited number of players and particularly high barriers to entry, the Commission is not required to conclude that either merging party constitutes an important competitive force, in the sense of paragraph 37 of the Horizontal Merger Guidelines, in order to find that a transaction gives rise to non-coordinated effects.

(326) Moreover, as regards the concept of important competitive force, in the sense of paragraph 37 of the Horizontal Merger Guidelines, the Commission disagrees with the position advocated by the Notifying Party, namely that a firm can be considered as an important competitive force only if it stands out from its competitors in terms of its impact on competition. The fact that in previous cases the Commission qualified certain firms that have been unique in their aggression in the market and that have been growing their market presence faster than any other competitor as an important competitive force, does not mean that this is the only definition of important competitive force.

b) The Commission's approach in this case

(327) Applying the legal test set out in the Merger Regulation and recalled above in recitals (320) and following, the Commission has assessed whether the Transaction is likely to lead to horizontal non-coordinated effects in the retail market for the provision of mobile telecommunications services in the United Kingdom, as well as in segments thereof, by eliminating the important competitive constraints exerted by the Parties on each other and reducing competitive pressure on the remaining competitors.

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269 Horizontal Merger Guidelines, paragraphs 26 and 28-30.

270 Commission decision of 12 December 2012 in case No. M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 176.

(328) To this effect, first, the Commission examines in general the competitive constraint exerted by the Parties in the market, looking at market shares (Section 8.2.1.2.a(i)), as well as closeness of competition (Section 8.2.1.2.a(ii)). Then, it assesses the specific competitive constraints exerted by each of the Parties before and in absence of the Transaction (Sections 8.2.1.2. b) and c) and Annex C).

(329) The Commission also assesses the likely behaviour of the merged entity post-Transaction (Section 8.2.1.2.d)) and the competitive position of the Parties' competitors, before and in absence of the Transaction, as well as their likely behaviour post-Transaction (Section 8.2.1.3). Moreover, the Commission has conducted a quantitative analysis of the price effects stemming from the elimination of competition between the Parties (Section 8.2.1.4.b) and Annex A).

8.2.1.2. Assessment of the competitive constraints exerted by the Parties

a) General assessment

i. Assessment of market shares

(330) According to the Horizontal Merger Guidelines, market shares constitute useful first indications of the competitive importance of the market players. [271]

(331) Furthermore, the Horizontal Merger Guidelines explain that the larger the market share, the more likely a firm is to possess market power.[272] Also, the larger the addition of market share (or "increment") brought by the Transaction, the more likely it is that a merger will lead to a significant increase in market power. Although market shares and additions of market shares only provide first indications of market power and increases in market power, they are normally important factors in the assessment.

(332) The market shares have been provided by the Notifying Party[273] and are based on the Parties' estimations using their own data, as well as data collected by third party analysts and GSMA,[274] for the full years 2012, 2013 and 2014.[275] The Commission has conducted a market reconstruction by requesting subscriber data for the period from 1 January 2013 to 30 June 2015 from all of the MNOs and the main non-MNOs for the private segment, as well as the prepaid and postpaid segments.[276] The results of the Commission's market reconstruction are broadly in line with the market share data provided by the Notifying Party, with the exception of the gross add[277] shares, as further explained in recital (387). The Commission notes that the Notifying Party has not contested the methodology used by the Commission to perform its market reconstruction until its Reply to the Letter of Facts of 17 March 2016.[278]

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271 Horizontal Merger Guidelines, paragraph 14.
272 Horizontal Merger Guidelines, paragraph 27.
273 Annex 9 to the Form CO, "Market share tables".
274 GSMA is the association of mobile operators and other companies active in the broader mobile ecosystem (including handset and device makers, software companies, equipment providers and internet companies), devoted to supporting the standardising, deployment and promotion of the GSM mobile telephone system.
275 Annex 8 to the Form CO, "Market share calculation methodology", describing the Notifying Party's methodology in computing market shares.
276 Tesco Mobile, Virgin Media, TalkTalk, Lycamobile and Lebara.
277 See below paragraph (382).
278 In this respect see below recital (389).

(333) The Parties', the other MNOs' and non-MNOs' market shares in the retail market for mobile telecommunications services are set out in recitals (334) and following.

Shares at network level

(334) Market shares at the network level are the shares computed by allocating to each MNO their own subscribers as well as the subscribers of the non-MNOs hosted on their respective networks.

(335) Figure 16 illustrates the Notifying Party's reconstruction of market shares at the network level.

Figure 16: Market shares in the retail market at network level, excluding M2M[279] (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2012	2013	2014	2012	2013	2014
Three	[10-20]%	[10-20]%	[10-20]%	[5-10]%	[5-10]%	[10-20]%
O2*	[30-40]%	[30-40]%	[30-40]%	[20-30]%	[20-30]%	[30-40]%
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[30-40]%**	**[30-40]%**	**[40-50]%**
EE	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[40-50]%	[30-40]%
Vodafone*	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Total	100%	100%	100%	100%	100%	100%

Source: Annex 9 to the Form CO, Market share tables.

* *Assuming that TalkTalk had already migrated to O2*

(336) Figure 16 shows that the Transaction would reduce the number of network players from four to three in the United Kingdom by combining the number two with the number four MNO. This would create the largest MNO at network level in terms of subscribers and revenues. In terms of subscribers, the remaining MNOs (EE and Vodafone) would have network level market shares approximately 10 percentage points and more than 20 percentage points smaller, respectively.

Shares at provider level

(337) This subsection provides market shares data for the overall retail market, as well as segment shares for its possible segments.

279 At the network level, the Notifying Party has only provided market shares for the overall retail market by number of subscribers (excluding M2M), and not for the segments thereof. Moreover, the Notifying Party has not provided market shares for the overall retail market at network level including M2M services. Nonetheless, the Commission notes that M2M services account for a limited percentage of the retail market, both in terms of subscriptions and in terms of revenues (see Figure 16). Moreover, the data submitted by the Notifying Party in Annex 9 shows that non-MNOs are not active in this hypothetical segment and that, while Three has a marginal presence, the other MNOs have roughly equal shares. Therefore the share for the overall retail market at network level including M2M would not significantly diverge from those presented in the above Figure 16.

(338) Preliminarily to that, in recitals (339) and following the Commission also provides an overview and assessment of the relative importance of the different market segments identified in Section 7.2.1.2, that is to say, the prepaid and postpaid segments, the market segments for the provision of retail mobile services to business customers ("the business segment") and to private customers ("the overall private segment"[280]), and the SIMO and handset segments.[281] This is because the market shares and other indicators on the overall retail market for mobile telecommunications services may not convey the full picture of the market positions and market power of the operators. For a full assessment of the effects of the Transaction it is also necessary to take into account the relative importance of each segment and its evolution. The competitive dynamics in each of these segments may differ and therefore, where relevant, in this Decision the Commission looks at each segment separately, in line with its previous decisions.[282]

Relative importance of different segments

(339) Figure 17 below provides an overview of the different segments of the overall retail mobile market in the United Kingdom by subscribers and by revenue in 2014.

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280 As mentioned above in paragraph (276), retail mobile services to business customers are only postpaid, while private subscriptions can be postpaid or prepaid.

281 With respect to the different distribution channels, see below recital (374) and following.

282 Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*; Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*; Commission Decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*.

Figure 17: Segments in the United Kingdom by subscribers and by revenue (2014)

Market/ Segments	Subscribers		Revenues	
	Million	% of overall retail	GBP million	% of overall retail
Overall retail	89.4		19317.9	
Prepaid (only private)	34.2	38%	2070.8	11%
Postpaid (private and business)	55.2	62%	17247.05	89%
Private	70.4	79%	15369.0	80%
Postpaid Private	36.2	40%	13298.2	69%
Business (only postpaid)	19	21%	3948.8	20%
M2M (only postpaid business)	6.8	8%	63.0	0.3%
Broadband (private and business, pre and postpaid)	4.8	5%	669.1	3%

Source: Annex 9 to the Form CO, Market share tables.

(340) As shown by the above Figure, in 2014 the prepaid segment accounted for 38% of the overall retail market by subscribers and 11% by revenues. Data provided by the Notifying Party shows that, while the overall subscriber base has been growing in the last three years, the number of prepaid subscribers has been stable (or decreasing). Postpaid services accounted instead for 62% of the overall retail market by subscribers and 89% by revenues; moreover, the number of subscribers of postpaid in the United Kingdom has been constantly growing in the last three years. In 2014 services to private customers represented 79% of the overall retail market by subscribers and 80% by revenues; moreover, the number of private customers has been constantly growing in the last three years. In 2014 the prepaid services accounted for approximately 48% of the private segment by subscribers, while postpaid accounted for 51%. Services to business customers accounted for 21% of the overall retail market by subscribers and 20% by revenues in 2014. Of the business subscribers, M2M services accounted for 8% of overall retail subscribers in

2014 and only 0.3% of 2014 revenues from mobile services. In 2014 mobile broadband services (to both private and business customers) accounted for 5% of overall retail subscribers and 3% of revenues from mobile services.

(341) Figure 18 below provides an overview of the relative importance of SIMO and handset contracts in the United Kingdom in 2014:

Figure 18: Segments in the United Kingdom (2014)

Segments	Subscribers (Million)	Revenues (GBP million)
SIMO postpaid private	6.8	122
Handset postpaid private	28.4	798
SIMO prepaid private	10.3	65
Handset prepaid private	8.9	54

Source: Notifying Party's response to RFI 60, question 2[283].

(342) As mentioned in Section 6.1., SIMO subscriptions are growing against a decrease of the number of handset contracts. Nonetheless, postpaid handset contracts still account for by far the larger part of the market both in terms of subscriptions and revenues, while the smallest segment in terms of subscriptions is the SIMO postpaid private segment (almost seven times smaller by revenues than the postpaid handset contracts segment), as shown in the above Figure 18. It is only in the small SIMO postpaid private segment (and consequently in the overall SIMO private segment) that non-MNOs are able to achieve a market segment share larger than 10% by subscribers and revenues.

Market shares

(343) Figure 19 below illustrates the Notifying Party's reconstruction of market shares at the provider level in the retail market.

283 Three's market share information for SIMO and handset contracts is based upon data gathered by Kantar Worldpanel and refers to sales of plans designed for private customers. The Commission notes an inconsistency between the sum of SIMO and handset contracts subscriptions and revenues compared to total subscriptions and revenues for private customers. Therefore the proportion of SIMO and handset contracts with respect to the overall retail market is not provided in the above Figure 17.

Figure 19: Market shares in the retail market at provider level (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2012	2013	2014	2012	2013	2014
Three	[5-10]%	[5-10]%	[10-20]%	[5-10]%	[5-10]%	[10-20]%
O2 (total)	[30-40]%	[30-40]%	[30-40]%	[20-30]%	[20-30]%	[20-30]%
O2	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*
Tesco Mobile	*[0-5]%*	*[5-10]%*	*[5-10]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[30-40]%**	**[30-40]%**	**[40-50]%**
EE	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
Vodafone	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Virgin Media	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Other MVNOs	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total MVNOs*	[10-20]%	[10-20]%	[10-20]%	[5-10]%	[5-10]%	[5-10]%
Total	100%	100%	100%	100%	100%	100%

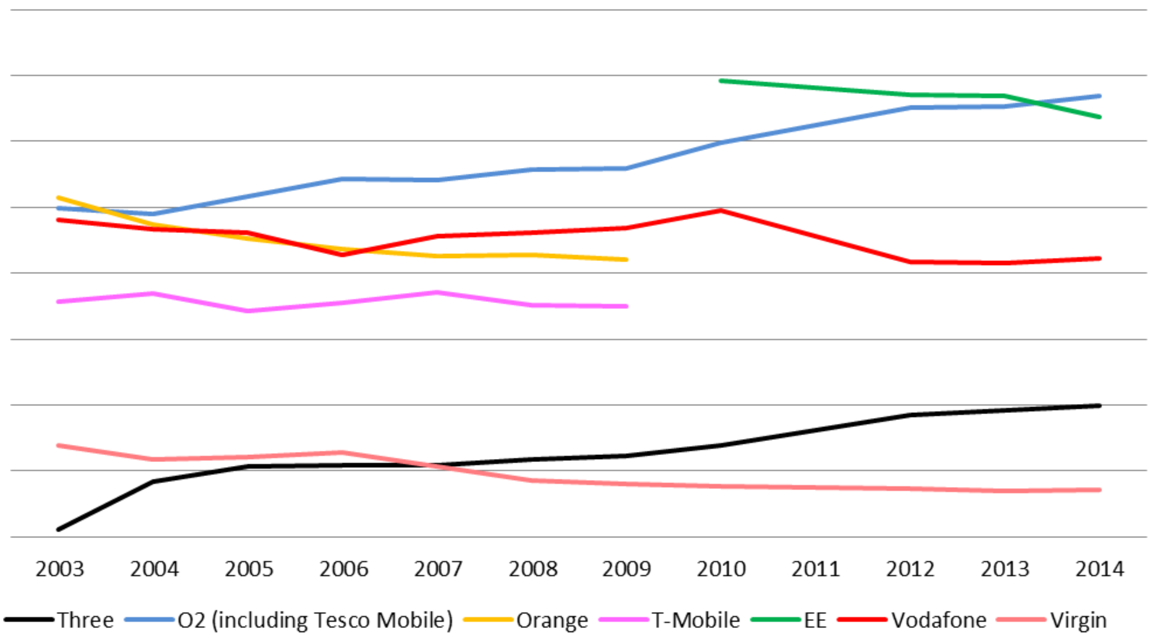
Source: Annex 9 to the Form CO, Market share tables.
* *"Total MVNOs" includes Tesco Mobile.*

(344) Figure 19 above shows that pre-Transaction in 2014 Three and O2 are respectively the fourth and the second largest operators by subscribers and revenues. EE and Vodafone are the two other major players, with respectively [30-40%] and [20-30%] market shares by subscribers and [30-40%] and [20-30%] by revenues. The remaining less than 10% of the market, by both subscribers and revenues, is accounted for by a number of non-MNOs, the largest of which is Virgin Media with [0-5%] market share by both subscribers and revenues.

(345) Post-Transaction the merged entity's market share would be sizeable, with it being the market leader by number of subscribers and revenues. The market share of the next largest provider, EE, would be more than ten percentage points smaller by subscribers, but less than ten percentage points smaller by revenues.

(346) Figure 19 above also shows the evolution of the market shares of the Parties and their competitors from 2012 to 2014, by subscribers and by revenues. Figure 20 below provides an overview of the evolution of the subscriber market shares of the MNOs and the largest non-MNO, Virgin Media, since 2003, the year of the launch of Three.

Figure 20: Evolution of MNO subscriber market shares (2003-2014)



[ ]

Source: Commission's computation on the basis of Ofcom's CMR 2009 [ID6057] and 2011[ID6079], Annex 9 of the Form CO, Virgin Media's annual reports 2003-2011 [ID6016 to ID6022].

(347) Figure 20 above shows that Three and O2 are the only MNOs with a constant positive trend in the growth in their market share by subscribers, while the other MNOs, EE and Vodafone, and Virgin Media have been losing subscriber market shares, or at least kept it constant, in recent years.

Segment shares

(348) Figure 21 to Figure 30 below illustrate the Notifying Party's reconstruction of segment shares at the provider level for the market segments identified in Section 7.2.1.2 above. The relative importance of these market segments is analysed in recitals (339)-(342).

Figure 21: Shares in the overall private segment at provider level (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2012	2013	2014	2012	2013	2014
Three	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
O2 (total)	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[20-30]%	[30-40]%
O2	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*
Tesco Mobile	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[30-40]%**	**[40-50]%**
EE	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[20-30]%	[10-20]%	[10-20]%
Virgin Media	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Other MVNOs	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total MVNOs*	[10-20]%	[10-20]%	[10-20]%	[5-10]%	[5-10]%	[5-10]%
Total	100%	100%	100%	100%	100%	100%

Source: Annex 9 to the Form CO, Market share tables.
* *"Total MVNOs" includes Tesco Mobile.*

(349) The Commission notes that, in the Reply to the Letter of Facts of 17 March 2016, the Notifying Party presented a restatement of Three's shares in several segments. On the basis of those share figures, Three's segment share in the overall private segment would be higher than in Figure 21 and equals [10-20%].[284]

(350) In the overall private segment, Figure 21 above shows that pre-Transaction in 2014 Three and O2 are the […] operators by subscribers. EE and Vodafone are the two other major players, with respectively [30-40%] and [10-20%] segment shares by subscribers and [30-40%] and [10-20%] by revenues. The remaining less than 10% of the segment, by both subscribers and revenues, is accounted for by a number of non-MNOs, the largest of which is Virgin Media with [0-5%] and [0-5%] market share by revenues and subscribers respectively.

(351) Post-Transaction the merged entity's segment share would be sizeable, with it being the leader by number of subscribers and revenues. The segment share of the next largest provider, EE, would be more than ten percentage points smaller by subscribers, but less than ten percentage points smaller by revenues.

284 See Figure 1 of Reply to the Letter of Facts of 17 March 2016. In this respect see below recital (389).

Figure 22: Shares in the business segment at provider level, including M2M (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2012	2013	2014	2012	2013	2014
Three	Three	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
O2	O2	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Combined	**Combined**	**[20-30]%**	**[30-40]%**	**[20-30]%**	**[20-30]%**	**[20-30]%**
EE	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Vodafone	[30-40]%	[30-40]%	[30-40]%	[40-50]%	[40-50]%	[30-40]%
Total MVNOs	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Total	100%	100%	100%	100%	100%	100%

Source: Annex 9 to the Form CO, Market share tables.

(352) In the business segment, Figure 22 above shows that pre-Transaction in 2014 O2 enjoys an important competitive position, being the […] operator by subscribers and the […] operator by revenues. Three's segment share is smaller than [0-5%] by both subscribers and revenues. Vodafone is the leader, with [30-40%] market share by subscribers and [30-40%] by revenues. EE is the other major player, with [20-30%] segment share by subscribers and by revenues. The remaining less than 10% of the segment, by both subscribers and revenues, is accounted for by a number of non-MNOs.

(353) Post-Transaction Vodafone would remain the leader, with segment share by subscribers and revenues approximately 10% larger than the merged entity. EE would have equal size to the merged entity. The Commission notes that the increment brought by the Transaction is smaller than [0-5%] and that no concern has been raised in the course of the market investigation with respect to the effects of the Transaction in the business segment. Therefore, the business segment will not be discussed in further detail in the remainder of this Decision.

Figure 23: Shares in the prepaid segment at provider level (by subscribers and revenues)[285]

Operator	Subscribers			Revenues		
	2012	2013	2014	2012	2013	2014
Three	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
O2 (total)	[30-40]%	[40-50]%	[30-40]%	[40-50]%	[40-50]%	[40-50]%
O2	*[30-40]%*	*[30-40]%*	*[30-40]%*	*[30-40]%*	*[30-40]%*	*[40-50]%*
Tesco Mobile	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[50-60%]**
EE	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[20-30]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Virgin Media	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Other MVNOs	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total MVNOs*	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Total	100%	100%	100%	100%	100%	100%

Source: Annex 9 to the Form CO, Market share tables.
** "Total MVNOs" includes Tesco Mobile.*

(354) The Commission notes that, on the basis of the share figures submitted by the Notifying Party in the Reply to the Letter of Facts of 17 March 2016, Three's segment share in the prepaid segment would be higher than in Figure 23 and equals [10-20%].[286]

(355) In the prepaid segment, Figure 23 above shows that pre-Transaction in 2014 O2 is the […] operators by subscribers and revenues. Three has a share of [5-10%] both by revenues and subscribers. EE and Vodafone are the two other major players, with respectively [30-40%] and [10-20%] segment shares by subscribers and [30-40%] and [10-20%] by revenues. The remaining less than 10% of the segment, by both subscribers and revenues, is accounted for by a number of non-MNOs, the largest of which is Virgin Media with [0-5%] segment share by both subscribers and revenues.

(356) Post-Transaction the merged entity's segment share would be sizeable, with the […] of O2 being reinforced by a segment share increment of [0-5] percentage points. The segment share of the next largest provider, EE, would be more than ten percentage points smaller by subscribers and over twenty percentage points smaller by revenues.

285 As indicated in paragraph (276) business subscriptions are only postpaid.
286 See Figure 1 of Reply to the Letter of Facts of 17 March 2016. In this respect see below recital (389).

Figure 24: Shares in the postpaid private segment at provider level (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2012	2013	2014	2012	2013	2014
Three	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
O2 (total)	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
O2	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*
Tesco Mobile	*[0-5]%*	*[5-10]%*	*[5-10]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[30-40]%**	**[30-40]%**	**[40-50]%**
EE	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[40-50]%	[30-40]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[20-30]%	[20-30]%	[10-20]%
Virgin Media	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%
Other MVNOs	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total MVNOs*	[5-10]%	[10-20]%	[10-20]%	[0-5]%	[5-10]%	[5-10]%
Total	100%	100%	100%	100%	100%	100%

Source: Annex 9 to the Form CO, Market share tables.
* *"Total MVNOs" includes Tesco Mobile.*

(357) The Commission notes that, on the basis of the share figures submitted by the Notifying Party in the Reply to the Letter of Facts of 17 March 2016, Three's segment share in the postpaid private segment would be higher than in Figure 24 and equals [20-30%].[287]

(358) In the postpaid segment (which as stated in recitals (339) and following, is the largest market segment accounting for close to 90% of the market revenues), Figure 24 above shows that pre-Transaction in 2014 Three and O2 both are respectively the […] operators by subscribers and the [….] operators by revenues. EE and Vodafone are the two other major players, with respectively [30-40%] and [10-20%] segment shares by subscribers and [30-40%] and [10-20%] by revenues. The remaining less than 10% of the segment, by both subscribers and revenues, is accounted for by a number of non-MNOs, the largest of which is Virgin Media with [0-5%] market share by revenues and [0-5%] segment share by subscribers.

(359) Post-Transaction the merged entity's segment share would be sizeable, with it being the leader by number of subscribers and revenues. The segment share of the next largest provider, EE, would be more than ten percentage points smaller by subscribers, but less than ten percentage points smaller by revenues.

287 See Figure 1 of Reply to the Letter of Facts of 17 March 2016. In this respect see below recital (389).

Figure 25: Shares in the SIMO private segment at provider level (by subscribers and revenues)[288]

Operator	Subscribers			Revenues		
	2013	2014	2015	2013	2014	2015
Three	[5-10]%	[10-20]%	[10-20]%	[5-10]%	[10-20]%	[10-20]%
O2 (total)	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
O2	*31%*	*28%*	*27%*	*28.4%*	*25.2%*	*25.4%*
Tesco Mobile	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[50-60]%**
EE	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Virgin Media	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Other MVNOs	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[5-10]%	[5-10]%
Total	100%	100%	100%	100.0%	100%	100.0%

Source: Notifying Party's response to RFI 60, question 2.

(360) In the SIMO private segment, Figure 25 above shows that pre-Transaction in 2015 Three and O2 are respectively the […] operators by subscribers and revenues. Three's segment share has increased from [5-10]% to [10-20]%, by subscribers, and from [5-10]% to [10-20]%, by revenues, from 2013 to 2015. EE and Vodafone are the two other major players, with respectively [20-30]% and [10-20]% segment shares by subscribers and [20-30]% and [10-20]% by revenues. The remaining [10-20]% of the segment, by both subscribers and revenues, is accounted for by a number of non-MNOs, the largest of which is Virgin Media with [5-10]% segment share by subscribers and [5-10]% segment share by revenues.

(361) Post-Transaction the merged entity's segment share would be sizeable, with it being the leader by number of subscribers and revenues. The segment share of the next largest provider, EE, would be more than twenty percentage points smaller by both subscribers and revenues.

288 The Notifying Party has not provided market share data for SIMO and handset contracts provided to business customers. Data for 2015 were provided until 31 October 2015.

Figure 26: Shares in the handset private segment at provider level (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2013	2014	2015	2013	2014	2015
Three	[10-20]%	[10-20]%	[5-10]%	[10-20]%	[10-20]%	[10-20]%
O2 (total)	[20-30]%	[20-30]%	[30-40]%	[20-30]%	[20-30]%	[20-30]%
O2	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*
Tesco Mobile	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Combined	**[30-40]%**	**[30-40]%**	**[30-40]%**	**[30-40]%**	**[40-50]%**	**[30-40]%**
EE	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[20-30]%
Virgin Media	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%
Other MVNOs	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100.0%	100%	100.0%

Source: Notifying Party's response to RFI 60, question 2.

(362) In the handset private segment, Figure 26 above shows that pre-Transaction in 2015 Three and O2 are respectively the […] operators by subscribers and revenues. EE and Vodafone are the two other major players, with respectively [30-40]% and [10-20]% segment shares by subscribers and [30-40]% and [10-20]% by revenues. The remaining less than 10% of the segment, by both subscribers and revenues, is accounted for by a number of non-MNOs, the largest of which is Virgin Media with [5-10]% market share by subscribers and [0-5]% market share by revenues.

(363) Post-Transaction the merged entity's market share would be sizeable, with it being the leader by number of subscribers and revenues. The segment share of the next largest provider, EE, would be [5-10] percentage points smaller by subscribers and revenues.

Figure 27: Shares in the SIMO postpaid private segment at provider level (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2013	2014	2015	2013	2014	2015
Three	[10-20]%	[10-20]%	[20-30]%	[10-20]%	[10-20]%	[20-30]%
O2 (total)	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
O2	*[20-30]%*	*[10-20]%*	*[10-20]%*	*[20-30]%*	*[10-20]%*	*[20-30]%*
Tesco Mobile	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[50-60]%**
EE	[20-30]%	[20-30]%	[20-30]%	[30-40]%	[20-30]%	[20-30]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Virgin Media	[10-20]%	[10-20]%	[10-20]%	[5-10]%	[5-10]%	[5-10]%
Other MVNOs	[0-5]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100.0%	100%	100.0%

Source: Notifying Party's response to RFI 60, question 2.

(364) In the SIMO postpaid private segment, Figure 27 above shows that pre-Transaction in 2015 Three and O2 are respectively the […] operators by subscribers and revenues. EE is the second largest player, with [20-30]% and [20-30]% segment shares respectively by subscribers and by revenues. Together Three, O2 and EE accounts for over 70% of the segment by either metric. Vodafone and Virgin Media follows far behind, with respectively [10-20]% and [10-20]% segment shares by subscribers and [10-20]% and [5-10]% segment shares by revenues. The remaining part of the segment, by both subscribers and revenues, is accounted for by a number of other non-MNOs.

(365) Post-Transaction the merged entity's segment share would be sizeable, with it being the leader by number of subscribers and revenues. The segment share of the next largest provider, EE, would be more than twenty percentage points smaller by both subscribers and revenues. The merged entity and EE alone would account by over 70% of the segment by either metric. Other players would remain further behind.

Figure 28: Shares in the handset postpaid private segment at provider level (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2013	2014	2015	2013	2014	2015
Three	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
O2 (total)	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
O2	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*
Tesco Mobile	*[0-5]%*	*[5-10]%*	*[5-10]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[30-40]%**
EE	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[20-30]%
Virgin Media	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%
Other MVNOs	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100.0%	100%	100.0%

Source: Notifying Party's response to RFI 60, question 2.

(366) In the handset postpaid private segment, Figure 28 above shows that pre-Transaction in 2015 Three and O2 are respectively the […] largest operators by subscribers and revenues. EE and Vodafone are the two other major players, with respectively [30-40]% and [10-20]% segment shares by subscribers and [30-40]% and [20-30]% by revenues. The remaining less than 10% of the segment, by both subscribers and revenues, is accounted for by a number of non-MNOs, the largest of which is Virgin Media with [5-10]% segment share by subscribers and [0-5]% segment share by revenues.

(367) Post-Transaction the merged entity's segment share would be sizeable, with it being the leader by number of subscribers and revenues. The segment share of the next largest provider, EE, would be more than five percentage points smaller by both subscribers and revenues.

Figure 29: Shares in the SIMO prepaid private segment at provider level (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2013	2014	2015	2013	2014	2015
Three	[0-5]%	[5-10]%	[5-10]%	[0-5]%	[5-10]%	[5-10]%
O2 (total)	[40-50]%	[40-50]%	[40-50]%	[40-50]%	[40-50]%	[40-50]%
O2	*[30-40]%*	*[30-40]%*	*[30-40]%*	*[30-40]%*	*[30-40]%*	*[30-40]%*
Tesco Mobile	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*
Combined	**[50-60]%**	**[40-50]%**	**[50-60]%**	**[40-50]%**	**[40-50]%**	**[50-60]%**
EE	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Virgin Media	[0-5]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Other MVNOs	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Total	100%	100%	100%	100%	100%	100%

Source: Notifying Party's response to RFI 60, question 2.

(368) In the SIMO prepaid private segment, Figure 29 above shows that pre-Transaction in 2015 O2 is the […] operator by subscribers and revenues. Three has a segment share of [5-10]% both by subscribers and revenues. EE and Vodafone are the two other major players, with respectively [20-30]% and [10-20]% segment shares by subscribers and [20-30]% and [10-20]% by revenues. The remaining part of the segment by subscribers is accounted for a number of non-MNOs, the largest of which is Virgin Media with [0-5]% segment share by subscribers and [0-5]% segment share by revenues.

(369) Post-Transaction the merged entity's segment share would be sizeable, with O2's leading position being reinforced by a segment share increment of [5-10] percentage points. The segment share of the next largest provider, EE, would be more than [20-30] percentage points smaller both by subscribers and revenues.

Figure 30: Shares in the handset prepaid private segment at provider level (by subscribers and revenues)

Operator	Subscribers			Revenues		
	2013	2014	2015	2013	2014	2015
Three	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
O2 (total)	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
O2	*[20-30]%*	*[10-20]%*	*[10-20]%*	*[10-20]%*	*[10-20]%*	*[20-30]%*
Tesco Mobile	*[10-20]%*	*[10-20]%*	*[10-20]%*	*[10-20]%*	*[10-20]%*	*[10-20]%*
Combined	**[30-40]%**	**[30-40]%**	**[30-40]%**	**[30-40]%**	**[30-40]%**	**[30-40]%**
EE	[40-50]%	[40-50]%	[40-50]%	[40-50]%	[30-40]%	[30-40]%
Vodafone	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[20-30]%	[10-20]%
Virgin Media	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[5-10]%	[5-10]%
Other MVNOs	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100%	100%	100%

Source: Notifying Party's response to RFI 60, question 2.

(370) In the handset prepaid private segment, Figure 30 above shows that pre-Transaction in 2015 O2 enjoys an important competitive position, with it being the […] operator by subscribers and revenues. Three has [0-5]% segment share by subscribers and revenues. EE and Vodafone are the two other major players, with respectively [40-50]% and [10-20]% segment shares by subscribers and [30-40]% and [10-20]% by revenues. The remaining less than 10% of the segment, by both subscribers and revenues, is accounted for by a number of non-MNOs, the largest of which is Virgin Media with approximately [5-10]% segment share by both subscribers and revenues.

(371) Post-Transaction EE would remain the leader, with a segment share by subscribers and revenues respectively [5-10]% and [0-5]% larger than the merged entity. The Commission notes that the increment brought by the Transaction is small and equals [0-5]% and that no concern has been raised with respect to the effects of the Transaction in this segment, which is the smallest and decreasing in the market.[289] Therefore, the handset prepaid private segment will not be discussed in further detail in the remaining of this Decision.

Conclusion on shares at provider level

(372) In conclusion, the Commission notes that pre-Transaction in 2014 Three and O2 are respectively the fourth and the second largest operators by subscribers and revenues in the retail market. At segment level, O2 is the […] player and Three is the […] depending on the segment.

[289] See Figure 18.

(373) Post-Transaction the merged entity's market and segment shares would be sizeable. The merged entity would be the leader by number of subscribers and revenues on the retail market and in various segments, including the postpaid segment, which is by far the largest segment of the retail market for mobile telecommunications services in the United Kingdom. The market and segment shares of the next largest provider, EE, would generally be more than ten percentage points smaller than the merged entity's market share, with a few exceptions in certain segments.[290]

Shares at distribution level

(374) Figure 31 below provides an overview of the relative importance of the direct and indirect distribution channels with respect to handset contracts in the United Kingdom in 2014 and shows that, whilst the indirect distribution channel accounted for almost 60% of the sales in terms of gross adds, the direct distribution channel accounted for the same in terms of revenues.

Figure 31: Segments in the United Kingdom (2014)

Handset postpaid private	Subscriber (gross adds) share	Revenue share
Direct distribution channel	42%	56%
Indirect distribution channel	58%	44%

Source: Enders Analysis, UK mobile market Q3 2014, page 7 [ID4171].[291]

(375) When considering prepaid and postpaid handset contracts separately, in terms of revenues, in 2014 direct distribution channels accounted for 56% of the sales of postpaid contracts and only 20% of prepaid contracts.[292]

(376) The Notifying Party was not able to provide market share data for a segmentation of the market at distribution level. In this regard the Commission notes that the CMA has recently looked into this market segmentation when reviewing the acquisition of Phones 4U by Vodafone. On the basis of the March 2015 CMA's decision, the market shares in the market for retail mobile telecommunications services at distribution level would be as follows:

290 The exceptions are the retail market and the overall private and postpaid private segments, where, in terms of revenues, the distance between EE and the merged entity would be smaller, and the handset private, handset postpaid private and prepaid segments, where the distance between EE and the merged entity would be smaller than 10 percentage points both by subscribers and revenues.

291 The Notifying Party was not able to provide data for this segmentation at market level (see Notifying Party's response to RFI 60). Enders Analysis, UK mobile market Q3 2014 [ID4171], only provide retailer share of contract handset sales and contract gross adds but not absolute figures and not data for SIMO. The Commission's analysis of data on sales of MNOs' subscriptions though different distribution channels in generally in line with the market shares by gross adds illustrated in Figure 31 above (see responses to RFIs 60, 61, 65 and 66 provided in the data room). Further, the market shares by gross adds illustrated in Figure 31 above are in line with the estimates of the monthly market shares of direct and indirect distribution channel for acquisitions of handset contracts between April 2014 and April 2015 contained in Three's internal documents, […] [ID 002100233.00001].

292 Enders Analysis, UK mobile user survey 2014, page 33 [ID 4175].

Figure 32: Market shares in the overall private segment at distributor level (based on the number of retail outlets and mobile phone subscriptions; including tied and independent specialist retailers only)[293]

Distributor	2014 Share (%)
O2	[15-25%]
Three	[10-20%]
Combined	[25-45%]
Dixons	[25-35%]
EE	[20-30%]
Vodafone	[20-30%]*
Virgin Media	[5-15%]

Source: CMA, Vodafone / Phones 4U merger inquiry, 24 March 2015, paragraph 45.

* *Vodafone's share is after the closing of the acquisition of Phones 4U.*

(377) The above Figure 32 reports market share data only for the MNOs' and Virgin Media's retail outlets as well as Dixons' and Phones 4U's, but it does not consider other indirect distributors, therefore it overestimates market shares of the different market players.

(378) As shown in the above Figure 32, at distribution level, pre-Transaction Dixons is the market leader, followed by EE and Vodafone. Post-Transaction the merged entity would have a similar share to that of Dixons, whilst EE and Vodafone would follow closely.

<u>Shares by gross adds</u>

(379) The Commission notes that in the mobile telecommunications sector market shares based on existing subscribers capture the competitive strength of market participants only to a certain degree, in particular because recent trends may not be properly reflected.[294] This is because many customers are bound to long-term contracts, which means that, at any given time, only a fraction of the total customer base is actually contestable. At any given moment, competition occurs only in respect of those contestable customers and entirely new customers (those who are not yet subscribers of mobile telecommunication services at all). Consequently it may take some time before trends in winning new business are reflected in the market shares.

(380) Shares of contestable customers are an informative preliminary element in order to form a view on the likely dynamics in the market for the years following the

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293 According to Enders Analysis, UK mobile user survey 2014, January 2015, page 32 [ID4175], distribution in shops offline retailing accounted for 59% of sales of postpaid handset contracts and 89% of sales of prepaid handset contracts.

294 Commission decision of 2 July 2014 in case No. M.7018 – *Telefónica Deutschland/E-Plus*, recital 244, Commission decision of 12 December 2012 in case No. M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 164 to 170.

Transaction.[295] This is particularly important for the United Kingdom's retail mobile market as close to 90% of the market revenues are generated by postpaid subscriptions which are often characterised by a binding period.

(381) However, market shares in terms of contestable customers are difficult to obtain. This is because the set of contestable customers includes not only customers that decide to switch operator and which are usually reported as gross-adds but also those customers who (actively) decide to either stay in their existing contract or who switch to another tariff but stay with the same provider. The latter (retained subscribers and internal switchers) are harder to measure in a consistent way based on data from different operators.[296]

(382) If shares of contestable customers cannot be reliably derived, an alternative (although imperfect) measure that captures the current competitive strength of market participants is to consider gross-add market shares.[297] Gross adds is the term used in the telecommunications industry for new customers to the firm in question, without deduction of those who leave.

(383) Figure 33 below provides the Notifying Party's reconstruction of shares at provider level in terms of gross adds for the overall private segment, the prepaid segment and the postpaid private segment.[298]

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[295] In line with this in the Reply to the Letter of Facts of 17 March 2016, paragraph 15, the Notifying Party argued that the Commission should have considered share of acquisitions and upgrades, that is, the sum of gross adds (for a definition see recital (382)), switchers within the tariffs offered by an operators and retained subscribers.

[296] In the present case, the Commission has focused on gross adds because of the difficulties in obtaining consistent and complete data on internal switchers and retained subscribers from all operators. In particular, one of the MNOs has not been able to provide information on internal switchers and another MNO has not been able to provide data on retained subscribers.

[297] Commission decision of 2 July 2014 in case N. M.7018 – *Telefónica Deutschland/E-Plus*, recital 246, Commission decision of 12 December 2012 in case N.°M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 170.

[298] The Notifying Party has not provided gross add share for the overall retail market.

Figure 33: Gross add shares in various segments at provider level (based on the number of gained subscribers)

Operator	Overall private	Prepaid voice[299]	Postpaid private voice[300]
	2012		
Three	[10-20]%	[0-5]%	[10-20]%
O2 (total)	[20-30]%	[30-40]%	[20-30]%
O2	*[20-30]%*	*[20-30]%*	*[20-30]%*
Tesco Mobile	*[5-10]%*	*[5-10]%*	*[5-10]%*
Combined	**[40-50]%**	**[30-40]%**	**[40-50]%**
EE	[30-40]%	[30-40]%	[30-40]%
Vodafone	[10-20]%	[20-30]%	[10-20]%
Virgin Media	[5-10]%	[5-10]%	[10-20]%
Other MVNOs	[5-10]%	[5-10]%	[0-5]%
Total MVNOs	[10-20]%	[20-30]%	[20-30]%
Total	100%	100%	100%
	2013		
Three	[10-20]%	[5-10]%	[10-20]%
O2 (total)	[30-40]%	[30-40]%	[20-30]%
O2	*[20-30]%*	*[20-30]%*	*[10-20]%*
Tesco Mobile	*[5-10]%*	*[10-20]%*	*[5-10]%*
Combined	**[40-50]%**	**[40-50]%**	**[40-50]%**
EE	[30-40]%	[30-40]%	[20-30]%
Vodafone	[10-20]%	[10-20]%	[10-20]%

299 The Notifying Party has not provided gross add share for prepaid services including both voice and broadband services. Nonetheless, the Commission notes that mobile broadband services account for a limited percentage of the retail market, both in terms of subscriptions and in terms of revenues (see Figure 17), therefore gross add share for prepaid services including both voice and broadband services would not significantly diverge from those presented in the above Figure 33.

300 The Notifying Party has not provided gross add share for postpaid services including both voice and broadband services. Nonetheless, the Commission notes that mobile broadband services account for a limited percentage of the retail market, both in terms of subscriptions and in terms of revenues (see Figure 17), therefore gross add share for postpaid services including both voice and broadband services would not significantly diverge from those presented in the above Figure 33.

Virgin Media	[5-10]%	[5-10]%	[10-20]%
Other MVNOs	[5-10]%	[5-10]%	[0-5]%
Total MVNOs	[20-30]%	[20-30]%	[20-30]%
Total	100%	100%	100%
	2014		
Three	[10-20]%	[5-10]%	[10-20]%
O2 (total)	[20-30]%	[30-40]%	[20-30]%
O2	*[10-20]%*	*[20-30]%*	*[20-30]%*
Tesco Mobile	*[10-20]%*	*[10-20]%*	*[5-10]%*
Combined	**[40-50]%**	**[30-40]%**	**[40-50]%**
EE	[20-30]%	[30-40]%	[20-30]%
Vodafone	[10-20]%	[10-20]%	[10-20]%
Virgin Media	[5-10]%	[0-5]%	[10-20]%
Other MVNOs	[5-10]%	[5-10]%	[5-10]%
Total MVNOs*	[20-30]%	[20-30]%	[20-30]%
Total	100%	100%	100%

Source: Annex 9 to the Form CO, Market share tables.
* *"Total MVNOs" includes Tesco Mobile.*

(384) Figure 33 above shows that in 2014 pre-Transaction, in all considered segments the Parties are the […] operator by number of gross adds (although in the overall private segment O2 shares its leading position with EE).

(385) Post-Transaction the merged entity would be the market leader with gross add shares equal or close to [30-40]% in all segments illustrated in Figure 33. EE would be the second largest player with a share more than 10 percentage point smaller than the merged entity. The share increment brought about by the Transaction would also be above 10% in the overall private and in the postpaid voice segments.

(386) The market reconstruction performed by the Commission has provided evidence that the gross add share data provided by the Notifying Party in Annex 9 to the Form CO is not fully accurate.

(387) While Figure 33 above shows that pre-Transaction in 2014 the Parties have both large gross add shares, it underestimates the competitive pressure exerted by Three on the relevant market, and in particular in the overall private, postpaid private and prepaid segments.

(388) As set out in recital (332), the Commission conducted its own reconstruction of market shares and gross add shares, to which the Notifying Party was given access in the data rooms opened on 4 February 2016 and 21 March 2016. On the basis of its market reconstruction, and in contrast to the figures provided by the Notifying Party

with Annex 9 to the Form CO, the Commission notes that Three's gross add shares for 2014 and the first half of 2015 are higher than the corresponding market shares in the same period.[301]

(389) In the Reply to the Letter of Facts of 17 March 2016 the Notifying Party has criticised the finding that Three's gross add shares are higher than its market shares. The Notifying Party claims that the methodology used by the Commission for calculating the gross add shares is not consistent with the methodology used to calculate subscriber shares and hence the two cannot be compared. The Notifying Party's criticism relates to the fact that (i) the Commission's gross add shares for the prepaid segment are based on gross adds that include free SIMs, while the Commission's subscriber shares focus on active SIMs; and (ii) for the postpaid segment, the Commission's gross add shares do not include internal migrations within an operator from the prepaid to the postpaid segment, while the subscriber shares for each segment reflect both gross adds to the postpaid segment attracted from other operators and gross adds to the postpaid segment attracted from the prepaid segment within the same operator.

(390) For the two reasons above, the Notifying Party submits that the Commission's comparison of gross add shares and subscriber shares presented in the Letter of Facts of 17 March 2016 would not be a "like for like" comparison, as it would be comparing gross add shares and subscriber shares computed on two different bases. The Notifying Party therefore submitted revised estimates of market shares (based on a combination of at least three different data sources) which the Notifying Party claims to be the right comparator for the Commission's gross add shares. These updated market shares are higher than the Commission's estimated market shares.[302] On this basis, the Notifying Party claims that Three's gross add share (as calculate by the Commission) would be smaller than its "like for like" comparator market share.

(391) In this regard the Commission notes the following.

(392) First, the purpose of the Commission's market reconstruction was to verify the accuracy of the Notifying Party's estimates of market shares and gross add shares submitted with the notification, as these are based on significant assumptions to overcome information gaps by the Notifying Party regarding its rivals' subscribers and gross adds.[303] The market reconstruction has been performed by the Commission collecting new and current subscriber data directly from the four MNOs, Tesco Mobile, Virgin Media, Talk Talk, Lycamobile and Lebara following a consistent methodology as set out in RFI 3 sent to Three on 17 June 2015.

(393) Second, while the Notifying Party's market shares submitted with the notification and the Commission's market shares are similar, the Commission noted in the Statement of Objections the existence of discrepancies between the gross add share estimates proposed by the Notifying Party and the gross add shares reconstructed by the Commission. Paragraph 284 of the Statement of Objections pointed to this inconsistency and stated that, while the results of the Commission's market reconstruction were broadly in line with the market share data provided by the

[301] Letter of Facts of 17 March 2016, paragraph 11. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

[302] See above recitals (349), (354) and (357).

[303] See Annex 8 to the Form CO on the Notifying Party's methodology to calculate market shares and gross add shares.

Notifying Party, this was not the case for the Parties' gross add shares. The Commission's reconstruction of market shares and gross add shares has been made available to the Notifying Party in the data room opened on 5 February 2016. In the Reply to the Statement of Objections, the Notifying Party did not raise any comments on the Commission's methodology. Only in the Reply to the Letter of Facts of 17 March 2016 the Notifying Party argued that the Commission's methodology is inaccurate.[304]

(394) Third, the Commission notes that Three's customer base and market share in the overall private segment has been consistently growing over period covered by the Commission's market reconstruction (January 2013 – June 2015).[305] In the Commission's view, this finding, coupled with the data on Three's average churn provided by the Notifying Party (which is constant or decreasing but higher than its competitors)[306], suggests that Three's gross add share has been above the corresponding market share over the period. The Notifying Party's claims that (i) Three's churn is particularly high and (ii) that Three's gross add share is below the correspondent market share would instead suggest that Three has been losing market share, which is not the case.

(395) The strength of Three's gross adds in spite of a claimed comparatively higher churn is also highlighted by Three's net adds[307] as reported in Three's internal documents. In a presentation of May 2015 Three reports a growth of [500000 - 600000] net customers from the first quarter (Q1) of 2014 to the same quarter of 2015, corresponding to a growth of the customer base of [5-10]%,[308] as shown in Figure 34. The same internal document also shows that the evolution of Three's performance in terms of net adds […].[309] In the Commission's view, evidence of strong net adds for Three is an indication of gross adds that are strong enough to counteract the levels of customer churn that in the Notifying Party's view are particularly high for Three (compared to the other MNOs).[310]

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304 The Commission also notes that the gross add shares from its market reconstruction have been used as the basis for calculating the price effects in its quantitative analysis presented in the Article 6(1)(c) Decision and in the Statement of Objections. Neither in the Reply to the Article 6(1)(c) Decision nor in the Reply to the Statement of Objections has the Notifying Party raised any issue on the methodology employed by the Commission.

305 Figures based on subscriber data from the Commission's market reconstruction (includes voice&data and data only connections for both prepaid and postpaid services).

306 See Figure 69 below.

307 Net adds are the number of new subscribers (gross additions) net of the lost subscribers and can be used as a relevant measure of an operator's competitive strength. Nevertheless, they are not relevant for the type of quantitative analysis performed in Section 8.2.1.4. That analysis uses gross adds as a measure of quantities, that is, the equivalent of what would be the sale volumes in a standard consumer good industry. By contrast, the net adds do not provide a relevant proxy for the "sales made by the operator" (which is the measure needed in the modelling) because they also account for the lost customers. Therefore, for the purpose of the quantitative analysis performed, the Commission has not collected data on net adds. It has nonetheless used information on net adds from the Parties' internal documents for descriptive purposes in this Section.

308 Three's internal documents, […] [ID 001310584.00001]. Three's prepaid subscriptions grew of [300000 - 400000] customers and post-paid subscriptions of [200 000 - 300 000], a growth of respectively [10-20]% and [0-5]%.

309 In this regard see recitals (634) and following.

310 See recital (651) below.

Figure 34

(a) Total net adds ('000) in 12 months to Q1 2015*

[…]

(b) Evolution of total net adds ('000) by quarters (Q1 2011 - Q1 2015)

[…]

Source: Three's internal documents, […][ID 001310584.00001].

* […]

(396) Finally, on the point raised by Three regarding the inclusion of free SIMs amongst the count of gross adds in prepaid, the Commission notes that this can only generate an upward bias in the gross add share of Three if Three could be shown to hand out considerably more free SIMs compared its rivals. Three has not provided any evidence that this is the case and, as such, the Commission is of the view that the inclusion of free SIMs is unlikely to introduce a material upward bias in the gross add share of Three. As discussed in paragraph (1004), including free SIMs amongst the prepaid gross adds is more likely to overstate the presence of non-MNOs such as Lycamobile and Lebara.

(397) In the light of the above, the Commission considers that the data presented in this subsection provide a first indication that Three exerts on the retail market a greater competitive constraint than its market share would suggest.

Concentration levels – Herfindahl-Hirschman Index

(398) The Horizontal Merger Guidelines explain that, while the absolute Herfindahl-Hirschman Index ("HHI") level can give an initial indication of the competitive pressure in the market post-merger, the change in the HHI is a useful proxy for the change in the concentration level directly brought about by the merger.[311] According to the Horizontal Merger Guidelines, the Commission is unlikely to identify horizontal competition concerns in a market with a post-merger HHI below 1 000, with post-merger HHI between 1 000 and 2 000 and a change below 250, or with a post-merger HHI above 2 000 and a change below 150.[312]

(399) Figure 35 sets out the level of HHI pre-Transaction, post-Transaction and change in HHI, based on the market and segment shares by providers, by subscriptions and revenues in 2014, as reported in Figure 19 and in Figure 21 to Figure 32.[313]

Figure 35: HHI (based on 2014 market shares)

Market/ Segment	HHI pre-Transaction	HHI post-Transaction*	Change in HHI
Overall retail			
Subscribers	[2000-3000]	[3000-4000]	[500-1000]
Revenues	[2000-3000]	[3000-4000]	[500-1000]

311 Horizontal Merger Guidelines, paragraph 16.

312 Horizontal Merger Guidelines, paragraphs 19 and 20.

313 Concentration level based on share at distribution level as well as for the business segment are not provided as the Commission has not found concerns with respect to the increase in market share of the merged entity and concentration levels in the market segments.

Overall private			
Subscribers	[2000-3000]	[3000-4000]	[500-1000]
Revenues	[2000-3000]	[3000-4000]	[500-1000]
Prepaid			
Subscribers	[2000-3000]	[3000-4000]	[500-1000]
Revenues	[3000-4000]	[3000-4000]	[500-1000]
Postpaid private			
Subscribers	[2000-3000]	[3000-4000]	[500-1000]
Revenues	[2000-3000]	[3000-4000]	[500-1000]
SIMO private			
Subscribers	[1000-2000]	[2000-3000]	[500-1000]
Revenues	[1000-2000]	[2000-3000]	[500-1000]
Handset private			
Subscribers	[2000-3000]	[2000-3000]	[0-500]
Revenues	[2000-3000]	[2000-3000]	[500-1000]
SIMO postpaid private			
Subscribers	[1000-2000]	[2000-3000]	[500-1000]
Revenues	[1000-2000]	[2000-3000]	[500-1000]
Handset postpaid private			
Subscribers	[2000-3000]	[2000-3000]	[500-1000]
Revenues	[2000-3000]	[3000-4000]	[500-1000]
SIMO prepaid private			
Subscribers	[2000-3000]	[2000-3000]	[0-500]
Revenues	[2000-3000]	[2000-3000]	[0-500]
Handset prepaid private			
Subscribers	[2000-3000]	[2000-3000]	[0-500]
Revenues	[2000-3000]	[2000-3000]	[0-500]

Source: Commission's computation.

(400) Pre-Transaction the retail market for mobile telecommunications is a highly concentrated market. As shown in Figure 19 and in Figure 21 to Figure 32 above, the

four MNOs account for over 90% by subscriptions and revenues of both the overall market and several segments of it, resulting in high concentration levels.

(401) The post-Transaction HHI on the overall retail market would be considerable, namely [3000-4000] based on subscriptions and [3000-4000] based on revenues. ikewise, in the overall private segment, the post-Transaction HHI would amount to [3000-4000] based on subscribers and [3000-4000] based on revenues after the Transaction. The change in HHI pre- and post-Transaction on the overall retail market would also be considerable, namely [500-1000] based on subscriptions and [500-1000] based on revenues. Likewise, in the overall private segment, the HHI would increase by [500-1000] based on subscribers and by [500-1000] based on revenues.

(402) In respect of prepaid subscriptions, the post-Transaction HHI is particularly high: [3000-4000] based on subscribers and [3000-4000] based on revenues after the Transaction with an increase of [500-1000] and [500-1000] respectively. In respect of postpaid private subscriptions, the increase is the highest. It amounts to [500-1000] based on subscribers and [500-1000] based on revenues.

(403) In respect to SIMO subscriptions, in all considered segments, the post-Transaction HHI would be above 2 000 and the change in HHI above 250. Similarly, for overall handset private subscriptions and handset postpaid private subscriptions the post-Transaction HHI would be above 2 000 and the change in HHI far above 250. In the handset prepaid private segment the post-Transaction HHI would be above 2 000 but the change in HHI pre- and post-Transaction would be below 150.

(404) Therefore, the post-Transaction HHI and the change in HHI pre- and post-Transaction in the overall retail market and in virtually all segments affected by the Transaction, with one exception (handset prepaid private segment)[314], would be significantly above the presumption thresholds of absence of competition concerns under paragraphs 19 and 20 of the Horizontal Merger Guidelines. The post-Transaction HHI and change in HHI pre- and post-Transaction would be the highest in the postpaid segment, which, as explained in recitals (339) and following, is the largest of the retail market.

(405) The very high values referred to in recitals (401) to (403) suggest that the Transaction, by combining two of the largest operators, would significantly increase the level of concentration in the relevant market and leads to a highly concentrated market post-Transaction.[315]

<u>Conclusion on assessment of market shares</u>

(406) Based on the above, the Commission considers that the size and the evolution of the market shares of the Parties in the relevant market and segments thereof provide a first indication of the important competitive constraint exerted by Three and O2. As a result of the Transaction the merged entity would hold a strong position in the retail market for mobile telecommunications services and in various segments thereof, which are already very concentrated and which, post-Transaction, would become even more concentrated.

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314 On the size of the handset prepaid private segment see Figure 18.

315 Horizontal Merger Guidelines, paragraphs 20 and 21.

ii. Competitive constraints exerted by the Parties on each other and other competitors

Notifying Party's view

(407) The Notifying Party submits that all of the evidence available to the Commission through the appropriate diversion ratios, its market investigation and the internal documents of the Parties clearly demonstrates that the Parties cannot be considered: (i) each other's closest competitor; or even (ii) sufficiently close competitors to satisfy the evidential burden required of the Commission in establishing unilateral effects arising from concentrations absent dominance. Three is a closer competitor to EE than to O2, and O2 is a closer competitor to EE than to Three.[316]

(408) In the Notifying Party's view, Three and O2 are not close competitors for the following reasons: (i) the diversion ratios between the Parties do not indicate any particular closeness; (ii) the Parties focus on complementary segments of the market; (iii) customers regard the brands of Three and O2 as far apart; (iv) the Parties pursue different business strategies; and (v) Three and Tesco Mobile are not close competitors either.

(409) In particular, as to the first argument, the Notifying Party claims that the diversion ratios between Three and O2 based on switching data from the Kantar Wordpanel survey show that the customers of Three are not particularly inclined to switch to O2 and vice versa.[317] To support this view, the Notifying Party makes several arguments concerning the use of number portability data as a basis for diversion ratios and concludes, based on switching data by the Kantar Wordpanel survey, that EE is the closest competitor to Three and that EE and Vodafone are the closest competitors to O2. In its Reply to the Article 6(1)(c) Decision the Notifying Party argues that the Commission's own diversion ratios presented in the Article 6(1)(c) Decision show that the Parties are not close competitors and that rather EE is the closest competitor to both Three and O2. Further in the Reply to the Statement of Objections the Notifying Party claims that the methodology used by the Commission for calculating diversion ratios suffers from serious design flaws that render the results unreliable and unusable.

(410) In addition, regarding market segments, the Notifying Party submits that the Parties focus on complementary segments rather than on the same segments.[318] The Notifying Party divided the market into seven segments: private prepaid voice, private postpaid voice, business voice, private prepaid mobile broadband, private postpaid mobile broadband, business mobile broadband and business M2M. The Notifying Party argues that the fact that Three is weak in segments where O2 is strongest and that O2 is weak in segments where Three is strongest shows that the Parties are not close competitors.

Commission's assessment

(411) The Commission notes that the retail market for mobile telecommunications services in the United Kingdom is very concentrated. As shown in Figure 19 and in Figure 21 to Figure 32, the four MNOs account for over 90% by subscriptions and revenues of both the overall market and the segment for the provision of services to private

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316 Reply to the Statement of Objections, Section 3.
317 Form CO, Section 6, paragraph 781.
318 Form CO, Section 6, paragraph 790.

customers. In the current competitive landscape, all MNOs, including Three and O2, compete vigorously.[319]

(412) The Commission has performed an assessment of the closeness of competition on the retail market for mobile telecommunications services within the legal framework illustrated in recitals (322) onwards and based on qualitative and quantitative evidence. The Commission's findings are set out in the following recitals.

Qualitative evidence on closeness of competition

(413) When asked to identify the closest competitor of Three, answers from respondents to the phase I market investigation varied depending on whether they were asked to consider retail mobile telecommunications services overall or specific market segments. For overall retail mobile telecommunications services, the majority of respondents regarded EE as the closest competitor to Three. Nonetheless, a significant number of market participants mentioned O2 as closest competitor of Three. Only one respondent mentioned Vodafone as Three's closest competitor. In the segments "prepaid services", "Voice, MMS/ SMS" and "private customers" a majority of respondents regarded O2 as the closest competitor to Three; in the segment "postpaid services" an equal number of respondents identified EE and O2 as the closest competitors of Three; in the segment "Voice, MMS/ SMS, data" EE was identified slightly more often than O2 as closest competitor to Three. The market participants did not regard Three and O2 as close competitors in the segments "data only" (closest competitor to Three: EE).[320]

(414) In the phase II market investigation, the Commission asked participants to identify the closest competing brand to Three’s brand in the overall retail market and in the following segments: private segment; prepaid segment; postpaid segment; SIMO segment; handset subscriptions segment; data only segment. The results of the phase II investigation are generally in line with those of the phase I investigation, with EE being indicated as the closest competing brand to Three in the overall retail market and all considered segments, with the exception of prepaid segment, where the majority of respondents indicated Tesco Mobile as Three's closest competing brand.[321]

(415) As regards the closest competitor to O2, the majority of respondents in the phase I market investigation named EE as O2's closest competitor for overall retail mobile telecommunications services. Three was mentioned second and Vodafone third. EE was mentioned most often as O2's closest competitor also in the segments "postpaid services", "Voice, MMS/ SMS, data" and "private customers", closely followed by Three in the first two segments. In the segment "data only" an equal number of respondents named EE and Three as the closest competitors to O2. In the segments "prepaid services" and "Voice, MMS/ SMS" a majority of respondents regarded Three as the closest competitor to O2.[322]

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[319] Form CO, Section 6, paragraph 861. See Reply to Article 6(1)(c) Decision, paragraph 149. See also […].

[320] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 34 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 32.

[321] […], Responses to Questionnaire Q67 to non-MNOs of 4 December 2015, question 3, […].

[322] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 34 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 32.

(416) In the phase II market investigation, the Commission asked participants to identify the closest competing brand to O2's brands, that is to say O2, giffgaff and Tesco Mobile in the overall retail market and in the segments indicated in recital (416). With respect to the brand "O2", the majority of respondents stated that EE is the closest competitor in the overall retail market and all considered segments, with the exception of postpaid segment, where the majority of respondents indicated Vodafone as O2's closest competing brand. With respect to giffgaff the majority of respondents stated that Tesco Mobile and Virgin Media are the closest competitor in the overall retail market and all considered segments. With respect to Tesco Mobile, the majority of respondents stated that Virgin Media is the closest competitor in the overall retail market and all considered segments.[323]

(417) The results of the market investigation summarised above therefore provide a first indication that the Parties are close competitors as for a large number of respondents to the market investigation Three and O2 are each other's closest competitors.

(418) Further, the review of the Parties' internal documents shows that both Three and O2 […].

(419) In the Statement of Objections[324] the Commission noted that […].[325] […].[326]

(420) In the Reply to the Statement of Objections, the Notifying Party claims that the Commission has only considered a limited number of documents as support for the propositions on closeness of competition and that it has ignored the context and full content of those documents, which ultimately would not support a finding of closeness of competition between the Parties. Further, the Notifying Party claims that the Commission has ignored […].[327]

(421) In this respect the Commission notes that, first, as explained in recitals (322), the legal test for closeness of competition does not require the merging parties to be the closest competitors.

(422) Second, the documents referred to in the Statement of Objections[328] in support of the closeness of competition findings are strategic documents, and are in particular […]. As such, the Commission considers that, because of their nature, those documents have a high evidential value.

(423) Third, the Commission does not deny that, in the same documents,[329] the Parties, in addition to each other, discuss and monitor also EE and Vodafone, and, to a certain extent also non-MNOs. The Commission nonetheless considers that this element does not exclude the fact that the Parties compete closely. Rather, in such a concentrated market, monitoring general market developments seems to be a regular and prudent business practice, in particular with respect to the major players, since all MNOs are likely to represent a competitive threat at a particular point in time.

(424) Fourth, the Commission considers that the documents cited by the Notifying Party in the Reply to the Article 6(1)(c) Decision and to the Statement of Objections do not

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323 […], Responses to Questionnaire Q67 to non-MNOs of 4 December 2015, question 3, […].
324 Statement of Objections, paragraph 333 and footnote 274.
325 O2's internal documents, […] [000081400.00001];[…] [000100206.00001].
326 See for example […] [ID 005901915.00001]. See also Three's internal documents, […].
327 Reply to the Statement of Objections, paragraph 181 and 186.
328 Statement of Objections, paragraph 333 and footnote 274.
329 Documents cited in the Statement of Objections, paragraph 333 and footnote 274.

disprove the Commission's finding that the Parties compete closely with each other, but rather confirm that finding.

(425) In particular, […].[330] […]. In this respect the Commission notes that, […],[331] […],[332] […]

Figure 36: […]

[…]

Source: Reply to the Statement of Objections, Annex B3.6, slide 26

[…]

(426) Likewise, the Notifying Party claims that according to certain internal documents,[333] […].[334] The Commission notes that […].[335]

(427) Further, the Notifying Party claims that some of O2's internal documents[336] show that […]. In this respect the Commission notes that […].[337]

(428) In addition, referring to certain internal documents of both O2 and Three,[338] the Notifying Party claims that […]. However, the Commission notes that […]. The Commission also notes that […].[339]

(429) Finally, the Notifying Party argues that O2's internal documents related to […]. However, the Commission notes that the Statement of Objections identified the launch pricing of 4G services as a possible past attempt of coordination between MNOs, which Three disrupted. Further, the Commission notes that O2, through Tesco Mobile, was the first operator to respond to Three's 4G pricing. O2's internal documents show that […] [340] In this respect, […]notes that "*Tesco Mobile originally launched 4G as a chargeable add-on to an existing package. In December 2013 H3G started its 4G rollout promising 4G at no extra cost. Subsequently in January 2014, Tesco Mobile announced that 4G would be available at no extra cost, dropping the premium bolt on. As Tesco Mobile is a joint venture between O2 and Tesco, we consider that this represents an example of O2 directly reacting to competitive pressure from H3G.*"[341]

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330 […] Annex B3.6 to the Reply to the Statement of Objections […].

331 […].

332 […].

333 The series of Three's internal documents […] cited in paragraph 87 of the Reply to the Article 6(1)(c) Decision and paragraph 188 of the Reply to the Statement of Objections.

334 Three's internal documents, […] [ID 13701354]; […] (ID 1202944); […] (ID3802456); and […] (ID 6500676) cited in Reply to the Article 6(1)(c) Decision, paragraph 86.

335 […] [ID 022500848.00001].

336 The series of O2's internal documents […] cited in the Reply to the Article 6(1)(c) Decision, paragraphs 88, 90 and 92, and in the Reply to the Statement of Objections, paragraphs 189, 191 and 193.

337 O2's UK internal document, […]

338 The […] internal documents of Three […] and O2's internal documents […], cited respectively in paragraph 87 of the Reply to the Article 6(1)(c) Decision and 188 of the Reply to the Statement of Objections and in paragraphs 89 and 91 of the Reply to the Article 6(1)(c) Decision and 190 and 192 of the Reply to the Statement of Objections.

339 Three's internal documents, […] [ID 009901628.00001]; […] [ID011002814]; […] [ID 009009728.00001]; […] [ID 003301693.00001]; […] [ID 025803196]; […] [ID 009901629.00001]. O2's internal documents, […] [ID 000048459.00001]; […] [ID 000092783.00001]; […] [ID 000054874.00001].

340 O2's internal documents, […] [ID 000048315.00001].

341 […].

(430) In light of the above, the Commission considers that the Parties' internal documents provide evidence that Three and O2 compete closely with each other and the other MNOs.

(431) Furthermore, the Parties' internal documents provide evidence that Three and O2's sub-brands, giffgaff and Tesco Mobile, compete closely. O2's sub-brand giffgaff competes particularly closely with Three in terms of prices, data allowances and target customer segments. Indeed, giffgaff is the only brand in the United Kingdom other than Three offering unlimited data at aggressive prices.[342] Likewise, Three and Tesco Mobile have the same brand positioning […].[343]

(432) While Three's brand appears to be closer to giffgaff and Tesco Mobile than to the O2 premium brand, the Commission notes that the Parties still reciprocally track the performance of all their brands, as well as the performance of other competitors, and take this information into account in their decisions on marketing and advertising strategies. Three's internal documents show that, […].[344] At the same time, O2's internal documents show that […][345]

(433) Finally, the Commission disagrees with the Notifying Party's claim that Three and O2 serve substantially different groups of customers, being the former more focused on postpaid heavy data users and the latter targeting mainly prepaid voice customers.

(434) In this regard the Commission notes that, while O2's market share in prepaid is greater than in postpaid, O2 is still the […] player […] in the postpaid segment. Further, the majority of both Parties' subscribers and revenues are derived from postpaid services. More precisely, in 2014 Three derived over […] of its subscribers and close to […] of its revenues from postpaid services, while for O2 […] ([…] including Tesco Mobile) of the customer base and over […] of the revenues relate to the postpaid segment. The market trends illustrated in Section 6.1. above show that the postpaid segment is growing, while the prepaid segment is shrinking. The focus of all mobile operators is therefore going to intensify even further in the postpaid segment.

(435) Further, as explained in Section 6.2., the mobile market in the United Kingdom is becoming more and more data centric, customer demand for data is increasing and all operators seek to monetise this trend. Internal documents of O2 show that […]. [346] […].

(436) A key feature for an appealing data offer to customers is the provision of 4G services. Also in this respect O2 […][347]

(437) Likewise, the Commission found that a significant segmentation of the market from a competitive perspective is the one between SIMO and handset contracts, in particular within the postpaid segment. As explained in Section 6.1., the SIMO postpaid segment is growing and increasing in importance for customers. In this segment Three and O2 are the third and first players by revenues and subscriptions according

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342 Ofcom, Phase 2 submission, "Closeness of competition between Three and giffgaff" [ID00003704]. As mentioned above in recital (268), Ofcom points to giffgaff "recurring goodybag" tariff as an example of blurred distinction between prepaid and postpaid services.

343 See Figure 65 and Three's internal documents, […] [ID 026900587.00001].

344 Annex 7.038 to Form CO, pages 18 and 20. See also Annex 7.034 to Form CO, slide 97.

345 O2's internal documents, […] [ID 000054874.00001].

346 O2's internal documents, […] [ID 000076720.00001].

347 O2's internal documents, […] [ID 000075071.00001].

to the market shares provided by the Notifying Party in response to the Commission's RFI 60.[348] The Parties' internal documents […].[349]

(438) Therefore, based on the results of the market investigation and the overall body of qualitative evidence in its file, the Commission considers that Three and O2 compete closely with each other and the other MNOs on the basis of the parameters of competition indicated in Section 6.6.2.

(439) The Commission also considers that, while MNOs are close competitors, non-MNOs are much more distant competitors to MNOs, including Three and O2.

(440) In this respect the Commission notes first that, non-MNOs overall account for less than 10% of the market and have a limited ability to compete as they rely on the wholesale conditions negotiated with their host MNOs.

(441) The Commission's market investigation showed that their dependence on the wholesale conditions is twofold. First of all, non-MNOs are dependent on the wholesale price charged by the host MNO when designing their own tariff plans. In particular, as further explained in Section 8.2.1.3.b(i), non-MNOs already face significant difficulties to compete with the MNOs on larger data packages and second, non-MNOs are reliant on the quality of their host network to provide services and therefore are not able to differentiate their retail services from those of the host MNO as regards quality or technical innovation. […] is unable at this stage to compete with the MNOs on large data packages and 4G services.

(442) The review of the Parties' internal documents, […].[350] Furthermore, as shown in Figure 106, Figure 107 and Figure 108, MNOs regard the non-MNOs they host more like business partners than real, direct competition for the same customers, and host them with a view to reach to those segments of the markets that they cannot appeal to on their own.

Diversion ratios

(443) Further evidence of the fact that the Parties compete closely to each other is provided by the analysis of the diversion ratios.

(444) The Horizontal Merger Guidelines explain that diversion ratios are one of the methods that can be used to assess whether the merging parties are close competitors.[351] The diversion ratios indicate the extent to which sales lost by one of the Parties are taken up by the other party or the remaining market participants. The Commission has adopted this type of analysis in previous merger cases in the telecommunications sector.[352]

(445) In the phase I investigation, the Commission calculated diversion ratios at the network level[353] based on MNP data collected from the mobile operators. On this

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348 See above Figure 25.

349 Three's internal documents, […]. O2's internal documents, […]; for example [ID000093080.00001], [ID000092772.00001]. See also Tesco's response to RFI 75, question 2 [ID4118].

350 See for instance Three's internal documents, […].

351 Horizontal Merger Guidelines, paragraph 29.

352 Commission decision of 2 July 2014 in case No. M.7018 – *Telefónica Deutschland/E-Plus*; Commission decision of 28 May 2014 in case No. M.6992 – *Hutchison 3G UK/Telefónica Ireland*; Commission Decision of 12 December 2012 in case No. M.6497 – *Hutchison 3G Austria/Orange Austria*.

353 That is, including each non-MNO under its corresponding MNO host and considering customer switching across networks.

basis, it found sizeable diversion between the networks of Three and O2 and vice versa. As indicated in the Article 6(1)(c) Decision, the Commission considers that Three and O2 are close competitors on the basis of diversion ratios calculated from this MNP data.

(446) The Commission considers that MNP data, which measures consumer switching between operators, can form a basis for calculating diversion ratios. The Commission has indeed relied on MNP data in past decisions. However, MNP data presents a number of limitations for the purposes of calculating diversion ratios. In particular, MNP data (i) does not provide a direct estimate of the customers' first and second choice; (ii) may not accurately reflect customer responses to price changes as data on past switching may have occurred for a variety of reasons not necessarily related to changes in relative prices; and (iii) only captures switching patterns for customers who port their number. To refine its estimate of the diversion ratios across operators, the Commission has carried out the Survey in the phase II investigation.

(447) The Survey has been conducted by telephone and aimed at eliciting switching patterns between each of Three, O2 and Tesco Mobile and the other mobile operators in response to price changes. A set of 1,200 customers having recently (between July 2014 and June 2015) switched to Three, O2 and Tesco Mobile have been asked about their likely alternative choice if their most recent choice of mobile provider (Three, O2 or Tesco Mobile) had been more expensive or not available. The Survey hence directly investigated second choices of customers who, through their recent choice, have identified themselves as having Three, O2 or Tesco Mobile as their first choice alternative.[354]

(448) The Commission has computed two sets of diversion ratios from the responses to the Survey. The first is based on respondents' stated behaviour in the hypothetical event that the tariffs of their most recently chosen provider had been more expensive at the time they made their choice ("intensive question").[355] The second set of diversion ratios is based on respondents' stated switching behaviour in the hypothetical event that their most recently chosen provider had not been available at the time they made their choice ("extensive question").

(449) Both questions elicit information on the distribution of respondents' second choices, that is, the alternative that the respondents considered to be the second best at the time of their choice. The intensive question has the further benefit that it can identify the second choices of marginal consumers, that is to say consumers that are most likely to change their behaviour following a price increase. In contrast, the extensive question provides information on the distribution of second choices of average consumers, including those that would likely not change their behaviour following a 10% price increase. While responses to the intensive question are the most relevant for the assessment of likely behaviour following price increases, the Survey featured significantly fewer responses to that question.

354 The Survey focussed on interviewing customers of Three, O2 and Tesco Mobile because the diversion from each of these three operators to the other two has a first order effect on the results of the quantitative analysis. The diversions from other operators (EE or Vodafone) are a significantly less important driver of the analysis of the price effects of the Transaction. See Annex A to this Decision.

355 The consumers were asked about their most recent choice of mobile telephone brand and which brand they would have chosen in case the price of the chosen brand had been approximately 10% higher per month at the time they made their choice. See Annex D to this Decision.

(450) The diversion ratios between Three and O2 resulting from the responses to the intensive question are higher than the corresponding figures based on an aggregation of the responses to the intensive and to the extensive question. As a conservative approach, and in light of their greater statistical precision, the Commission has therefore used for its baseline analysis the diversion ratios calculated on all responses (intensive and extensive).

(451) The computed diversion ratios can be presented at the network level or at the provider level. For the former, switching is considered across the four mobile networks only and each non-MNO is aggregated under its host network (with the exception of Tesco Mobile, which is reported separately from O2).[356] The diversion ratios at the provider level instead assume that each non-MNO is fully independent from its host network and, therefore, diversions to and from each non-MNO are reported separately from their host MNO.

(452) More details on the Survey and the calculation of diversion ratios based on this Survey data are presented in Annex A, where the Commission also discusses the Notifying Party's arguments on diversion ratios in the Reply to the Article 6(1)(c) Decision and the Reply to the Statement of Objections.

(453) The Commission has calculated diversion ratios separately for the prepaid and the postpaid private segments, as well as for the overall private segment.[357, 358, 359]The Commission has not carried out a survey of the customers in the business segment as Three's retail activities are negligible in this segment.

(454) Figure 37 and Figure 38 present the diversion ratios at the network and at the provider level, respectively, based on an aggregation of the respondents' answers to the intensive question and to the extensive question.

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356 In the quantitative analysis, the Commission applied 50% ownership and control of O2 towards Tesco. See Section 8.2.1.4.

357 The Commission has computed the diversion ratios for the overall private segment as the average of the diversion ratios in the prepaid and the postpaid segments weighted by the corresponding subscriber share.

358 A small number of respondents indicated that they would also switch segment in the event of a price increase. Nevertheless, for the purposes of the analysis of diversion ratios, the Commission has assumed that switching takes place within the same segment only. See Annex A to this Decision.

359 The Commission has not calculated diversion ratios separately for the segmentation between private SIMO contracts and private contracts with a handset. This is because the competitive significance of a segmentation between SIMO and handset contracts was identified by the Commission on the basis of the analysis of the internal documents submitted by the Parties at the end of phase I and during the phase II investigation (see recital (257)), when the Survey had already been designed and launched (see Annex E to this Decision, section Fieldwork). In any event the Commission considers that disaggregated information on the segmentation of prepaid versus postpaid private is sufficient to verify whether the relative position of Three and O2 could differ compared to the overall market, given the current limited size of the SIMO segment, in particular in postpaid, which is the largest segment in the retail market (see Figure 17): indeed, the SIMO postpaid private segment is almost seven times smaller by revenues than the postpaid handset contracts segment, see Figure 18.

Figure 37: Diversion ratios based on the Survey, intensive+extensive, network level

Prepaid	Three	O2	Tesco Mobile	EE	Vodafone
Three	-	[50-60]%	[5-10]%	[20-30]%	[10-20]%
O2	[20-30]%	-	[10-20]%	[30-40]%	[30-40]%
Postpaid private	Three	O2	Tesco Mobile	EE	Vodafone
Three	-	[40-50]%	[0-5]%	[20-30]%	[20-30]%
O2	[10-20]%	-	[0-5]%	[40-50]%	[30-40]%

Source: Commission calculations based on the Survey's responses.

(455) At the network level, [50-60]% of customers that chose a Three prepaid tariff indicated O2's network as their second choice, while [20-30]% and [10-20]% indicated EE's and Vodafone's networks, respectively, as their second choice alternative. In the postpaid segment, which is the largest segment of the retail market (see Figure 17), [40-50]% of customers that chose Three's network indicated O2's network as their second choice, while [20-30]% and [20-30]% would have chosen EE's and Vodafone's networks, respectively. The diversion ratios from Three to Tesco Mobile are relatively low in all segments ([5-10]% and [0-5]% in prepaid and postpaid, respectively).

(456) The diversion ratios from O2 towards Three's network are [20-30]% in the prepaid segment and [10-20]% in the postpaid segment. From O2 to EE's and Vodafone's networks, the diversion ratios are [30-40]% and [30-40]% in the prepaid segment, and [40-50]% and [30-40]% in the postpaid segment. The diversion ratios from O2 to Tesco Mobile are [10-20]% in the prepaid segment and [0-5]% in the postpaid segment.

Figure 38: Diversion ratios based on the Survey, intensive+extensive, provider level

Prepaid	Three	O2	Tesco Mobile	EE	Vodafone
Three	-	[40-50]%	[5-10]%	[10-20]%	[10-20]%
O2	[20-30]%	-	[10-20]%	[20-30]%	[20-30]%
Postpaid private	Three	O2	Tesco Mobile	EE	Vodafone
Three	-	[30-40]%	[0-5]%	[20-30]%	[10-20]%
O2	[10-20]%	-	[0-5]%	[30-40]%	[30-40]%

Source: Commission calculations based on the Survey's responses.

(457) The diversion ratios at the provider level are lower than the corresponding figures at the network level because, as explained above, the network level diversion ratios attribute all diversions to and from a non-MNO to the corresponding host MNO.

(458) At the provider level, [40-50]% of customers that chose a Three prepaid tariff indicated O2's network as their second choice. In the postpaid private segment, [30-40]% of customers that chose Three's network indicated O2's network as their second choice.

(459) The diversion ratios from O2 towards Three's network are [20-30]% in the prepaid segment and [10-20]% in the postpaid private segment.

(460) Overall, the diversion ratios based on the aggregate responses to the intensive and extensive Survey questions show that a sizeable amount of customers of each of the Parties have the other Party as a second best alternative.

(461) In terms of comparison with MNP data, the results of the Survey suggest a significantly higher diversion from Three to O2 in all segments (both at network and provider level).[360] As already indicated in the analysis presented in the Article 6(1)(c) Decision, the Commission considers that Three and O2 are close competitors on the basis of diversion ratios calculated from MNP data. The findings of the Survey confirm and further strengthen this view.

(462) Further diversion ratios and switching patterns are analysed and discussed in Annex A, which forms an integral part of this Decision.

Conclusion on competitive constraints exerted by the Parties on each other and other competitors

(463) Based on the above, the Commission concludes that the Parties are close competitors on the overall retail market for mobile telecommunications services (and segments thereof) in the United Kingdom. The rivalry between the Parties has been an important source of competition on the market.[361]

iii. Conclusion on general assessment

(464) Pre-Transaction the retail market for mobile telecommunications is a highly concentrated market. As shown in Figure 19 and in Figure 21 to Figure 32 above, the four MNOs account for over 90% by subscriptions and revenues of both the overall market and several segments of it, resulting in high concentration levels. Moreover, the remaining less than 10% of the market is constituted by non-MNOs players that are dependent on the MNOs for securing wholesale access and have, consequently, limited ability to compete for the reasons set out in Section 8.2.1.3.b(i) below.

(465) The size and the evolution of the market shares of the Parties in the relevant market and segments thereof provide a first indication of the important competitive constraint exerted by Three and O2 on the market. A more detailed assessment of the competitive constraint exerted by each of the Parties is carried out in Sections 8.2.1.2.b. and c. Further, the evidence in the Commission's file show that Three and O2 currently compete closely with each other.

(466) The Transaction would significantly strengthen the merged entity's position in the retail market for mobile telecommunications services and in various segments thereof, which are already very concentrated and which, post-Transaction, would become even more concentrated. The Transaction would also eliminate the competition currently exerted by the Parties on each other.

b) Specific assessment of the competitive constraint exerted by Three

(467) In this Section the Commission assesses in detail the competitive constraint currently exerted by Three (recitals (468) and following) and the likely constraint it would

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360 See Table 3 of Annex A.

361 Horizontal Merger Guidelines, paragraph 28.

exert absent the Transaction (recitals (684) and following). In recitals (777) and following the Commission concludes on Three's competitive constraint in the market.

i. Competitive constraint exerted by Three pre-Transaction

Notifying Party's view

(468) The Notifying Party claims that Three cannot be qualified as an important competitive force within the meaning of the Horizontal Guidelines for the following reasons.

(469) First, all MNOs compete vigorously in the market and all contribute to price and tariff competition in the United Kingdom. All MNOs offer a wide variety of tariffs that differ across a range of dimensions, including the monthly fee/top-ups, the allowances of voice minutes, number of SMS and data volume covered by the monthly fee (or by the top-ups in the case of prepaid tariffs), the commitment period (in the case of postpaid tariffs), or the choice and prices of handsets available with a tariff. Within this wide variety of tariffs, each customer will choose depending on their specific preferences. For this reason, there is not one single tariff or one single MNO that can be identified as the most price aggressive, innovative or as offering the best value for money. In this context, the Notifying Party claims that Three does not play a unique and irreplaceable role in the competitive process.[362]

(470) Second, Three has undergone a process of evolution since its launch in 2003, which has led it to significantly change its role in the market in recent years. […] According to the Notifying Party, this would be reflected in Three's gross add shares, which constitute strong factual evidence that Three is not an important competitive force.[363]

(471) The Notifying Party claims that the […] change was due to […].[364]

(472) In the context of this […] change, whilst there has been an improvement in the perception of Three's network quality, the historically negative brand image continues to impact Three's business and is inconsistent with a player that exerts more influence on the market than implied by its market share.[365]

(473) Finally, the Notifying Party considers that Three is capacity constrained and […].[366]

Commission's assessment

Introduction

(474) As discussed in Section 8.2.1.2.a(i), the Commission considers that the size and the evolution of Three's market share in the relevant market and several segments thereof provide a first indication of the important competitive constraint exerted by Three on the market.

(475) In more detail, Three's market share by subscribers has been constantly growing, not only in the overall market, but also in the prepaid and postpaid segments. Likewise, the growth of Three's market share by revenues has been constant, as shown by the below Figure 39 […].

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362 Form CO, Section 6, paragraph 870 and following.
363 Form CO, Section 6, paragraph 880 and following.
364 Form CO, Section 6, paragraph 880 and following.
365 Form CO, Section 6, paragraph 915 and following.
366 This claim is examined in Section 1 of Annex C.

Figure 39: […]

[…]

Source: Three's internal documents, […][ID 001310584.00001].

(476) Parallel to the growth in market share, Three's subscriber base has also consistently grown in absolute numbers. On the basis of the more recent data available in its file on the evolution of mobile providers' customer bases (including business customers but excluding M2M), the Commission notes that Three has had the strongest growth among the MNOs from the second quarter of 2014 to the same quarter of 2015 ([…]), as well as the strongest growth from the first quarter of 2015 and the second quarter ([…]). O2 has the […] growth considering both reference periods (respectively […]and […]).[367] The remaining MNOs […], as shown in the below Figure 40.

Figure 40: Evolution of MNOs number of subscribers ('000) from Q1 2014 to Q2 2015 (excluding M2M)

	2014				2015		Change Q2 2015 over Q1 2015 (QoQ)		Change Q2 2015 over Q2 2014 (YoY)	
	Q1	Q2	Q3	Q4	Q1	Q2	('000)	%	('000)	%
O2 (total)	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
O2	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
giffgaff	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Tesco Mobile	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Three	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
EE	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Vodafone	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]

Source: O2's internal documents, […] [ID000104341]

(477) Likewise Three's internal documents show that […][368] […].[369]

Figure 41: […]

[…]

Source: Three's internal documents, […][ID 012601633.00001]

(478) With respect to the Notifying Party's claim that Three's growth rates alone cannot be a basis for a finding of important competitive constraint, that the growth of its market share has been limited and that absolute growth is the only meaningful measure in

367 Including Tesco Mobile, whose growth was respectively […] year over year and […] quarter over quarter.

368 Excluding Tesco Mobile.

369 See also evolution of Three's customer base in Annex 9 to the Form CO, "Market share tables".

terms of impact on the competitive process and a company's ability to constrain other market participants' behaviour,[370] the Commission notes the following.

(479) First, the Commission has given consideration to Three's growth rate in line with the precedents cited by the Notifying Party[371] and it does not base its conclusion on Three being an important competitive force only on that basis. On the contrary, the Commission considers Three's growth rate to be one piece of an overall body of evidence.

(480) Further, when looking at the absolute growth of Three compared to its rivals, as suggested by the Notifying Party, the growth still appears to be significant, as shown in Figure 40 and Figure 41 above. For example, Figure 40 shows that […]. Likewise Figure 41 shows that […].

(481) In addition, the Commission considers that the data illustrated in Section 8.2.1.2.a(i) on gross adds provides a further indication that Three can be qualified as an important competitive force within the meaning of paragraph 37 of the Horizontal Merger Guidelines. On the basis of its reconstruction of market and gross add shares (to which access was given to the Notifying Party in the data rooms open on 4 February 2016 and 21 March 2016), the Commission notes that Three's gross add shares for 2014 and the first half of 2015 are higher than its market shares in the same period.[372]

(482) In the Commission's view, the positive growth of Three's absolute subscriber base and market shares, as well as Three's gross add shares for 2014 and the first half of 2015, provide an indication that Three exerts an important competitive constraint in the market, greater than its market share suggests.

(483) This view is supported by the CMA, on the basis of its knowledge of the market acquired in the investigation of the BT/EE transaction as well as on the basis of the submissions it received in the course of making its Article 9 request.[373]

(484) The Commission considers that the indications provided by the data just described are corroborated by the overall body of qualitative and quantitative evidence in its file, which is discussed in the remainder of this Section. In recitals (485) and following the Commission provides an overview of, and assesses, Three's competitive behaviour in the relevant market. From recitals (578) onwards the Commission undertakes an assessment of the pre-Transaction competitive position and constraint exerted by Three on the relevant market with respect to the parameters of competition identified in Section 6.6.2.

Three's competitive behaviour in the mobile market

(485) In the following subsection the Commission describes Three's historical as well as more recent competitive behaviour in the retail market in the United Kingdom, which features a series of innovative and disruptive product introductions as shown in Figure 42 below.

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370 Reply to the Statement of Objections, section 5.4.2.

371 Commission decision of 6 April 2006 in case No M.3916 – *T-Mobile Austria/Tele.ring*; Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*.

372 Letter of Facts of 17 March 2016, paragraph 11. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

373 CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraph 12 [ID4116].

Figure 42: […]

[…]

Source: Annex 7.186 to the Form CO, page 16.

(486) Three's history as an innovative and aggressive player is relevant as it shows its ability to cope with competitive challenges. In addition, its more recent competitive history puts the Notifying Party's claim related to […] and, by taking that factor into account, is predictive of its future behaviour.

Three's behaviour following its entry

(487) As mentioned in recital (124), Three is the last MNO to have entered the market in the United Kingdom in 2003. Compared to the other MNOs active in the United Kingdom market it has pursued a focused business model, based only on the provision of mobile telecommunications services and targeting mainly private customers.

(488) With this specific business model, which characterises Three's mobile operations across the different EU countries where it is active, Three was launched as a very price-aggressive player in order to build its brand and customer base.[374] Its strategy was to capitalize on the possibilities of mobile internet made possible by the 3G technology. It achieved 80% population coverage already in 2004 three years before the deadline set by Ofcom.[375] In 2003 it was the first operator to launch a video calling service.

(489) After an initial surge in market share, Three faced a number of challenges, such as the lack of content in its offering, an unattractive handset portfolio, high costs relative to revenue due to lack of scale, problems of establishing a new brand network as well as quality outside urban areas. Number porting, which was very cumbersome in the United Kingdom at the time, also hindered Three's expansion.[376]

(490) Nevertheless it found ways to overcome some of the difficulties, for example by partnering with EMI for providing music content, launching a mobile music video download service as well as SeeMe TV a service similar to Youtube, all of which were successful. To address Three's cost base and network quality problems, Three entered into a network sharing joint venture in December 2007, which became MBNL. Still in 2007 Three rolled out the first advanced 3G (HSPA) network.[377]

Product offers in 2007

(491) From 2007 onwards several factors aligned to make Three's strategy successful: through MBNL it could control its costs and improve the quality of its network, while the technological development in smartphones and mobile broadband reached a stage where its data centric vision could make a tangibly different customer experience.

374 Form CO, Section 6, paragraph 318.

375 See: http://www.mobilenewscwp.co.uk/2013/04/08/decade-of-three-the-uks-ugly-duckling-reaches-10/ (provided with the access to file on 4 February 2016).

376 http://www.mobilenewscwp.co.uk/2013/04/08/decade-of-three-the-uks-ugly-duckling-reaches-10/ (provided with the access to file on 4 February 2016).

377 http://www.mobilenewscwp.co.uk/2013/04/08/decade-of-three-the-uks-ugly-duckling-reaches-10/ (provided with the access to file on 4 February 2016) Form CO paragraph 321

(492) With its products in 2007 Three promoted the benefit of data usage on handsets through pioneering partnerships with companies such as Skype, Facebook and Spotify and through the launch of the X-Series, a combination of apps and a generous data bundle.[378] Three offered voice calls via Skype free of charge in a sense that the use of Skype did not count towards the customer's data allowance.[379]

(493) These products were significantly out of line with the offers of the other MNOs at the time. When 3G services were launched in the United Kingdom, it was common for mobile operators to block access to voice over internet protocol (VoIP) services, such as Skype, but this began to change in 2007 when Three began to offer VoIP through Skype. Following Three, all MNOs in the United Kingdom started offering access to VoIP services.[380] In other words, competitors reacted to Three.

(494) Further, in 2007, Three was the first operator to introduce mobile broadband services to non-business consumers via mobile broadband USB dongles. At launch, its data packages were more than 50% cheaper than any other offering in the United Kingdom.[381] Three also launched innovative "Mix & Match" tariffs, flexible postpaid tariffs whereby consumers could mix text messaging and voice minutes (1 minute = 1 text) and choose from a large range of handsets, as well as the "3 Like Home," an offer which allowed customers roaming in countries where Three had a network to use their tariff, including data, as if they were at home.

(495) As shown in Figure 43, Three was markedly cheaper than other operators with regard to voice calls as well: while other MNOs offered 300-450 minutes for GBP 30, Three's tariff at this price point included 750 minutes.[382] In 2008, the comparable figures were 400 to 700 for other MNOs and 1100 for Three.

(496) It is true, as the Notifying Party claims, that with low market share and a need to establish its brand, Three had to offer low prices to achieve scale and attract customers. However, this does not refute the notion that Three had a substantial impact on competition already at this stage. Competition is often driven by small players for which it is imperative to be price aggressive to achieve scale. On the contrary, established operators that already have sufficient scale in an industry with significant fixed costs are under less pressure to achieve subscriber growth and thus are less likely to compete aggressively.

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378 Form CO, Section 6, paragraph 321, second bullet.

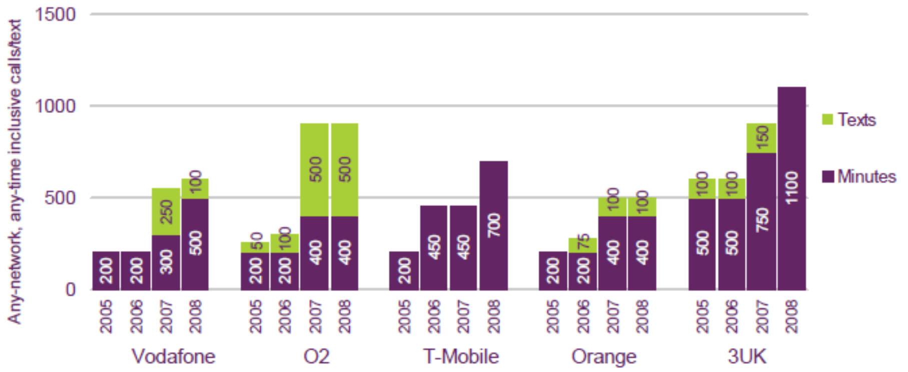
379 http://www.mobilenewscwp.co.uk/2013/04/08/decade-of-three-the-uks-ugly-duckling-reaches-10/ (provided with the access to file on 4 February 2016).

380 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 6.32 [ID2069].

381 Form CO, Section 6, paragraph 321.

382 Ofcom's 2008 CMR, Figure 5.6 [ID6061]

Figure 43: Inclusive any-network, any-time allowances in GBP 30 per month mobile contracts



Source: Ofcom's 2008 CMR, Figure 5.6.

Data monetisation and the One Plan

(497) By 2010 the network consolidation and improvement was also completed, which allowed Three to be even more aggressive in its customer propositions.[383] At the same time, from 2010 Three could offer within its tariff plans the iPhone, a device that was both popular and designed with internet usage in mind, which coincided with the data centric strategy pursued by Three. As a result, Three launched the One Plan, one of its most influential products with a substantial impact on competition in the subsequent years.

(498) The product was originally launched in July 2010 and included a 1 GB cap, along with 2000 minutes on any network, 5000 Three network minutes and 5000 texts.[384] By dropping the data cap in December 2010, the tariff became "all you can eat".[385]

(499) The effect of the One Plan on competition is clearly illustrated by the context in which the launch took place and the subsequent developments. Namely, prior to the One Plan, the increase of data usage due to both the growing popularity of smartphones and the availability of 3G prompted O2, […],[386] […]. In its memorandum […].[387]

(500) After analysing the possible risks, […].[388]

(501) […],[389] […].[390] […].

(502) […].[391] […][392] […][393]

(503) Accordingly, […][394]

383 Form CO, Section 6, paragraph 321.
384 http://www.trustedreviews.com/news/Three-Launches-The-One-Plan (provided with the access to file on 4 February 2016).
385 http://www.telegraph.co.uk/technology/news/8203667/Three-drops-data-caps-on-flagship-tariff html (provided with the access to file on 4 February 2016).
386 O2's internal documents, [ID 000009320.00001] […].
387 O2's internal documents, [ID 000012444.00001] […].
388 O2's internal documents, [ID 000012444.00001], […].
389 O2's internal documents, [ID 000012444.00001], […].
390 O2's internal documents, [ID 000012444.00001], […].
391 O2's internal documents, [ID 000000251.00001], […].
392 O2's internal documents, [ID 000009320.00001], […].
393 O2's internal documents, [ID 000000251.00001], […].
394 O2's internal documents, [ID 000009320.00001], […].

(504) The positive reaction of competitors […][395]

(505) The fact that […][396]

(506) With regard to the next move in data monetisation, […][397]

(507) It was in this context that Three disrupted the industry trend by dropping the cap on the "One Plan" in December 2010. An analyst at CCS Insight described the initiative as a "*a bold move by Three and goes against the prevailing tide set by other networks who are trying to rein in data usage*".[398] A technology expert at mobile price comparison site uSwitch commented that "*Data has long been offered as a premium service by mobile networks even though smartphones have become ever more dependent on this component of a tariff. The One Plan will make it much easier for consumers to make the most of their mobile without the worry of exceeding any fair usage limit".*[399]

(508) The One Plan reversed the previous tendency of […][400] […].[401] […][402]

(509) In January 2012, EE reintroduced an unlimited data tariff under the T-Mobile brand, called the "Full Monty",[403] which was perceived by commentators as a direct competitor to the One Plan: "*In response to Three's The One Plan which has offered unlimited all-you-can-eat data with inclusive tethering since the start of 2011, T-Mobile have just launched their new plan 'The Full Monty.'"*[404]

(510) By February 2012, the situation appeared […] for O2, which had to react to these developments. It submitted […][405] […][406]

(511) […].[407]

(512) The proposal for the O2 XL tariff, […].[408]

(513) The final product O2 launched in March 2012 was called "On and On" and was perceived as a counter to the One Plan and the Full Monty: "*the new tariff puts O2 in direct competition to Three's "The One Plan" and T-Mobile's "The Full Monty."*[409] The finally approved tariff did not include the unlimited data option as the add-on for 5 GBP bought an additional 1 GB instead of unlimited data; however, the plan was priced at the same level as the One Plan, included unlimited calls and texts, and the 1GB and 2GB data allowances were relatively generous at the time for the price of

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395 O2's internal documents, [ID 000000251.00001], […].
396 O2's internal documents, [ID 000009320.00001], […].
397 O2's internal documents, [ID 000009320.00001], […].
398 Ben Wood, of research firm CCS Insight, reported by the BBC http://www.bbc.com/news/technology-11998793 (provided with the access to file on 4 February 2016).
399 http://www.telegraph.co.uk/technology/news/8203667/Three-drops-data-caps-on-flagship-tariff html (provided with the access to file on 4 February 2016).
400 O2's internal documents, [ID 000025935.00001], […].
401 O2's internal documents, [ID 000012486.00001], […].
402 O2's internal documents, [ID 000012486.00001], […].
403 http://kenstechtips.com/index.php/t-mobile-the-full-monty-tariff (provided with the access to file on 4 February 2016).
404 http://kenstechtips.com/index.php/the-full-monty-vs-the-one-plan (provided with the access to file on 4 February 2016).
405 O2's internal documents, [ID 000018599.00001], […].
406 O2's internal documents, [ID 000018599.00001], […].
407 O2's internal documents, [ID 000018599.00001], […].
408 O2's internal documents, [ID 000018599.00001], […].
409 http://kenstechtips.com/index.php/o2-on-and-on (provided with the access to file on 4 February 2016).

the plan. […].[410] Further, as the appeal of the One Plan and the Full Monty was the avoidance of "bill shock" due to out of bundle charges if the customer exceeds the data allowance, O2 offered not to apply such charges but rather slow down speed significantly and/or restrict data usage once the allowance is exhausted.

(514) Vodafone's response was the "Red tariff", which was launched in September 2012. Containing unlimited voice, unlimited text and a 1GB allowance with an option for 2GB similar to O2's "On and on", the Red tariff was regarded by analysts as a response to O2's On-and-On[411] and more broadly to the One Plan and the Full Monty.[412] The SIMO prices of the four products were almost exactly aligned around GBP 20 with the Full Monty and the One Plan offering unlimited data, and the On-and-On and the Red tariff offering 1GB/2GB. Texts and voice were either unlimited (On and On, Red tariff, Full Monty for text) or subject to an extremely generous allowance[413] (texts for the Full Monty and texts and voice for the One Plan).[414]

(515) It appears therefore that after Three broke the industry trend of reining in data usage, all operators launched similar products at similar prices to Three.

(516) In this period, and prior to launching "On and On", O2 described the competitive situation as follows: "*[there is competition for high data users]*."[415] […][416]

(517) This quote captures [that data became an important competitive criterion].

(518) The Commission notes that O2 brand giffgaff also had an unlimited data offer throughout this period, from June 2010, that is to say before Three launched the unlimited version of the One Plan. However, as the Notifying Party itself explained, giffgaff is not a mass-market proposition as it does not have any retail stores or a dedicated customer service team. It is a community-led operator targeting tech-savvy and young customers. Accordingly, due to its business model, giffgaff's unlimited offer had limited reach.[417]

(519) The evidence presented above clearly shows Three's disproportionate impact on the market in this period. First, the fact that all operators removed unlimited offers and that some operators raised prices (recitals (502)-(503) and (505)) shows that the general industry trend prior to the unlimited version of the One Plan was the restriction of data usage and the increase of data prices.[418] This is further confirmed by the contemporaneous opinions of commentators cited in recital (507).

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410 Three's internal documents, [ID 022700520.00001], […]. As of December 2012 average data use by all mobile phone users was around 500 MB http://www.itpro.co.uk/644680/ofcom-uk-tops-world-mobile-data-usage-chart (provided with the access to file on 4 February 2016); however, the average in this case is pulled down by those who did not have a smartphone. […]: O2's internal documents, [ID 000016210.00001], […]

411 Enders Analysis, Q3 2012 page 12, in Three's internal documents, [ID 018700386.00001] .

412 http://kenstechtips.com/index.php/three-launches-the-one-plan-almost-unlimited-everything-for-25month (provided with the access to file on 4 February 2016).

413 5000 or unlimited same network minutes and 2000 all network minutes

414 http://kenstechtips.com/index.php/three-launches-the-one-plan-almost-unlimited-everything-for-25month (provided with the access to file on 4 February 2016).

415 O2's internal documents, [ID 000016210.00001], […].

416 O2's internal documents, [ID 000016210.00001], […].

417 Reply to the Statement of Objections, paragraph 447.

418 The increase in data price came about either via the quantity restriction (raise of unit price or incurring the higher out-of-bundle charges if the customer exceeds its allowance) or through the explicit increase of the tariff price.

(520) Second, the One Plan had a substantial impact on the market. Notably, O2's internal analysis […]. Given the circumstances of the Full Monty's launch – EE first restricted unlimited data and then launched the Full Monty after the One Plan – and the contemporaneous analyst opinion cited in recital (509), it is also clear that the Full Monty was a response to the One Plan. Furthermore, O2's internal analysis […]. Finally, given the similarity between the Red tariff and the On-and-On plan,[419] which was also confirmed by contemporaneous commentators,[420] that product too can be considered as a response to the One Plan. The Commission notes that, contrary to the Notifying Party's view, two products can be closely competing offers even if they are not identical in all aspects. Put differently, the launch of a product can be a competitive response to a competitor's product even if it is not identical to the latter – it is sufficient in this regard that the product launched in response is similar and targets the same segment/customers as the competitor's product.

(521) The impact of the One Plan on competition is further attested by O2's analysis cited in recital (516), […].

(522) In short, in the period 2010-2012, Three reversed the industry trend around data usage and its product led to an intense competition resulting in lower prices and more generous allowances. Three achieved this despite being the smallest MNO, clearly showing its outsized influence on the competitive process. While these events took place in 2010-2012, they are nevertheless important as they show the willingness of Three to challenge the status quo if Three does not face strong capacity constraints, which, as explained in Annex C in more detail, the Commission considers to be the case.

International Roaming and Feel at Home

(523) Three's "Feel at Home" product, launched in August 2013, was another example of the benefits brought on by Three's aggressive competitive behaviour. With "Feel at Home", Three abolished roaming charges in a large number of countries, including popular destinations for holidays as well as business.

(524) At the time "Feel at Home" was launched, roaming charges were much higher than today and caused sometimes "rate shock", the most extreme cases of which made headlines, such as EE brand Orange billing GBP 2609.31 for downloading a music album while the customer travelled in South Africa (at GBP 8 per MB).[421] According to a customer survey carried out by uSwitch, an online and telephone comparison service, in May 2013, 15% of customers experienced rate shock with an average large bill of GBP 120.[422]

(525) Average roaming prices at the time were affected by European regulation. Within the EU, roaming was subject to a regulatory cap of EUR 0.24 per minute for making calls, EUR 0.07 per minute for receiving calls and EUR 0.45 per MB of data as from July 2013. Operators were obliged to offer tariffs that complied with these caps (so-

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419 See recital (514).

420 See recital (514).

421 http://www.telegraph.co.uk/finance/personalfinance/10764210/Maths-teachers-2600-phone-bill-for-downloading-Neil-Diamond-CD.html (provided with the access to file on 4 February 2016).

422 uSwitch, Mobile roaming shock: Brits could face a £256 million bill this summer for failing to know which countries are in the EU (the "uSwitch survery"), 29 May 2013, available at: http://www.uswitch.com/media-centre/2013/05/mobile-roaming-shock-brits-could-face-a-256-million-bill-this-summer-for-failing-to-know-which-countries-are-in-the-eu/ (provided with the access to file on 4 February 2016).

called Eurotariffs) but could offer non-regulated tariffs as well.[423] Roaming charges outside the EU were not regulated. Both in the case of EU and non-EU roaming operators had to suspend the service once an overall cap of EUR 50 was reached unless the customer opted out.

(526) According to the Body of European regulators for Electronics Communications ("BEREC"), in the third quarter of 2013, in the United Kingdom the average retail price per minute for intra EU roaming voice calls made was EUR 0.209 and EUR 0.221 per minute for the Eurotariff and the alternative tariff respectively.[424] Thus, an average roaming call of ten minutes would result in a charge of EUR 2, and making such a call every day for ten days EUR 20 just for voice calls. The corresponding figures for average retail price per MB of EU data roaming were EUR 0.416 and EUR 0.224,[425] which meant that in the case of opt-out roaming charges could reach EUR 90 (Eurotariff) or EUR 45 (alternative tariff) for a relatively modest 200 MB of data use while on holidays.

(527) In the case of international data roaming outside the EU, the EU caps did not apply, which resulted in much higher roaming charges and excessive charges if the customer opted out of the regulatory cap. Operators offered data bundles that reduced the cost of roaming somewhat; however, out-of-bundle charges or standard rates for roaming were still very high, reaching several GBP per MB. The uSwitch survey found that close to 60 % of customers did not check roaming charges before going on holidays and 70 % of them were not contacted by their operator about a roaming deal. In other words, a large fraction of customers did not use the bundled offers and were charged at the standard rates. According to the survey, 1MB of internet data – just about enough to view a couple of web pages and a minimum usage of social network sites – cost an average of GBP 4.75 across the major networks for someone traveling to Turkey, the eighth most popular holiday destination for British people at the time. This meant that a modest amount of use of data services during holidays could result in a charge of GBP 294 in case the customer opted out of the regulatory cap.[426] Cost per minute to make a call ranged from GBP 1.30 to GBP 1.50, cost per MB of data ranged from GBP 3 to GBP 8.[427] According to BEREC, in the third quarter of 2013 the average retail price per minute for roaming voice calls made by customers from the United Kingdom outside the EEA was EUR 1.004, somewhat less than the cost per minute relating to Turkey cited by the uSwitch survey but still very high, resulting in EUR 10 for a ten-minute call.[428] In March 2013, Ofcom published guidance to consumers on how to avoid high charges when travelling abroad[429] and noted that outside the EU the data roaming charges could reach 6-8

[423] uSwitch survery referred in foonte 422. See also BEREC, International Roaming BEREC Benchmark Data Report April 2013 – September 2013 ("International Roaming BEREC Benchmark Data Report April 2013 – September 2013"), 17 February 2014, page 6, available at: http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/4048-international-roaming-berec-benchmark-data-report-april-2013-8211-september-2013 (provided with the access to file on 4 February 2016).

[424] International Roaming BEREC Benchmark Data Report April 2013 – September 2013, page13.

[425] International Roaming BEREC Benchmark Data Report April 2013 – September 2013, page13.

[426] uSwitch survery referred in foonte 422.

[427] uSwitch survery referred in foonte 422.

[428] See also International Roaming BEREC Benchmark Data Report April 2013 – September 2013, page 38.

[429] http://consumers.ofcom.org.uk/files/2013/03/roaming.pdf (provided with the access to file on 4 February 2016).

GBP per MB (supposing, again that the customer opts out of the suspension of the service).[430]

(528) In short, when Three introduced its "Feel at Home" offer, roaming charges were considerable and much higher than local charges even in the case of EU roaming and disproportionately expensive in the case of roaming outside the EU. The existing cheaper bundles offered by some operators were often not taken up by customers. Initially Feel at Home was restricted to seven countries where Three had a sister network.[431] The offer was extended to four additional destinations[432] in December 2013 and to five additional destinations in July 2014.[433] Two more countries[434] were added in August 2015. In some of the destinations that were added to the scheme following its initial launch Three did not have a sister network (for example in the United States, France or Spain). Even in the countries where Three had a sister network, Three's offer applied regardless of which foreign network the customer used. It should be noted that Vodafone, O2 or EE all had sister networks (Vodafone and O2 in more countries than Three) and were thus technically able to offer the same level of service as Three.

(529) Three's Feel at Home was introduced in a context in which competition failed to bring down roaming prices. The BEREC report indicates that the charges to non-group companies on the wholesale market was subject to an EUR 0.1 per minute price cap and the charges to non-group companies were below the cap in all countries.[435] That is, while on average MNOs were charged below EUR 0.1 per minute at the wholesale level, they charged EUR 0.209 and EUR 0.221 per minute at the retail level. The same is true for data where the average wholesale prices for inbound data roaming were significantly below the wholesale cap of EUR 0.15 per MB[436] whereas the average retail prices were EUR 0.416 and EUR 0.224 for the Eurotariff and the alternative tariff respectively. In other words, MNOs had a large gap between their roaming costs and the prices they applied at the retail level and yet competition did not bring the prices down. BEREC also noted that "*For voice roaming services, average EEA prices are close to the regulated caps. This suggests that providers see little attraction in competing on Eurotariff rates, despite the fact that there is a significant margin between typical wholesale prices and retail caps.*"[437] The report notes that market forces produced a better outcome in data: *"a large number of operators offer a variety of packages of roaming data services*" ; however, in this case too retail prices remained significantly above the costs and, as Three's example showed, significantly above competitive levels.

(530) By offering the possibility to stay connected while traveling without the risk of a bill shock, Three's aggressive competitive behaviour provided consumers with another significant benefit.

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430 http://ask.ofcom.org.uk/help/telephone/international_3G_charges (provided with the access to file on 4 February 2016).

431 Australia, Austria, Denmark, Hong Kong, Italy, Republic of Ireland, Sri Lanka and Sweden.

432 Indonesia, Sri Lanka, Macau and the United States.

433 France, Switzerland, Israel, Finland and Norway.

434 Spain and New Zealand.

435 International Roaming BEREC Benchmark Data Report April 2013 – September 2013, page 23.

436 International Roaming BEREC Benchmark Data Report April 2013 – September 2013, page 60.

437 International Roaming BEREC Benchmark Data Report April 2013 – September 2013, page 8.

(531) The Notitying Party considers that Feel at Home was not special as other MNOs also offered roaming deals prior to Feel at Home and continued to do so after that as indicated in Figure 44 below.[438]

Figure 44: MNOs' roaming offers

Date	International roaming event
May 2012	O2 launches "O2 Travel" (GBP 1.99/day for 25MB and access to 60 minutes of voice bundle allowance for postpaid customers/fixed per minute charges for prepaid customers)
June 2012	Vodafone launches Eurotraveller (GBP 3 per day to access Voice, text and data bundle in the EU)
June 2012	Three launches GBP 5/day Euro internet pass (unlimited data)
October 2012	EE launches new Roaming inclusive tariffs (GBP 5 extra for roaming in bundle)
August 2013	Three launches Feel at Home, phase 1 (seven destinations)
December 2013	Three launches Feel At Home phase 2 (four additional destinations)
July 2014	Three launches Feel At Home phase 3 (five additional destinations).
July 2014	Vodafone launches World traveller extension to Euro traveller (GBP 5/day to access voice, text and data bundle in 58 destinations outside Europe)
April 2015	Three launches FAH phase 4 (two additional destinations)
August 2015	EE launches GBP 4/day Roaming pass for European destinations.

(532) The Notifying Party further considers that Feel at Home had a limited impact, otherwise competitors would have copied the scheme, which they did not do.[439] On the contrary O2 maintained its roaming proposition which was structured differently, notably it covered a larger number of destinations for a set daily fee.[440] The Notifying Party also emphasizes Feel at Home's limitations, notably that it is only available in 18 countries and that the network partners Three has in these countries are smaller players.[441] The Notifying Party […].[442] Roaming was also not an important issue for customers when choosing operators, according to a research report by Kantar Media prepared on behalf of Ofcom.[443]

(533) The Commission considers that the Notifying Party unduly downplays the significance of Feel at Home. The destinations where roaming is free under Feel at Home include the top five travel destinations visited by United Kingdom residents in

438 Reply to the Statement of Objections, pargagraphs 955-956.
439 Reply to the Statement of Objections, pargagraph 960.
440 Reply to the Statement of Objections, pargagraphs 964.
441 Reply to the Statement of Objections, pargagraph 963.
442 Reply to the Statement of Objections, pargagraph 967.
443 Reply to the Statement of Objections, pargagraphs 969.

2014 (Spain, France, United States, Ireland, Italy)[444] and […].[445] Further, Three's roaming service in these important destinations is completely free even at the levels of domestic use, while competitors' offers are still expensive or do not allow for normal usage. Namely, Vodafone's daily charges allow for normal use but the offer is still substantially more expensive than Three's (can reach GBP 30-50 over a ten day long travel period versus no cost at Three). EE's roaming pass in Europe is also expensive compared to Three's offer, valid only in Europe and data use at normal speeds is limited to 100 MB per day, beyond which speeds are decreased so as not to allow for data intensive features.[446] EE's data add-ons outside Europe are also expensive, for example the use of 500 MBs for seven days in the United States costs GBP 40.[447] Finally, O2's O2 Travel provides only a limited amount of data (25MB per day) and at GBP 2 per day it is still significantly more expensive than Three's offer. Moreover, competitors' products require the customer to opt in or to purchase the add-on, whereas Three's customers benefit from Feel at Home automatically. This is important as, according to the Uswitch survey cited above, most customers are unaware of roaming deals and do not contact their operator before travelling. Consequently, in practice, many customers do not benefit from competitors' offers and pay instead the much more expensive standard roaming charges. Thus Feel at Home provides customers with a significant benefit that is the direct result of Three's aggressive competitive behaviour. According to a technology blog, Feel at Home saved GBP 1.3 billion of savings in roaming charges since its introduction, around GBP 330 per customer.[448]

(534) The Notifying Party also downplays the impact of Feel at Home. Contrary to what the Notifying Party claims in the Reply to the Statement of Objections, the Notifying Party itself had previously indicated that […]% of Three customers cited Feel at Home as a very important part of why they choose Three.[449] The Kantar report cited by the Notifying Party was conducted in 2010 and gives a more qualified picture than what the Notifying Party suggests. Namely, while overall roaming was found not to be "*at the front of customers' minds*", 36% of customers were found to place at least some importance on roaming costs when choosing a mobile operator.[450] Furthermore, when respondents were prompted specifically on the importance of roaming, almost a quarter of those who hadn't mentioned it as a factor earlier claimed that it was either very or fairly important to them.[451] Moreover, the customer's need to use the device does not decrease, and rather increases, when travelling, so there appears to be an obvious preference for being able to do so at no extra charge or at the very least at a modest extra charge. The importance of roaming is also acknowledged by industry experts. For example Amir Rehman of Market & Competitor intelligence commented that "*Roaming is an emotive topic amongst consumers as people tend to remember the few cases that have made the news where customers have run up bills in the thousands whilst roaming. Three's has used this to*

[444] Office of National Statistics, Travel trends 2014, 20 May 2015 [ID6063].
[445] Form CO, Section 6, paragraph 884.
[446] See: http://ee.co.uk/ee-and-me/why-ee/roaming---calling-abroad/roaming/euro-pass [ID6064].
[447] http://explore.ee.co.uk/roaming/ee/usa [ID6065].
[448] http://jmcomms.com/2015/08/25/three-users-save-1-3-billion-by-feeling-at-home-abroad/ [ID 6066].
[449] Form CO, Section 6, paragraphs 884 and 936.
[450] Danny Kay, Kantar Media, International Roaming Report, prepared for Ofcom, 5 November 2010, Section 2 [ID6067].
[451] Danny Kay, Kantar Media, International Roaming Report, prepared for Ofcom, 5 November 2010, Section 2 [ID6067].

strengthen its position as the consumer champion by abolishing roaming charges in the seven countries named above with more to come."[452]

(535) While other MNOs did not copy the Feel at Home scheme, as the chronology cited above shows, after the introduction of Feel at Home both EE and Vodafone launched roaming products that improved on their previous offerings. It is very unlikely that Three's Feel at Home, which is a popular proposition, had no role in the improved offers of EE and Vodafone. It is therefore not surprising that Vodafone's improved plan was reported in the press as "*Vodafone rivals Three as roaming extends to France, Spain and the US*".[453]

(536) Furthermore, roaming prices in general fell significantly after the introduction of Feel at Home notwithstanding certain differences between EEA roaming voice calls made, EEA data roaming and non-EEA voice calls. Specifically, with regard to EEA roaming voice calls made, the prices were roughly the same for the alternative tariff (EUR 0.235 in Q1 2015 vs EUR 0.221 in Q3 2013) and lower in Q1 2015 for the eurotariff (EUR 0.16 in Q1 2015 and EUR 0.209 in Q3 2013)[454]; however, the decrease in the eurotariff resulted largely from regulation as the tariff stayed close to the regulatory cap of EUR 0.19, suggesting that the price reduction was due to regulation. With regard to EEA data roaming, average retail data price per MB fell from EUR 0.416 (eurotariff) and EUR 0.224 (alternative tariff) in Q3 2013 to EUR 0.038 (eurotariff) and 0.09 (alternative tariff) in Q1 2015[455]. Since in both periods the prices were significantly below the applicable regulatory caps (EUR 0.45 per MB in Q3 2013 and EUR 0.2 per MB in Q1 2015), and, furthermore, the prices in Q1 2015 were more significantly below the price cap in Q1 2015 than in Q3 2013, the reduction was mainly due to market forces in which Three's Feel at Home is likely to have played a role. Finally, there was a significant reduction in the retail price per minute of non-EEA voice calls made, down from EUR 1.004 in 2013 to EUR 0.862 in 2015.[456] As this area was unaffected by regulation, this reduction was due to market developments and therefore Three's competitive offer is likely to have played a role in it.

(537) The OECD also observed that the emergence of free international roaming is directly linked to the existence of aggressive and innovative challenger players: "*International mobile roaming is another area where challenger brands are changing markets. At the time of the OECD Recommendation on International Mobile Roaming, in February 2012, no mobile operator in any OECD country included this service as an integral part of their offer. Since 2013, a growing number of offers from MNOs that include international mobile roaming as an integral part of their bundles have been made in countries with four or more operators. Such offers*

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452 O2's internal documents, [ID 000047763.00001], […].

453 http://www.theinquirer net/inquirer/news/2375565/vodafone-rivals-three-as-4g-roaming-extends-to-france-spain-and-the-us (provided with the access to file on 4 February 2016).

454 BEREC, International Roaming BEREC Benchmark Data Report October 2014 – March 2015 ("International Roaming BEREC Benchmark Data Report October 2014 – March 2015"), 1 November 2015, page 14 http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/5440-international-roaming-berec-benchmark-data-report-october-2014-8211-march-2015 (provided with access to file on 4 February 2016).

455 International Roaming BEREC Benchmark Data Report October 2014 – March 2015, page 58.

456 International Roaming BEREC Benchmark Data Report October 2014 – March 2015, page 39.

have largely not yet emerged in countries with three operators."[457] Thus, attractive roaming offers are generally viewed by the OECD as the result of the competitive efforts of challenger players, that is to say players with a disproportionate influence on the competitive process.

(538) The Commission also notes that Three's launch of Feel at Home and the price decrease of roaming occurred in parallel with […]. In other words, even with the […] Three launched a very popular, appealing and price aggressive proposition. A more detailed assessment of the Notifying Party's claim on Three's […] is undertaken in recitals (634) onwards.

4G as a premium product

(539) Three's outsized impact on the competitive process is also observable with regard to the introduction of the 4G (or LTE) technology in the United Kingdom.

(540) EE was the first MNO to launch 4G following Ofcom's decision in August 2012 to allow EE to refarm its 1800 MHz spectrum, which it had used for 2G up to that point.[458] The decision was criticised by the other MNOs who argued that they have to wait for the 4G auction to be able to launch 4G services, which was scheduled for later and took place only in February 2013.[459]

(541) As EE applied for the refarming already in November 2011, O2 was aware of EE's plans prior to Ofcom's decision and expected EE to […].[460]

(542) Indeed when EE launched its 4G service in October 2012 (initially with limited reach only), it priced it at a premium, on average GBP 5 more than the comparable 3G plan. An additional important factor of 4G pricing is the amount of data included in the plan at different price points given that the purpose and benefit of high speed 4G – 4G speeds are several times faster than 3G speeds – is making possible or significantly improving the experience of data intensive use such as uploading images, videos, streaming music and video, downloading large files as well as sending and receiving large files by email. When the data allowances were also taken into account, EE's pricing was subject to widespread criticism in the press.

(543) Technology site Zdnet.Com commented that "*For consumers, £36 (every month for two years) gets just 500MB of data on EE's cheapest 4G option. That doesn't sound too outrageous, but I'm totally baffled by the suggestion that someone exists who wants 4G connectivity and is willing to pay a premium for it, but will use it so little that 500MB will last a month….Clearly, a 500MB cap on a 4G connection is madness*".[461] Given 4G's association with increased data use, a 4G customer would either face much higher out-of-bundle charges for exceeding the plan or would have to spend more by buying add-ons or by choosing a more expensive data plan with higher data allowance. The latter seems to have been EE's strategy as its spokesperson was reported to have said that "*For customers who want to download*

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457 http://oecdinsights.org/2014/11/06/what-difference-does-a-mobile-operator-more-or-less-make-to-you/ (provided with access to file on 4 February 2016).

458 http://stakeholders.ofcom.org.uk/consultations/variation-1800mhz-lte-wimax/statement (provided with access to file on 4 February 2016).

459 http://media.ofcom.org.uk/news/2013/winners-of-the-4g-mobile-auction/ (provided with access to file on 4 February 2016).

460 O2's internal documents, [ID 000114235.00001], […].

461 http://www.zdnet.com/article/ees-4g-pricing-fast-data-for-those-with-money-to-burn/ (provided with access to file on 4 February 2016).

multiple songs or stream videos every day, we'd recommend they go for one of our plans with a higher data limit or use our free BT Wi-Fi or any available Wi-Fi services".[462] Naturally, plans with higher data allowance were progressively more expensive as the data allowance increased, with prices of GBP 41 for 1GB, GBP 46 for 2GB, up to the highest package which included 8GB for GBP 56 (around EUR 70 with the exchange rate at the time). Thus the premium came not only from the fact that there was an extra charge compared to the equivalent 3G plan but also from the fact that 4G was liable to cause customers to choose higher data allowance plans. The article concludes that "*For most people, £50 or so a month for a mobile contract is quite a lot of money. Even if you go for the second-place 1GB package, you'd pay £984 across the 24 months — a hefty whack for a phone.*"[463]

(544) Neowin, a site for IT professionals, referred to EE's plans as the high price for EE's early monopoly[464] and the Daily Telegraph reported that EE's 4G launch "*The launch comes amid criticism of EE's 4G pricing plans*".[465] A day after the announcement of the price plan EE put out a twitter message saying that "*We've had tons of comments over the last 24 hours, some would make our mothers blush. If you're worried about data*…"[466] The company was forced to defend itself publicly, arguing inter alia that 4G will not increase data usage.[467] Given, however, the consistent forecasts about significant data volume growth, also cited by the Notifying Party,[468] it is very unlikely that such high volumes would be used over slow connections – in other words increased data use goes hand in hand with the technology that allows faster down and upload of data. Indeed, already shortly after Vodafone's 4G launch Vodafone saw […][469] Two years later, in 2015, Vodafone indicated on a shareholder earnings call that "*4G [is] driving significant uplift in data usage by consumers: that it is seeing 130% more data usage per customer on 4G vs. 3G, on average. Specifically, Vodafone highlighted that in UK, 4G customers on average have data usage of 1,400MB/month compared to average data usage of 587MB/month for 3G customers.*"[470]

(545) As such, the 4G pricing strategy of EE was to charge a premium and to nudge customers into choosing high data allowance plans where the real benefits of 4G can be experienced by capping the data allowance of the lower price plans. Alternatively, the customer would buy a lower priced plan but would soon run out of data allowance and out-of-bundle charges could be applied. In short, 4G was to be an expensive service. This strategy very much recalls that pursued by O2 with regard to 3G from mid-2010, which was initially followed by the industry but subsequently

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462 http://www.zdnet.com/article/ees-4g-pricing-fast-data-for-those-with-money-to-burn/ (provided with access to file on 4 February 2016).

463 http://www.zdnet.com/article/ees-4g-pricing-fast-data-for-those-with-money-to-burn/ (provided with access to file on 4 February 2016).

464 http://www.neowin.net/news/4g-uk-the-high-price-of-ees-monopoly (provided with access to file on 4 February 2016).

465 http://www.telegraph.co.uk/technology/broadband/9642376/Superfast-4G-launches-in-10-cities html (provided with access to file on 4 February 2016).

466 https://twitter.com/EE/status/261136467550666753/photo/1 (provided with access to file on 4 February 2016).

467 http://www.huffingtonpost.co.uk/2012/10/25/ee-defends-4g-pricing_n_2014411 html (provided with access to file on 4 February 2016).

468 For example Form CO, Section 6, paragraph 167.

469 O2's internal documents, [ID 000036231.00001], […].

470 O2's internal documents, [ID 000055728.00001], attachment "*European Technology – Takeaways from Vodafone's 4G webinar – Alert*" by JPMorgan Cazenove, page 1.

undermined by Three. In such a strategy, it is important to avoid unlimited data plans which would go a long way in neutralising the revenue effect: if consumers opt for unlimited plans in line with their preferences to avoid bill shock, the increased data consumption triggered by 4G would not boost operator revenue. This, too, is an issue that featured prominently in the first round of monetisation attempt.

(546) O2's and Vodafone's 4G launch was planned for August 2013. […][471]

(547) The part of the positioning that called for the elimination of unlimited data received mutual confirmation from EE, Vodafone and O2 in the form of forward-looking statements at the Mobile World Congress in Barcelona in March 2013 by their respective CEOs. Mobile News quoted all three CEOs saying that none of them would offer unlimited data packages on 4G.[472] In the case of EE this meant that the Full Monty tariff it launched in competition with Three would not be offered under 4G. Vodafone and O2 reasoned that unlimited data would compromise the quality of service, while EE's CEO considered that it was necessary, while admitting that the idea is popular with customers. The statements concern the future intention of restricting output and as such are equivalent in their nature to statements about future prices.

(548) […].[473]

Figure 45: […]

[…]

Source: O2's internal documents.

(549) With regard to Vodafone, O2 could rely on Vodafone's forward looking public statements about the premium price for 4G, […][474] Thus, Vodafone's repeated forward-looking signals allowed O2 to gauge Vodafone's positioning already in April 2013, which Vodafone further confirmed in May 2013.

(550) The statement in question by Philipp Humm was made in an interview by Mobile News and reveals that Vodafone was reacting to EE's lead and decided to follow it: "*We don't have LTE in the UK at the moment, but EE has charged a premium and we think that's the right way to go*."[475]

(551) Public statements in June 2013 gave further mutual reinforcement of what all three MNOs already perceived about the positioning of one another, this time on the columns of the Financial Times. The article of 7 June 2013 on the upcoming introduction of 4G[476] outlined the context for MNOs, notably the shareholder pressure to increase profits, and reported on the comments by Gervais Pellissier, finance director at Orange in France and EE's shareholder: "*Gervais Pellissier, finance director at Orange, is confident that the group can raise prices on the back of a 4G launch. Mr Pellissier compares the telecoms market to the airline industry, where there is evidence of a disappearing "mid-range" of carriers as the sector*

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471 O2's internal documents, [ID 000018646.00001, […].

472 http://www.mobilenewscwp.co.uk/2013/03/11/operators-rule-out-offering-unlimited-data-plans-on-4g/ (provided with access to file on 4 February 2016).

473 O2's internal documents, [ID 000012845.00001], […].

474 O2's internal documents, [ID 000040456.00001], […].

475 http://www.mobilenewscwp.co.uk/2013/05/21/vodafone-says-4g-should-be-priced-at-a-premium/ (provided with access to file on 4 February 2016).

476 http://www.ft.com/intl/cms/s/0/d9d81a7c-cc6a-11e2-9cf7-00144feab7de.html#axzz3wvsKSMYK (provided with access to file on 4 February 2016).

polarises into budget flights and first class travel." This statement was closely echoed by Vodafone's European CEO Vittorio Colao: "*Vittorio Colao, chief executive of Vodafone, also uses an airline metaphor when talking about the costs and pricing of 4G. "New things should be priced to reflect the cost," says Mr Colao. "If you build a plane, then you [expect customers to] pay for the cost of the plane*." Olaf Swantee, EE's CEO, took the same line: "*Olaf Swantee, chief executive, says that the group would keep ahead given investment in network quality and technology that allowed higher speeds. "When you can bring true network differentiation, then you can monetise it," he says*."

(552) Further, O2's business plan of May 2013 contains […][477] […].[478]

(553) In summary, all MNOs other than Three positioned 4G as an expensive service, by applying a premium to the price of comparable 3G plans, by not offering unlimited data and by setting tiered data allowances such that the 4G experience will move customers to higher priced plans. […] and all three players reinforced one another with forward-looking public statements.

(554) Vodafone and O2 were to launch their 4G service on 29 August 2013. As their launch meant that EE no longer had a monopoly, EE decreased its prices somewhat in July 2013,[479] which was followed by Vodafone's and O2's announcement of their launches on 7 August 2013[480] and 14 August 2013[481] respectively. According to a report by Gigaom, an online technology commentator, on 14 August 2013, O2 was the third to announce its 4G plans after EE and Vodafone, and all three MNOs positioned the product similarly, with Vodafone having a slight edge "*So, in short, the major UK carriers have all settled around more-or-less the same price point, with Vodafone edging past its rivals in the good-deal stakes."* With respect to Three, the report adds: *"However, Three still hasn't put its cards on the table – and Three exists to be a disruptor-slash-gadfly, so perhaps we can expect a shake-up from that direction*."[482] Indeed, according to the comparison made by uSwitch, the 12 months SIMO prices of three MNOs, which were announced within close succession, were mostly aligned, with only the Vodafone plan standing slightly out at the GBP 26 price point by offering 2GB instead of 1 GB of data. For example all three offered plans at 31 GBP with 3-4 GB data allowance and at GBP 36 with a 5-8 GB allowance.[483]

(555) According to Three's analysis […][484] The implicit approach, taken by Vodafone with regard to handsets, was to equalise the 3G and 4G offers but to offer 4G mainly at higher data bundles (2GB and above)[485] As noted by Enders analysis, a

477 O2's internal documents, [ID 00047923.00001], […].
478 O2's internal documents, [ID 000036231.00001], […].
479 http://www.theguardian.com/technology/2013/jul/03/4g-ee-prices-faster-connections (provided with access to file on 4 February 2016).
480 http://www.bbc.com/news/technology-23603024 (provided with access to file on 4 February 2016).
481 http://gigaom.com/2013/08/14/o2-uk-lays-its-4g-cards-on-the-table-but-vodafones-offering-still-looks-like-the-best-deal/ (provided with access to file on 4 February 2016).
482 http://gigaom.com/2013/08/14/o2-uk-lays-its-4g-cards-on-the-table-but-vodafones-offering-still-looks-like-the-best-deal/ (provided with access to file on 4 February 2016).
483 uSwitch, O2 reveals its 4G plans, 14 August 2013, available at: http://www.uswitch.com/media-centre/2013/08/o2-reveals-its-4g-plans/ (provided with access to file on 4 February 2016).
484 Three's internal documents, [ID 003801384.00001], […].
485 Enders Analysis UK mobile market Q2 2013, page 13 [ID4167].

telecommunications research firm, this resulted in fairly similar price levels across operators for large data bundles.[486]

(556) The report of 15 October 2013 by Enders analysis also confirms that all three MNOs other than Three charged a premium: "*4G pricing is encouraging in this regard, with the three big operators all either including an explicit price premium and/or only offering 4G at well above average price points*."[487] This was true, […].[488]

(557) Three's approach was radically different. In February 2013 Three announced that it would offer 4G at no extra cost to customers,[489] an announcement that the Financial Times reported as having signalled a "price war".[490] Three's CEO told the newspaper that "*unlike some other operators*" 4G will be available across all price plans without customers needing to pay a premium fee to upgrade, adding that "*We don't want to limit ultrafast services to a select few based on a premium price*". This commitment also meant that Three would keep the unlimited data plan as well and offer it at no extra cost on 4G. That is, while other operators offered 12 month SIMO plans at 31 GBP with a 3-4 GB allowance and GBP 36 plans with a 5-8 GB allowance (see recital (554)), Three offered unlimited data at GBP 20.[491] Three announced the launch of the 4G service at the end of August, deliberately at the same time as the launch of the O2 and Vodafone services, and scheduled the launch for December 2013.[492]

(558) As was the case with the previous attempt of data monetisation, Three's strategy greatly contributed to falling prices and reversed the market trend that clearly pointed towards positioning 4G as a premium product. Two months before Three's launch, in October 2013, EE introduced two different speeds under 4G, a standard 4G and a double speed 4G, with slightly decreasing the price of the standard 4G, albeit still keeping a smaller premium.[493] Close to Three's launch, on 12 December 2013, O2 reversed its pricing and abolished the premiums above the minimum tariff level.[494] In January 2014 Tesco Mobile, an O2 brand, also abolished the premium on 3G […][495]

(559) In February 2014 Mobilenews reported that EE's CEO Olaf Swantee accused Three of devaluing 4G by offering it free to customers. Given Three's later roll-out of 4G, Olaf Swantee criticised Three's network and maintained that EE will not be drawn into a price war "*Before you offer something for free, you need to have a network, and I haven't seen Three's network so far. I don't know which cities and towns they currently have it in. Customers will ask a lot of questions when they realise something is free. When something is available for free, it often lacks the value that*

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486 Enders Analysis UK mobile market Q2 2013, page 13 [ID4167].

487 O2's internal documents, "Enders Analysis UK Mobile Market: Opportunities and Threats for O2", page 6, [ID 000013683.00001].

488 O2's internal documents, [ID 000047731.00001], […].

489 http://www.ft.com/intl/cms/s/0/80b56636-6ca0-11e2-b73a-00144feab49a html#axzz3wCPbHM84 (provided with access to file on 4 February 2016).

490 http://www.ft.com/intl/cms/s/0/80b56636-6ca0-11e2-b73a-00144feab49a html#axzz3wCPbHM84 (provided with access to file on 4 February 2016).

491 See the One Plan 12 month SIMO price as at January 2013 http://kenstechtips.com/index.php/three-launches-the-one-plan-almost-unlimited-everything-for-25month (provided with access to file on 4 February 2016). According to O2's internal document [ID 000063750.00001], […].

492 O2's internal documents, […] [ID000047763.00001]

493 http://www.3g.co.uk/PR/Oct2013/ee-introduce-all-new-4g-tariffs.html (provided with access to file on 4 February 2016); Enders analysis UK Mobile Market, Q4 2013 page 10 [ID4171].

494 Enders analysis UK mobile market Q3 2013, page 1 and page 11 [ID4170].

495 O2's internal documents, [ID 000063750.00001], […].

really should be there. We won't be offering 4G for free. There is more to competition than price. Otherwise we would just be playing an endless game in reducing costs where the product becomes a commodity."[496]

(560) However, in March 2014 EE introduced new and more accessible 4G tariffs, a move reported by the International Business Times as follows "*The 4G market in the UK is still very young, with players like O2, Vodafone and Three still in the very early stages of rolling out their superfast networks around the country.EE by comparison is an old hand, having launched its 4G network a full year ahead of most of its rivals. However the increased competition - especially from Three which is offering 4G to its customers at no extra cost - has forced EE's hand and it has now revealed new "budget" 4G contracts*."[497] EE reduced the price of the cheapest 4G package with only 500 MB to GBP 14, down from the very first tariff of GBP 36 it introduced in October 2012. Although this tariff had a very low data allowance of 500 MB for 4G, EE also launched a more inclusive entry level package with 1GB of data for GBP 19 and a lower priced plan for its double-speed Extra plans with 2GB of data for GBP 22.[498] It offered discounts for shared plans and cheaper roaming deals too.

(561) The lowering of the entry level tariff was regarded by commentators as the end of the 4G premium. For example Shaun Collins, CEO of analyst firm CCS Insight, commented that "*The competitive environment means that the premium has almost disappeared for standard 4G - the £5 premium on LTE Advanced is all but gone," said Shaun Collins, CEO of analyst firm CCS Insight. If you look at moves by O2 to make 4G free up to 1GB, the move by Tesco to make 4G free and Three, which always said it was going to make 4G a free upgrade, it was inevitable that EE was going to have to make a price move. Effectively, we're seeing almost a removal of the 4G premium for EE at the entry level".*[499]

(562) As the removal of the premium by Tesco Mobile (an O2 brand in the mobile market) […][500] and O2 removed the premium just before Three's launch, it appears that both O2 brands changed their pricing largely because of Three. According to CCS Insight, this in turn triggered a price decrease on EE's part, showing the effect Three had on the overall market.

(563) Vodafone kept its prices high, apparently in a hope that the bundled content (a six months subscription for Netflix or Sky Sports etc) will justify its premium prices. However, by August 2014 it was losing market share in respect of 4G. According to a report by the Daily Telegraph " *Vodafone faces calls to cut its tariffs over concerns it is pricing itself out of the increasingly competitive market for 4G mobile broadband, with BT preparing to pile on more pressure. The operator applies a significant premium to faster internet access on the move while rivals charge little or nothing extra. Vodafone instead aims to tempt customers by bundling six months' free mobile access to Netflix, Sky Sports or Spotify, but the strategy is not protecting*

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496 http://www.mobilenewscwp.co.uk/2014/02/20/ee-accuses-three-of-devaluing-4g-by-offering-it-for-free/ (provided with access to file on 4 February 2016).

497 http://www.ibtimes.co.uk/ee-looks-bring-4g-masses-cut-price-plans-1441848 (provided with access to file on 4 February 2016).

498 http://thenextweb.com/mobile/2014/03/26/uk-operator-ee-unveils-new-4g-plans-just-13-99-per-month-cheaper-end-market/ ; http://www.engadget.com/2014/03/25/ee-cheaper-tariffs/ (provided with access to file on 4 February 2016).

499 http://www.alphr.com/news/broadband/387832/ees-14-mth-tariff-marks-end-of-4g-price-premium (provided with access to file on 4 February 2016).

500 O2's internal documents, [ID 000063750.00001], […]; [ID 000063749.00001].

Vodafone's market share as consumers move to 4G, according to industry analysts".[501]

(564) As of August 2014 Vodafone had only 10 % of 4G customers vs its share of 29 % in 2G and 3G. Vodafone had less than 1 million 4G customers while Three and O2 had 2 million each. EE with its substantial head start in 4G had around 4 million. Kester Mann of CCS Insight commented that "*The approach Vodafone has taken is very much to make 4G a premium-priced product. The challenge it has is that competitors have come in much lower. It's not clear that bundling content has worked; the type of people who would want Sky Sports mobile or Spotify subscriptions are quite likely to have them anyway through other routes*"[502] At this time Vodafone charged GBP 22 for a 12 month SIMO package with 1 GB data (that is to say without any bundled content), while the equivalent product cost GBP 17 at EE, GBP 16 at O2 and GBP 13 at Three. By comparison, at the launch of the Vodafone and O2 4G services a year earlier (August 2013), the relevant prices were GBP 26 at EE and GBP 26 at O2. In other words, while O2 and EE adjusted its pricing closer to Three's, Vodafone did not and this had a visible impact on its market share. Vodafone had to put out a public statement to defend its policy and Kester Mann of CSS Insight added that Vodafone would continue to lose share if it does not respond to the actions of its competitors.[503]

(565) It appears that Three had a key role in driving prices down and reversing an industry trend. In the presentation […][504] […]. […], by breaking the industry trend a challenger can not only cause a chain reaction that spreads from one competitor to the other but can also reignite the rivalry between the rest of the players that did not have appetite for competition until then.

(566) In an overview of the market in the United Kingdom in July 2014, O2 emphasized […].[505]

(567) Using GfK data on the sale of postpaid handset contracts above the GBP 35 price point, the Notifying Party argues that prior to Three's launch EE was not selling materially higher priced packages and following Three's 4G launch there was not a material reduction in higher priced packages,[506] implying that Three's offer had no impact. The Notifying Party also considers that the various promotions prior to Three's launch (EE data uplifts in August, O2's extra data promotion upon launch and Vodafone's promotion in September) indicate that prices were coming down independently of and prior to Three's launch as a result of competition between EE O2 and Vodafone.[507] It cites a Pure Pricing report in Q3 2013, according to which

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501 http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/telecoms/11029465/Vodafone-market-share-hit-by-high-4G-prices html (provided with access to file on 4 February 2016).

502 http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/telecoms/11029465/Vodafone-market-share-hit-by-high-4G-prices html (provided with access to file on 4 February 2016).

503 http://www.mobiletoday.co.uk/news/industry/30453/vodafone-under-pressure-to-cut-its-4g-sim-only-prices.aspx (provided with access to file on 4 February 2016).

504 O2's internal documents, [ID 000003587.00001], […].

505 O2's internal documents, [ID 000003715.00001]. […].

506 Reply to the Statement of Objections, paragraphs 987-988

507 Reply to the Statement of Objections, paragraphs 984, 989

"*the premium for 4G has been a short lived phenomenon in the UK.*"[508] Based on the Pure Pricing report the Notifying Party also claims that that EE's downward price revision in October 2013[509] was independent of Three. As regards O2's and Tesco Mobile's abolition of the premium in December,[510] in the Notifying Party's view these developments, too, were independent of Three. In particular, according to […].[511] Finally, the Notifying Party considers that there is no proof that the price revisions subsequent to Three's launch[512] were a reaction to Three's proposition.

(568) In this regard, the Commission considers that these arguments raise two questions: first, whether there was any price effect and, second, in case there was a positive price effect, whether and to what extent such effect is attributable to Three's offer. As regards the first question, the documented downward price revisions prior to and following Three's launch[513] clearly prove that that there was a price effect and 4G became cheaper over time. The GfK data is inconclusive as it does not capture what prices would have prevailed absent these revisions. In addition, the data includes both 3G and 4G tariffs and considers only higher price points whereas Three made 4G available at all price points.

(569) As regards the second question, the Commission notes that as late as August 2013 all three MNOs other than Three offered 4G at a premium, around similar price points.[514] Further, as mentioned in recital (556), the promotions in August and September by EE, O2 and Vodafone were temporary offers for a few months as evidenced by the detailed chronology of the Pure Pricing report,[515] which means that it was likely that they would not have resulted in definite price reductions. EE's downward price revision in October 2013 largely maintained the premium as it halved the premium for the lower speed plans and maintained it in full for the higher speed plans. Moreover, this revision took place two months prior to Three's launch when all operators, including EE, were aware that Three would launch 4G at no extra cost. Given the well documented intentions of EE, Vodafone and O2 to charge a premium and the fact that they only provided temporary discounts up to that point, it is unlikely that this price revision had nothing to do with Three's prospective launch. The public accusation of Three by EE's CEO for giving away 4G for free also shows that in general EE was very much aware of and took into account Three's competitive behaviour. Accordingly, the only definite price revision prior to Three's launch was partial and likely to have been influenced by Three's prospective entry. Three had a large role in the subsequent price revisions too. As discussed in recital (558) Tesco Mobile […] as a reason to abolish the premium, while O2's move in turn occurred at the same time Three launched its 4G service […], which shows that it was also not independent of Three. In this regard the Notifying Party quotes the O2 document selectively as the document […].[516] […]. Finally, the opinions of commentators cited in recitals (560) and (561) as well as the internal documents cited in recitals (565) and (566) also confirm Three's decisive role in decreasing the prices of 4G plans,

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508 Reply to the Statement of Objections, paragraph 990, Annex B11.10 to the Reply to the Statement of Objections.

509 See recital (558).

510 See recital (558).

511 O2's internal documents, [ID 000013726.00001].

512 See recitals (558)-(566).

513 See recitals (558)-(564).

514 See recitals (553)-(556).

515 Pure Pricing report Q3 2013, page 4 Annex B11.10 to the Reply to the Statement of Objections.

516 O2's internal documents, [ID 000013726.00001], […].

especially if it is considered that Three's proposition can have an effect on the rivalry between the other three MNOs. The Commission considers therefore that Three had a substantial role in abolishing the premium for 4G and decreasing 4G prices. In particular, given that all operators except Three planned to sell 4G at a premium it is highly likely that absent Three the result would have been significantly different.

(570) The argument that Three had to offer 4G at no extra cost because of the congestion of its 3G network,[517] even if it were valid, would not undermine the Commission's conclusion that Three exercised a disproportionate influence on the competitive process relative to its market share. The fact that Three took aggressive measures to ensure that it could continue to compete effectively demonstrates Three's willingness to influence competition on the market to a degree that is not reflected in its market shares. Finally, the argument that Three had to offer 4G at no extra cost because […][518] also does not fit the facts. Three launched only three months after Vodafone and O2, so the outlier is rather EE due to Ofcom's spectrum decision.

(571) Some of the premium remained even with Three's policy. As Enders Analysis noted in June 2014 "*The 4G premium is still elusive, but exists of a form at EE and Vodafone.*"[519] For Vodafone the premium involved a heavy loss of market share, while EE could probably maintain some of its premium due to its advantage in roll-out: at any given point in time in 2014 its 4G coverage was far more advanced than the other MNOs', which meant that for many customers it was the only option. For example, in the third quarter of 2014 EE had 75 % coverage whereas Vodafone's and O2's stood at 50 % and Three's at 46 %.[520] Also, 4G probably increased data consumption, which moved certain customers to price plans with higher data allowance increasing revenue per user "*4G plans are being used to encourage larger data bundle purchases, pushing up ARPU*".[521] There is little doubt, however, that absent Three's strategy the market would have ended up with much higher 4G prices and consumers with higher data bills.

(572) The Commission considers therefore that Three played a key role in preventing a price increase for 4G. In other words, it had a disproportionately large influence on competition, beyond the level than what would follow from its market share. As the events around the 4G launch are recent, they are relevant for assessing Three's future behaviour absent the Transaction. Furthermore, as was the case with Feel at Home, Three's market behaviour with regard to 4G puts the Notifying Party's claims on […]. […].

VoLTE

(573) In 2015, Three has been the first operator in the United Kingdom to launch a voice over LTE ("VoLTE") service, named "4G Super-Voice."[522] All other MNOs plan to launch VoLTE as well.

(574) Three regarded the launch of this service as an important step in improving its network quality and keeping its status as the most reliable network.[523] Commentators

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517 Reply to the Statement of Objections, paragraph 977.

518 Reply to the Statement of Objections, paragraph 980.

519 Enders Analysis UK mobile market Q1 2014, page 8 [ID4165].

520 Enders Analysis UK mobile market Q3 2014, page 13 [ID4171.]

521 Enders Analysis UK mobile market Q2 2014, page 11 [ID4168].

522 See: http://blog.three.co.uk/2015/09/15/4g-super-voice-is-here/ (provided with access to file on 4 February 2016).

viewed the fact that Three launched VoLTE prior to its competitors as Three's success over its rivals: "*This is a significant strategic coup for Three as its rivals have all been keen to position themselves strongly for the VoLTE era. EE spoke to Telecoms.com about both its VoLTE and its 800 MHz plans last week, perhaps in anticipation of this announcement. Meanwhile Vodafone launched its wifi calling at the end of last week and will feel renewed pressure to get a move on with VoLTE*"[524]

(575) The launch of the first VoLTE service also shows that, even after the […], Three continued to put pressure on its competitors, not only with regard to prices but also with regard to network quality. […].

Conclusion on Three's competitive behaviour

(576) The review of Three's competitive behaviour pre-Transaction indicates that in the period 2007-2012 Three drove competition in the industry.

(577) Its more recent behaviour in the years 2013-2015 shows that, notwithstanding the […], Three still has a disproportionate effect on the competitive process compared to its market share. In particular, it is largely due to Three that the price of data[525] remained very competitive in the United Kingdom in the last six years. As the subsequent sections will show, Three was able to have such an effect on prices while achieving increasingly better network quality. […]

Positioning with respect to price related competition

(578) With respect to price, on the basis of the evidence in its file, the Commission considers that Three has consistently exerted an important competitive constraint on the market with its tariffs. The importance of such competitive constraint does not appear to have diminished in the recent past and in particular after 2013 ([…]).

(579) To reach this conclusion, the Commission has performed a qualitative and quantitative pricing analysis as well as an assessment of other qualitative evidence available in its file.

Qualitative pricing analysis

(580) The Commission has compared postpaid[526] tariffs, both SIMO and handset contracts,[527] for sale on the market in the United Kingdom from January 2014 till January 2016 using different sources of evidence.

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523 See: http://www mobilenewscwp.co.uk/2015/04/23/three-set-for-major-network-upgrade-this-year/ [ID6069]

524 See: http://telecoms.com/442441/three-uk-announces-volte-launch-and-800-mhz-roll-out/ [ID6070]

525 On the importance of price see Section 6.6.2.

526 The largest segment in the market, see Figure 12. A comparison of prepaid tariffs is nonetheless performed in recital (803) below.
The anlaysis takes into account only "above the line" tariffs, that is publicised prices, and not "below-the-line" offers (that is discounts and other promotions resulting in modifications of the tariff plans that are publicised). Below the line offers are only relevant for a small proportion of the tariffs sold in the overall private market (prepaid and postpaid). For example, in 2014, only […] of O2's private customers and only […]% of […]'s private customers were on such tariffs (O2's response to RFI 61, question 3; […], combined with the total number of […]'s private customers, Annex 9 to the Form CO). Three measures below the line pricing […]. Three's use of below the line pricing as of December 2015 and January 2016 was […]. Still, even these figures imply that the large majority of subscriptions are sold at the headline prices.

527 On the choice of representative devices for the purposes of the comparison, see recital (606) below.

2014

(581) The Commission has compared the content and the prices of all new postpaid SIMO tariffs introduced during the full year 2014 by the MNOs as declared by the latter in response to the Commission's data request.[528] The analysis has been performed by comparing the price of MNOs' tariffs with the same data allowance, as competition in the retail market is now, to a large extent, based on data packages with voice and SMS offered as unlimited services.[529] In this respect the Commission notes the following:

(a) In 2014 Three was the only MNO to launch six All You Can Eat ("AYCE"), that is to say unlimited, data tariffs, with AYCE SMS, three different voice allowances (200, 600 and AYCE), 4G services included and commitment periods of 1 or 12 months;

(b) For all data tiers for which it provided a tariff, that is to say 500 MB, 1GB, 2GB, Three launched the cheapest tariffs and all these tariffs included 4G services;

(c) Three launched the cheapest tariffs even when considering ranges of tariffs, that is to say tariffs with data allowances between 0 and 500 MB, 500 MB and 1 GB, 2 GB to 3 GB.[530] Three's AYCE tariffs are the cheapest in the range between 4 GB and unlimited data.

(582) Further, the report produced by Pure Pricing,[531] for the year 2014 available in the Commission's file likewise shows that Three's tariffs were the cheapest or (for few pounds) the second cheapest for both SIMO plans and plans offered with high end handsets.[532] With respect to SIMO contracts, Pure Pricing's last report of 2014 notes a value decrease in Three's tariffs (compared to its previous tariffs), but it relates such decrease to the voice content, and not to the data allowances. Indeed, the report states that "*In December 2012 unlimited data was available from £15.90 per month, and in December 2014 unlimited data cost a similar sum at £15 per month. The key difference for Three is that whilst the price for unlimited data has been maintained, the accompanying voice value has decreased from 600 minutes in 2012 (and from 2000 minutes in 2013) to only 200 minutes in 2014*."

(583) As regards handset contracts, Pure Pricing reports also clearly show that Three's tariffs were among the most competitive in the market. By way of example, Figure 46 below shows the evolution of the lowest cost of ownership (that is to say, the lowest cost of the phone plus 24 monthly charges for the plan offered by each retailer with at least 1 GB) from 5 July 2014 until 13 September 2014 of the newest smartphones available for sale of Apple and Samsung.

528 Responses to RFIs 3 to 12 and follow up RFIs 15 to 25. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

529 See recital (62) above.

530 No MNO launched tariffs with data allowances between 1 GB and 2GB and between 3 GB and 4 GB.

531 Pure Pricing is a consulting firm which undertakes the market's consumer mobile pricing researches in the United Kingdom, offering clients weekly, monthly and quarterly updates. The scope of the researches includes pay monthly, pre-pay, voice, text and data services in addition to handset pricing. The ones mentioned in the following are quarterly reports.

532 Three's internal documents, PurePricing's "UK mobile pricing developments" for the first; third and last quarters of 2014 [respectively ID 005000060.00001, 011800060.00001, 012600060.00001].

Figure 46: Lowest cost of ownership for selected handset contracts between July and September 2014

Figure 47

(a) iPhone 5s 16GB, plans with at least 1GB

[…]

(b) Samsung Galaxy S5, plans with at least 1GB

[…]

Source: Three's internal documents, […] [ID 011800060.00001].

(584) While, on the one hand, Figure 46 above shows […], the figure also clearly shows […].

2015

(585) In March 2015 Enders Analysis published a report analysing the new launch of BT's mobile services. The report includes a pricing comparison for a selection of tariffs with the aim of benchmarking the competitive impact of BT's new product which is reproduced below as Figure 48. As for Three ("H3G" in the Figure) the selection of tariffs only includes the AYCE data offer for GBP 27, but not other available AYCE tariffs from Three in the relevant period, such as the ones for GBP 17 and 22 or the tariffs including 4GB available at GBP 16 and 21 (see Figure 49). The pricing comparison shows that, for data allowances above 2GB, Three's tariffs are the cheapest among the benchmarking products.

Figure 48

Figure 2: UK SIM-only pricing for 500MB and over contracts

	Price per month	Minutes	4G	Data	Contract length
Vodafone	£14.00	900	Yes	500MB	12 months
O2	£13.00	500	Yes	500MB	12 months
EE	£12.99	500	Yes	500MB	12 months
TalkTalk	£12.50	500	No	700MB	12 months
Tesco	£10.00	1000	Yes	500MB	12 months
Giffgaff	£10.00	500	£2 extra	1GB	30 days
Virgin Media	£8.00	1000	No	500MB	12 months
H3G	£8.00	200	Yes	500MB	12 months
BT	**£5.00**	**200**	**Yes**	**500MB**	**12 months**

BT price valid for customers who live in a BT Broadband home
TalkTalk mobile offers only available to TalkTalk residential customers
[Source: Enders Analysis based on company websites]

Figure 3: UK SIM-only pricing for 2GB and over contracts

	Price per month	Minutes	4G	Data	Contract length
O2	£20.00	Unlimited	Yes	2GB	12 months
Vodafone	£19.80	Unlimited	Yes	3GB	12 months
EE	£15.99	Unlimited	Yes	2GB	12 months
Tesco	£15.00	3000	Yes	2GB	12 months
TalkTalk	£15.00	700	No	2GB	12 months
Virgin Media	£15.00	Unlimited	No	3GB	12 months
Giffgaff	£12.00	500	£3 extra	3GB	30 days
BT	**£12.00**	**500**	**Yes**	**2GB**	**12 months**
H3G	£11.00	200	Yes	2GB	12 months

BT price valid for customers who live in a BT Broadband home
TalkTalk mobile offers only available to TalkTalk residential customers
[Source: Enders Analysis based on company websites]

Figure 4: UK SIM-only pricing for largest data bundle offered

	Price per month	Minutes	4G	Data	Contract length
O2	£30.00	Unlimited	Yes	8GB	12 months
Vodafone	£30.00	Unlimited	Yes	20GB	12 months
EE	£27.99	Unlimited	Yes	5GB	12 months
H3G	£27.00	Unlimited	Yes	Unlimited	12 months
Tesco	£25.00	Unlimited	Yes	8GB	12 months
TalkTalk	£20.00	2000	No	4GB	12 months
Virgin Media	£20.00	Unlimited	No	Unlimited	30 days
BT	**£20.00**	**Unlimited**	**Yes**	**20GB**	**12 months**
Giffgaff	£18.00	2000	No	Unlimited	30 days

BT price valid for customers who live in a BT Broadband home
TalkTalk mobile offers only available to TalkTalk residential customers
£20 Virgin Media offer only available to Virgin Media customers
[Source: Enders Analysis based on company websites]

Source: Enders analysis, "BT Mobile goes fourth", Appendix [ID6008].
Note: "Tesco" stands for "Tesco Mobile".

(586) In turn, the 2015 Pure Pricing reports available in the Commission's file indicate that […]."[533] […].

[533] Three's internal documents, PurePricing's "UK mobile pricing developments Q2/2015" [ID 011800060.00001].

(587) With respect to SIMO contracts, the same 2015 report offers […]:

Figure 49: MNOs' 12 months SIMO portfolio at the end of Q2/2015

[..]

Source: Three's internal documents, […] [ID 011800060.00001].

(588) Similarly Three's […].[534]

Figure 50: […]

[…]

Source: Annex 7.194 to the Form CO, slide 12.

(589) Further, […].[535]

Figure 51: […]

(a) […]

[…]

(b) […]

[…]

(c) […]

[…]

Source: Three's internal documents, […] [ID ID 000602129.00001].
[…]

(590) The comparison of postpaid SIMO contracts available for sale in October 2015 submitted to the Commission by Ofcom also shows that Three is the MNO offering the cheapest tariffs overall. Ofcom provided a comparison of headlines prices for three data segments: high, medium and low. The analysis shows that Three's tariffs are the ones at the cheapest price with the highest volume of data in both the high and medium data segments and among the cheapest for low data segment, second only to giffgaff, O2's fighting brand, and Tesco Mobile as shown in the below Figure 52.[536]

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534 Annex 7.194 to the Form CO, slides 12 and 19 and following.

535 For example, Three's internal documents, […] [ID 000602129.00001]. See also, […], Three's internal documents, […] [ID 000602129.00001]; […] (submitted as Annex B3.7 to the Reply to the Statement of Objections), […].

536 Figure 52 also shows that non-MNOs can provide data packages at competitive price terms only at the lower end of the data range.

Figure 52: Key private SIMO tariffs on October 2015 (headline prices)

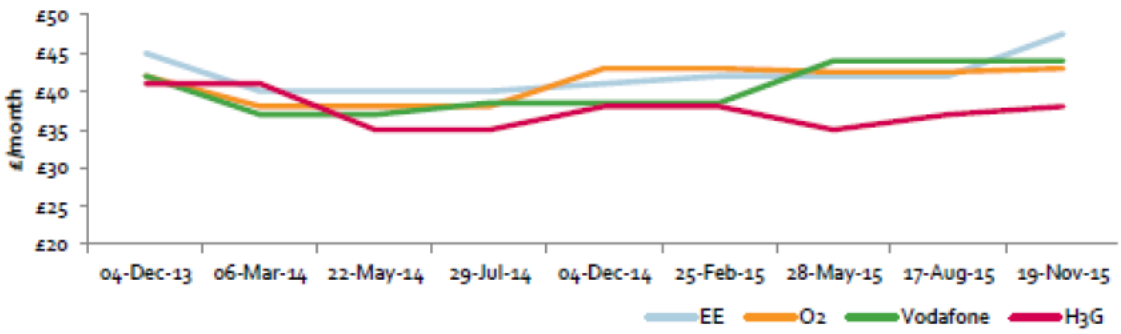
Operator	Contract length (months)	Monthly charge (GBP)	Any network, anytime minutes	SMS	Data	Other comments
High data segment						
Three	12	17.00	200	AYCE	AYCE	-
Three	12	22.00	600	AYCE	AYCE	-
Three	12	27.00	AYCE	AYCE	AYCE	-
EE	12	28.99	AYCE	AYCE	10GB	GBP 25.99, until 27 October
O2	12	27.20	AYCE	AYCE	10GB	-
O2	12	30.60	AYCE	AYCE	20GB	-
Vodafone	12	27.20	AYCE	AYCE	10GB	-
Vodafone	12	30.00	AYCE	AYCE	20GB	-
iD	12	25.00	2000	5000	10GB	-
Tesco Mobile	12	22.50	5000	5000	6GB	-
Virgin Media	1	23.00	AYCE	AYCE	8GB	3G only
giffgaff	1	20.00	AYCE	AYCE	AYCE	-
Medium data segment						
Three	12	17.00	200	AYCE	AYCE	-
Three	12	16.00	600	AYCE	4GB	-
Three	12	21.00	AYCE	AYCE	4GB	-
EE	12	20.99	AYCE	AYCE	4GB	-
O2	12	19.54	AYCE	AYCE	4GB	-
Vodafone	12	22.00	AYCE	AYCE	4GB	10% off (discount not shown) 6 months' content, for example NOW TV EU roaming calls
Virgin Media	1	15.00	AYCE	AYCE	4GB	3G only
giffgaff	1	15.00	1000	AYCE	4GB	

giffgaff	1	20.00	AYCE	AYCE	AYCE	
Low data segment						
Three	12	8.00	200	AYCE	500MB	-
EE	12	9.99	250	AYCE	250MB	-
O2	12	8.50	100	AYCE	100MB	-
O2	12	13.50	500	AYCE	500MB	-
Vodafone	12	9.50	300	AYCE	250MB	-
BT Mobile	12	10.00	200	AYCE	500MB	-
iD	12	12.50	250	5000	500MB	-
Tesco Mobile	12	7.50	250	5000	500MB	-
Virgin Media	1	5.00	250	AYCE	250MB	3G only
Virgin Media	1	8.00	1250	AYCE	500MB	3G only
giffgaff	1	5.00	100	300	100MB	-
giffgaff	1	7.50	250	AYCE	500MB	-

Source: Ofcom, Phase 2 submission to the European Commission, "Ofcom comments on the effects of the Three/O2 merger on prices", Annex 1, tables 1 to 3 [ID3703]. Ofcom analysis of Pure Pricing data, October 2015.

(591) Furthermore, Enders Analysis' regular tracking of the prices also shows that Three's "sweet spot"[537] prices linked to the key handsets such as iPhone 5s/iPhone 6 and iPhone 6s have been consistently the lowest in the period between May 2014 and November 2015, as shown in Figure 53.[538]

Figure 53: "Sweet spot" bundle with iPhone 5s/6/6s



Source: Enders Analysis, UK mobile market Q3 2015 [ID4172].

537 The "sweet spot" pricing is a key price point on the market used for tracking purposes. It includes a typical bundle of data, voice and texts sold together with a popular handset such as the iPhone in a postpaid contract.

538 Enders Analysis, UK mobile market Q3 2015, page 8 [ID4172].

(592) In addition, […] contains the SIMO postpaid deals offered by Tesco Mobile, Three, O2, EE, Vodafone, Virgin Media, BT, and Dixons' iD on 27 November 2015. Such tariff comparison shows that Three's offers the cheapest deals for data in the market, beaten only by Tesco Mobile at the lowest price level, while Virgin Media offers the best tariffs for voice services.[539]

(593) In the Reply to the Statement of Objections, the Notifying Party submitted a chart, reproduced below in Figure 54, which shows the price development, from 31 October 2015 to 23 January 2016, of example tariffs with at least 2GB of data for the iPhone 5S. Even that example show that Three's pricing has remained constant and below the average of other MNOs' prices for the whole period concerned. Market-wide, only Dixons' offers of EE were cheaper than Three's ones for the whole period. Although pricing of other MNOs were converging towards Three's ones, the Commission notes that the price change of Three's rivals should be read in the context of the diminishing competitive importance of the handset included in the tariffs, device which was launched by Apple in September 2013 and had been already superseded by two new iPhone devices in the period concerned.

Figure 54: Price Development of Example Tariffs with at least 2GB of Data for iPhone 5S

[…]

Source: Reply to the Statement of Objections, Figure 50.
Note: "Tesco" stands for "Tesco Mobile".

2016

(594) Finally, the Commission's analysis of SIMO and selected handset contracts and promotions advertised and available for sale on the MNOs', Virgin Media's and Tesco Mobile's websites on January 2016 again shows that Three's tariffs are very price competitive.

(595) With respect to SIMO contracts, the Commission has compared headline prices of 12 month (1 month for Virgin Media, as no 12-month plan was available) SIMO subscriptions for four data segments: between 0 and 1 GB (the latter not included), 1 and 4 GB (the latter not included), 4 and 10 GB (the latter not included) and above 10 GB. The Commission notes that, among the considered tariffs, Three's tariffs are among the cheapest within each data segment and provide the greater amount of data as shown in the below Figure 55.

539 […].

Figure 55: 12 months private SIMO tariffs on January 2016 (headline prices)

Operator	Contract length (months)	Monthly charge (GBP)	Any network, anytime minutes	SMS	Data	Promotions
Between 0 and 1 GB (not included)						
EE[540]	12	9.9	250	AYCE	250 MB	
EE	12	12.99	500	AYCE	500MB	
Vodafone[541]	12	9.5	300	AYCE	250MB	AYCE data for 2 months
O2[542]	12	9.5	250	AYCE	250MB	
O2	12	12	500	AYCE	500MB	
Three[543]	12	8	200	AYCE	500MB	50% off for 3 months (discount not included) Including Feel at Home
Tesco Mobile[544]	12	7.5	250	5000	500MB	
Tesco Mobile	12	10	750	5000	500MB	
Virgin Media[545]	1	5	250	AYCE	250MB	Only 3G
Virgin Media	1	8	1250	AYCE	500MB	Only 3G
Between 1 GB and 4 GB (not included)						
EE	12	16.99	2000	AYCE	2GB	
Vodafone	12	14	600	AYCE	1GB	AYCE data for 2 months

540 For EE's offers see ID3754 (source: http://shop.ee.co.uk/mobile-phone-deals/sim-only-deals, last visited on 12 January 2016).

541 For Vodafone's offers see IDs 3759 and 3760 (source: https://www.vodafone.co.uk/shop/bundles-and-sims/sim-only-deals/index.htm#simonly-plans, last visited on 12 January 2016).

542 For O2's offers see ID 3757 (source: https://www.o2.co.uk/shop/simplicity/#/tariffs, last visited on 12 January 2016).

543 For Three's offers see ID 3755 (source: http://www.three.co.uk/Store/SIM/Plans_for_phones, last visited on 12 January 2016). The price includes a GBP 5 discount for paying by a recurring method, such as direct debit.

544 For Tesco Mobile's offers, see ID 4161 (source: http://shop.tescomobile.com/pay-monthly/sim-only/Tesco+Mobile/simonly/tariff, last visited on 12 January 2016).

545 For Virgin Media's offers, see ID: 4137 (source: http://store.virginmedia.com/virgin-media-mobile/sim-only/pay-monthly-sim.html, last visited on 12 January 2016).

Vodafone	12	15.3	AYCE	AYCE	2GB	25% off (discount included) until 1 February 2016 AYCE data for 2 months
O2	12	14	1000	AYCE	1GB	GBP 1 discount for 12 months until 3 February 2016
O2	12	16	AYCE	AYCE	2GB	GBP 2 discount for 12 months until 3 February 2016
Three	12	11	600	AYCE	1GB	50% off for 3 months (discount not included) Including Feel at Home
Three	12	16	AYCE	AYCE	1GB	
Three	12	11	200	AYCE	2GB	
Tesco Mobile	12	10	2520	5000	1GB	
Tesco Mobile	12	12.5	1000	5000	1GB	
Tesco Mobile	12	15	3000	5000	2GB	
Tesco Mobile	12	17.5	5000	5000	3GB	
Virgin Media	1	10	2500	AYCE	1GB	Only 3G
Virgin Media	1	12	AYCE	AYCE	2GB	Only 3G
Between 4GB and 10 GB (not included)						
EE	12	20.99	AYCE	AYCE	4GB	
EE	12	23.99	AYCE	AYCE	6GB	
Vodafone	12	19.8	AYCE	AYCE	4GB	25% off (discount included) until 1 February 2016 AYCE data for 2 months 6 months' content, such as NOW TV EU roaming calls
Vodafone	12	24.3	AYCE	AYCE	6GB	
O2	12	18	AYCE	AYCE	4GB	GBP 3 discount for 12 months until

						3 February 2016
O2	12	23	AYCE	AYCE	8GB	GBP 4 discount for 12 months until 3 February 2016
Three	12	16	600	AYCE	4GB	50% off for 3 months (discount not included) Including Feel at Home
Three	12	21	AYCE	AYCE	4GB	
Three	12	19	600	AYCE	8GB	
Three	12	24	AYCE	AYCE	8GB	
Tesco Mobile	12	22.5	5000	5000	6GB	
Virgin Media	1	15	AYCE	AYCE	4GB	3G only
Virgin Media	1	23	AYCE	AYCE	8GB	3G only
Above 10 GB						
EE	12	28.99	AYCE	AYCE	10GB	
Vodafone	12	27.2	AYCE	AYCE	10GB	25% off (discount included) until 1 February 2016 AYCE data for 2 months 6 months' content, such as NOW TV EU roaming calls
Vodafone	12	30	AYCE	AYCE	20GB	
O2	12	28	AYCE	AYCE	16GB	GBP 5 discount for 12 months until 3 February 2016
Three	12	17	200	AYCE	12GB	50% off for 3 months (discount not included) Including Feel at Home
Three	12	22	600	AYCE	12GB	
Three	12	27	AYCE	AYCE	12GB	
Three	12	20	200	AYCE	AYCE	Including Feel at Home
Three	12	25	600	AYCE	AYCE	
Three	12	30	AYCE	AYCE	AYCE	

Source: Commission's analysis based on MNOs' websites.
All tariffs include 4G as standard, with the exception of Virgin Media's tariffs.

(596) Moreover, the Commission has compared headlines prices of Three's (the cheapest MNO) and Virgin Media's 1 month SIMO subscriptions for four data segments: between 0 and 1 GB (the latter not included), 1 and 4 GB (the latter not included), 4 and 10 GB (the latter not included) and above 10 GB. The Commission notes that, as shown in Figure 56 below, while Virgin Media is able to offer competitive prices for low data package, this is not the case with respect to the larger data packages, its largest offer being an 8GB data package. Importantly, its offers do not include 4G. As a result, as from 4GB Three's offerings is the cheapest and most valuable for customers (notably Three offers a package of 12GB 4G services at a price lower than Virgin Media package of 8GB 3G services).

Figure 56: 1 month private SIMO tariffs on January 2016 (headline prices)

Operator	Contract length (months)	Monthly charge (GBP)	Any network, anytime minutes	SMS	Data	Comments
Between 0 and 1 GB (not included)						
Virgin Media	1	5	250	AYCE	250 MB	Only 3G
Virgin Media	1	8	1250	AYCE	500MB	Only 3G
Three	1	11	200	AYCE	500MB	4G standard
Between 1 GB and 4 GB (not included)						
Virgin Media	1	10	2500	AYCE	1GB	Only 3G
Virgin Media	1	12	AYCE	AYCE	2GB	Only 3G
Three	1	14	600	AYCE	1GB	4G standard
Three	1	18	AYCE	AYCE	1GB	4G standard
Three	1	14	200	AYCE	2GB	4G standard
Between 4GB and 10 GB (not included)						
Virgin Media	1	15	AYCE	AYCE	4GB	Only 3G
Virgin Media	1	23	AYCE	AYCE	8GB	Only 3G
Three	1	19	600	AYCE	4GB	4G standard
Three	1	24	AYCE	AYCE	4GB	4G standard
Three	1	22	600	AYCE	8GB	4G standard
Three	1	27	AYCE	AYCE	8GB	4G standard
Above 10 GB						
Virgin Media	No offer					
Three	1	20	200	AYCE	12GB	4G standard

Three	1	25	600	AYCE	12GB	4G standard
Three	1	30	AYCE	AYCE	12GB	4G standard
Three	1	23	200	AYCE	AYCE	4G standard
Three	1	28	600	AYCE	AYCE	4G standard
Three	1	33	AYCE	AYCE	AYCE	4G standard

Source: Commission's analysis based on MNOs' websites.[546]

(597) With respect to handset contracts, the Commission has compared the iPhone 6s (16 GB) offers with 24 month commitment, upfront payment for the device below GBP 100 and the lowest cost of ownership (that is to say, the lowest cost of the phone plus 24 monthly charges for the plan offered by each retailer with at least 1 GB). iPhone 6s was the latest Apple device available on the market in January 2016, therefore the Commission considers that tariffs for handset contract including that device are the most representatives of mobile operators' price aggressiveness at that time.

(598) The analysis shows that, among MNOs' offers, the cost of ownership of Three's offer at the end of the 24 months commitments period is the cheapest with a cost of GBP 1 011, GBP 39 less expensive than O2, GBP 104 than Vodafone and GBP 169 than EE. Moreover, Three and O2 are the MNOs with the highest number of tariffs among the top 10 with the lowest cost of ownership (four each), while Vodafone and EE have only one tariff each in the top 10.

(599) The Commission's comparison of handset tariffs for iPhone 6s (16 GB) also shows that among the MNOs' offers with the lower cost of ownership Three's ones are also the most valuable for customers. In this regard the Commission notes that, when comparing offers with the same data allowances among those with the lowest cost of ownership, over the 24 month commitment period Three's 2 GB tariff is GBP 32 cheaper than Vodafone's and GBP 97 cheaper than EE's (O2 does not offer a tariff with 2 GB). Moreover, the Commission notes that Three offers a tariff with 4 GB allowance which is only GBP 16 more expensive than Vodafone's tariff with the lowest cost of ownership (which offers only half as much data as Three's) and over GBP 48 cheaper that EE's tariff with the lowest cost of ownership. Finally, Three offers 8 GB at a price which is GBP 1 cheaper than EE's tariff with the lowest cost of ownership. O2 offers tariffs with 3 and 5 GB data allowances which are slightly more expensive that Three's tariff with 4 GB, around GBP 20 more expensive than Vodafone's 2GB tariff and over GBP 45 cheaper than EE's tariff with the lowest cost of ownership and 2 GB.

(600) A summary of the Commission's analysis if provided in the below Figure 57.

[546] For Three's tariffs, January 2016 [ID3755] and for Virgin Media's tariffs, January 2016 [ID3137].

Figure 57: Top 10 MNO's iPhone 6s (16 GB) offers with 24 months commitment, upfront payment below GBP 100 and the lowest cost of ownership (January 2016)

Rank	Operator	Monthly charge (GBP)	Upfront payment (GBP)	Any network, anytime minutes	SMS	Data (GB)	Cost of ownership after 24 months (GBP)
1	Three[547]	38	99	24	AYCE	1	1011
2	O2[548]	42.5	29.99	24	AYCE	1	1049.99
3	Three	41	99	24	AYCE	2	1083
4	Vodafone[549]	44	59	24	AYCE	2	1115
5	Three	43	99	24	AYCE	4	1131
6	O2	46	29.99	24	AYCE	3	1133.99
7	O2	44	79.99	24	AYCE	5	1135.99
8	Three	45	99	24	AYCE	8	1179
9	EE[550]	44.99	99.99	24	1000	2	1179.75
10	O2	49	19.99	24	AYCE	5	1195.99

Source: Commission's analysis based on MNOs' websites.
All tariffs include 4G as standard.

(601) Further, the Commission has compared Three's (the cheapest of the MNOs), Tesco Mobile's and Virgin Media's iPhone 6s (16 GB) offers with 24 months commitment, upfront payment for the device below GBP 100 and the lowest cost of ownership. The analysis shows that the cost of ownership of Tesco Mobile's offers at the end of the 24 months commitments period is the cheapest for each data tier, while Three is providing the greatest amount of data, as shown in the below Figure 58. Virgin Media's pricing is competitive only for the smaller data allowances and it only offers 3G.

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547 For Three's offers see ID 3591 (source: http://www.three.co.uk/iPhone/iPhone_6s?featuretab=Trade-in&intid=3store_popular_iPhone_6s&memory=16&colour=Space_Grey), last visited on 12 January 2016). The price includes a GBP 5 discount for paying by a recurring method, such as direct debit.

548 For O2's offers see ID 3756 (source: https://www.o2.co.uk/shop/tariff/apple/iphone-6s/?productId=25b43759-ac41-44f0-9ef9-817d1dda540e&planId=&contractType=paymonthly, last visited on 12 January 2016).

549 For Vodafone's offers see ID3758 (source: http://shop.vodafone.co.uk/shop/pricePlans/plansHome.jsp?&_dyncharset=ISO-8859-1&_dynSessConf=-3100712519159238584&bundleSkuItemId=sku48047571&planContractType=&_D:segmentType=+&_D:segmentType=+&_DARGS=/shop/pricePlans/plansLeftPanel.jsp&_dyncharset=ISO-8859-1&_dynSessConf=-3100712519159238584&input=, last visited on 12 January 2016).

550 For EE's offers see D3753 (source: http://shop.ee.co.uk/mobile-phones/pay-monthly/iphone-6s-16gb-space-grey/details#choosePlanAnchor, last visited on 12 January 2016).

Figure 58: iPhone 6s (16 GB) offers with 24 months commitment, upfront payment below GBP 100 and the lowest cost of ownership (January 2016)

Operator	Monthly charge (GBP)	Upfront payment (GBP)	Any network, anytime minutes	SMS	Data (GB)	Comments	Cost of ownership after 24 months (GBP)
Virgin Media	39	0	2500	AYCE	1	only 3G	936
Three	38	99	AYCE	AYCE	1	4G standard	1011
Tesco Mobile	38	0	3000	5000	2	4G standard	912
Virgin Media	41	0	AYCE	AYCE	2	only 3G	984
Three	41	99	AYCE	AYCE	2	4G standard	1083
Tesco Mobile	40	0	5000	5000	3	4G standard	960
Virgin Media	44	0	AYCE	AYCE	4	only 3G	1056
Three	43	99	AYCE	AYCE	4	4G standard	1131
Tesco Mobile	45	0	5000	5000	6	4G standard	1080
Tesco Mobile	47.5	0	5000	5000	8	4G standard	1140
Three	45	99	AYCE	AYCE	8	4G standard	1179
Virgin Media	52	0	AYCE	AYCE	8	only 3G	1248
Three	48	99	AYCE	AYCE	12	4G standard	1251
Three	51	99	AYCE	AYCE	AYCE	4G standard	1323

Source: Commission's analysis based on Three's, Tesco Mobile's and Virgin Media's websites.

Conclusion on qualitative pricing analysis

(602) The Commission considers that the qualitative pricing analysis preformed above shows that Three with its tariffs has consistently exerted an important competitive constraint on the market.

Notifying Party's pricing analysis

(603) In the Reply to the Statement of Objections the Notifying Party submitted that the analysis of tariffs and pricing performed by the Commission in the Statement of Objections as set out above is flawed for the following reasons:

(a) It is based on an analysis of a single point in time, based on website information, rather than a systematic analysis of prices over time;

(b) It is based on a small sub-sample of arbitrarily chosen price points – in a market where there are at a minimum several hundred key price points;

(c) It ignores pricing via Dixons, which is where Vodafone, EE and O2 (and several non-MNOs) place more aggressive offers;

(d) It ignores the fact that non-MNOs are the most price aggressive players in the market. In this respect, the Notifying Party submitted a qualitative price comparison of SIMO offers in January 2016 which would show that non-MNOs are cheaper than Three.

(604) Moreover, the Notifying Party submitted an econometric analysis of contract handset prices based on Pure Pricing weekly data during the period October 2014 to February 2016. According to the Notifying Party, that econometric analysis would show that:

(a) Three is not the most price aggressive player, but rather somewhat "middle of the road" on pricing – up to a couple of pounds per month less expensive on average than MNOs' direct distribution channel, but more expensive than non-MNOs and those same MNOs when distributing through Dixons;

(b) Over the last 18 months most retailers were cheaper than Three across the whole period (particularly non-MNOs and sales via the indirect channel) and other retailers were improving their price positioning relative to Three.

(605) In this respect, the Commission recalls that, as stated in recital (580), the pricing analysis undertaken in the Statement of Objections consisted of a qualitative comparison of tariffs from January 2014 to January 2016, using different sources of information: operators' replies to the Commission data requests (related to all distribution channels), Pure Pricing monthly reports (the same source of data used by the Notifying Party), third parties' submissions, as well as its own analysis of pricing displayed on operators' websites. The Commission has also specifically considered and acknowledged the pricing positioning (as well as limited ability to compete) of non-MNOs and indirect distributors in the Statement of Objections[551] and does so also in the pricing analysis carried out in this Decision. With respect to non-MNOs' competitive position pre-Transaction, see Section 8.2.1.3.b(i). With respect to the indirect distributors, their autonomous pricing and competitive position pre-Transaction, see Section 8.2.1.3.c(i).

(606) Furthermore, with respect to the Notifying Party's criticism that the Commission's analysis takes into account only a small sub-sample of arbitrarily chosen price points, the Commission notes that, when analysing handset contract pricing, the Commission's analysis was focused on Samsung and, in particular, Apple devices. Those appear to be the most representative handsets in the United Kingdom. Indeed, according to YouGov, since March 2013 Apple and Samsung devices account for over 60% of the smartphone ownership in the United Kingdom and this percentage is constantly increasing to the detriment of other smartphone brands. Since June 2014 Apple smartphones account for the majority of smartphone ownership with an average share of 36%.[552] This is confirmed by the Parties' internal documents, […][553] […], as Yougov statistics show that the percentage of Apple and Samsung device owners is increasing.

(607) The Commission considers that in any event the Notifying Party's qualitative comparison of SIMO presented in tables 14 and 15 of the Reply to the Statement of Objections, as well as the Notifying Party's econometric analysis of handset

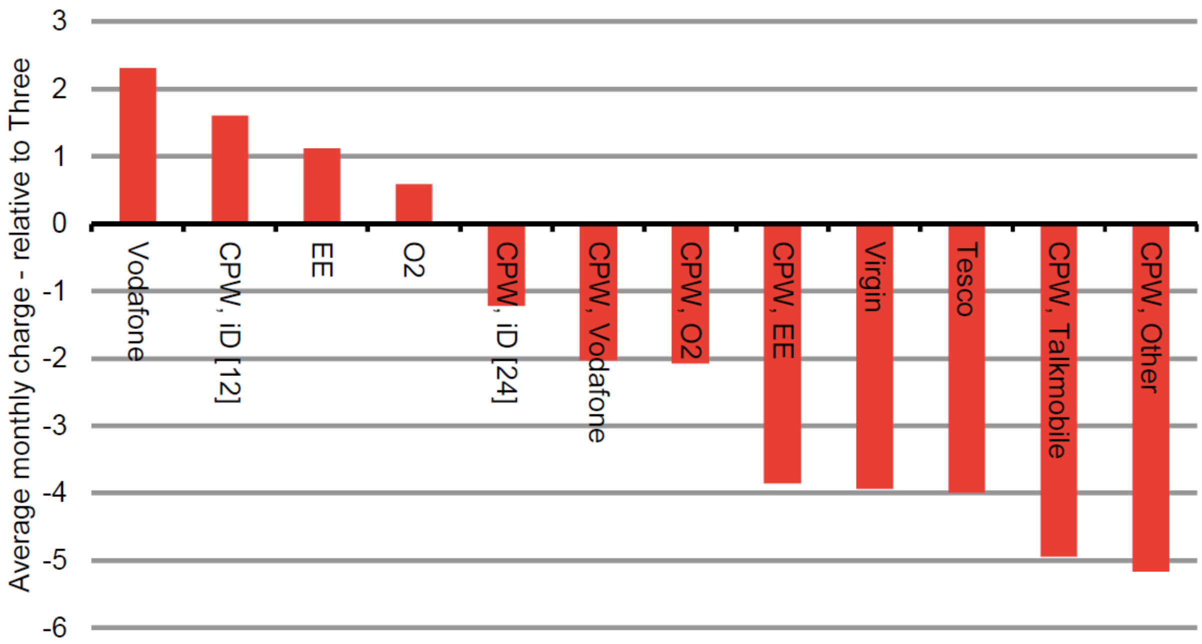
551 Statement of Objections, respectively paragraphs 468 and 651-721, for non-MNOs, and 730-746, for indirect distributors.

552 See Annex B3.5 to the Reply to the Statement of Objections, page 5.

553 Three's internal documents, [ID 027000033.00001], […].

contracts, by and large confirm the Commission's findings. Indeed, the Notifying Party's analysis shows that between October 2014 and February 2016 Three was consistently the cheapest MNO in the direct channel followed by O2. The Notifying Party's analysis also shows, in line with the Commission's findings, that only certain tariffs of Tesco Mobile and Virgin Media (which, however, does not offer 4G) were cheaper than Three.[554] Further, the fact that in the Notifying Party's regression analysis the prices of certain MNOs' and non-MNOs' tariffs are cheaper at Dixons than in the direct channel only confirms the Commission's findings about the important role played by Dixons as price discounter. The estimated average difference in average monthly charges across tariffs (conditional on data allowances, voice minute allowances, text allowances and device) resulting from the Notifying Party's regression analysis on prices of handset contracts are shown Figure 59.

Figure 59: Results of the Notifying Party's statistical analysis of 80 000 price points (October 2014-February 2016)



Source: Reply to the Statement of Objections, Figure 20.
Note: "Tesco" stands for "Tesco Mobile".

(608) Moreover, the Commission considers that the econometric analysis submitted by the Notifying Party presents several methodological limitations.

(609) First, the Notifying Party's econometric analysis presents issues of misspecification and multicolinnearity.[555] The Notifying Party's econometric analysis uses as variables of interest dummy variables representing the operators (that is to say the variables capturing the difference in prices across operators) and includes a high number of dummy variables to control for (i) the characteristics of the bundles (levels of data allowance, SMS allowance and minutes allowance), (ii) the device

554 The other two non-MNOs considered in the Notifying Party's comparison of SIMO tariffs in January 2016 are Talk Talk and BT Mobile. As further explained in recital (1071), Talk Talk's mobile subscriptions are available only to its fixed customers. With respect to BT Mobile, see recital (585) and (995).

555 Multicollinearity refers to two or more independent variables displaying a high degree of correlation, such that one can be approximated by a linear combination of the others. Effectively, this means that the two or more multicollinear variables capture parts of the same effect on the dependent variable.

sold with the tariff, and (iii) monthly unobservable factors (time fixed effects). While the Notifying Party explained that this allows for a flexible non-linear relationship between allowances and prices, the Notifying Party's fails to appreciate that some of the dummy variables used as control variables overlap to a great extent and even display a high degree of correlation with the dummy variables of interest representing the operators. Therefore, the price differences captured by the operator dummy variables are erroneously altered by the multicollinearity with other control variables. For example, the dummy variable indicating unlimited data allowance (that is, AYCE) is almost completely overlapping with the dummy variable of Three, as 99.5% of the tariffs with unlimited data allowance belong to Three. Also, the dummy variable indicating 5000 SMS allowance is highly correlated with the dummy variable of Tesco Mobile, as 80% of the tariffs with 5000 SMS allowance belong to Tesco Mobile and all Tesco Mobile's tariffs have 5000 SMS allowance.

(610) Misspecification and multicollinearity issues in the Notifying Party's econometric analysis also give rise to counterintuitive results. Figure 60 shows the Notifying Party's estimates of the average price difference between tariffs with different levels of data allowance compared to tariffs with an allowance of 100MB.[556] The figure shows a number of counterintuitive results. For example, according to the Notifying Party's analysis the unlimited data tariffs carry an average price premium (relative to a 100MB contract) much lower than other tariffs with significantly smaller data allowances. Tariffs with 50GB data allowance appear to carry the highest price premium of over 40GBP, almost three times higher than unlimited data tariffs and more than two times higher than tariffs with 30GB data allowance. Conversely, tariffs with 9GB and 11GB data allowances display a relatively low price premium compared to tariffs with relatively similar data allowances as 10GB and 12GB. The reason for these counterintuitive results is that, according the Notifying Party's data, some data allowances are offered by only one operator. For instance, as mention in recital (609), the vast majority of unlimited data tariffs are offered by Three. Likewise, tariffs with 50GB data allowance are offered only by EE through its direct sales channel, and tariffs with 30GB allowance are offered only by O2. This implies that in the Notifying Party's regression the estimated coefficients of the dummy variables for data allowances capture the price premium of the *combination* of data allowance and operator offering these tariffs. For instance, the dummy variable of 50GB data allowance captures the average price premium of EE's tariffs offering 50GB data allowance. Therefore, these control variables erroneously capture part of the effect that should be attributed to the price differentials across operators.[557]

(611) The Commission considers the Notifying Party's approach flawed and potentially misleading. In the Commission's view, a more appropriate approach to control for the tariffs' characteristics would be to include continuous variables representing data, SMS and minutes allowances. However, the Commission notes that even this alternative approach may still present issues for the identification of the effects of interest (see recital (619)).

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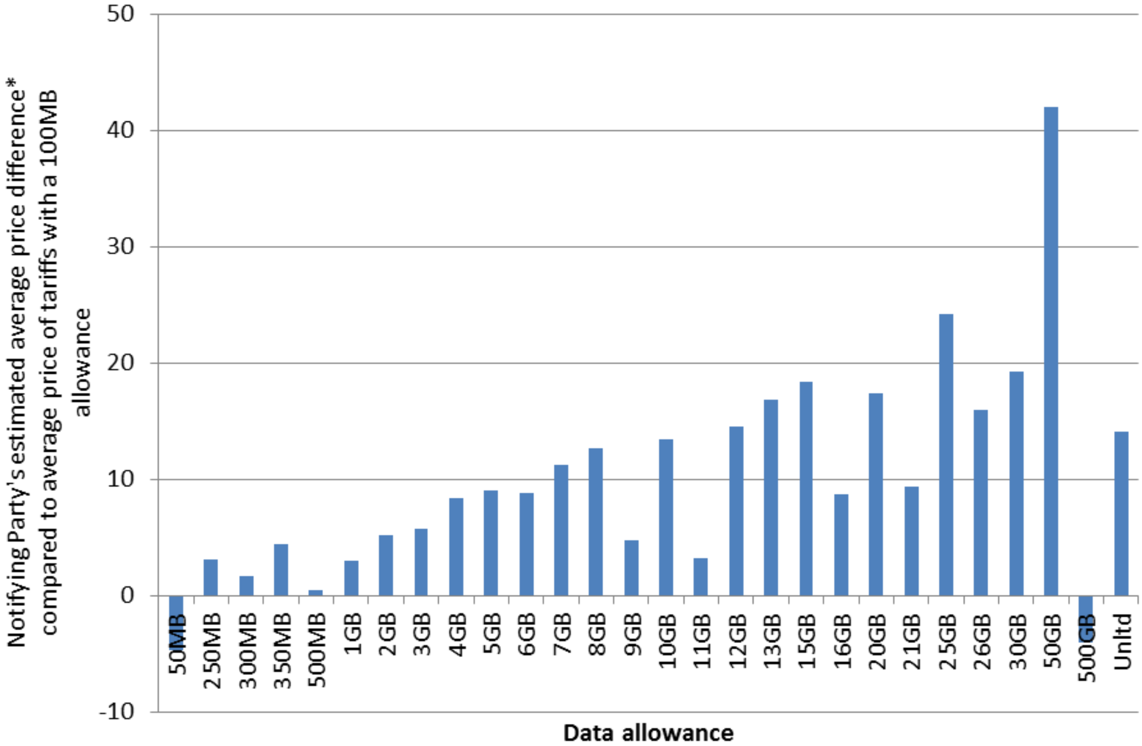
556 These are the estimated coefficients on the dummy variables controlling for different data allowances, having the dummy variable indicating 100MB allowance as base.

557 The Commission notes that the extent of this bias on the variables of interest will depend, all else being equal, on the number of observations used to estimate the coefficients of the dummy variables for data allowances. From an examination of the Notifying Party's data, it appears that the bias may be more severe for Three, as 22% of Three's tariffs include unlimited data allowances.

Figure 60: Data allowances' estimated price premiums



(612) Second, the analysis does not take into account differences in technologies offered in the market. Three has offered 4G as standard on all of its tariffs since lunch at the end of 2013, while other MNOs have pursued a premium price strategy for 4G services. Non-MNOs have either introduced 4G as standard at a later point in time or continue to offer 3G tariffs without access to 4G. By ignoring differences in technologies, the econometric analysis may overestimate the price of Three relative to non-MNOs because it fails to capture the fact that for a given data allowance the value offered by Three is higher than the value offered by a non-MNO offering 3G.[558] The data provided by the Notifying Party does not allow for this effect to be accounted for.

(613) Third, the data employed in the econometric analysis presented by the Notifying Party in relation to Virgin Media's tariffs is very limited (three weeks in January-February 2016). The Commission considers that for such a short time frame it is standard practice to exclude the corresponding observations from an econometric estimation. As such, the Notifying Party's finding that over the period October 2014-February 2016 Virgin Media is cheaper on average compared to Three is not substantiated by the evidence provided.

(614) Fourth, the analysis does not control for contract length. It is not clear from the Notifying Party whether the data submitted includes contracts of 12 months or 24 months. To the extent an MNO offers more 12-month contracts, which may arguably be more expensive, as a proportion of all tariffs it offers, that MNO would appear more expensive in the analysis.

558 A similar issue occurs to the extent that 3G tariffs for the other MNOs are included in the sample.

(615) Finally, the Notifying Party treats Vodafone's sub-brand Talk Mobile as a separate entity. In the Commission's view, the tariffs of Talk Mobile should be treated, instead, as Vodafone's tariffs.[559]

(616) The Commission has tested the sensitivity of the Notifying Party's analysis to corrections for some of the issues presented above. Specifically, the Commission (i) adopted a continuous measure to control for the data, SMS and minutes allowances,[560] (ii) excluded Virgin Media from the analysis, (iii) included the tariffs of Talk Mobile offered through indirect sales channel (CPW_Talkmobile) among the Vodafone's tariffs offered through indirect sales channel (CPW_Vodafone).[561,562]

(617) Figure 61 shows the results of the Notifying Party's econometric analysis as modified by the Commission. The figure displays the price differential of MNOs and some non-MNOs (Tesco Mobile and iD) through direct and indirect sales channels, relative to Three's prices through direct sales channel.[563] Overall, the results of the Notifying Party's econometric analysis, as modified by the Commission, confirm the conclusions of the Commission's qualitative price comparison presented in recital (602). Three appears to be the least expensive operator through the direct sales channel. The other MNOs appear to be less expensive than Three only through indirect sales channel. Regarding the non-MNOs, Tesco Mobile appears to be more expensive than Three, while the tariffs of iD through indirect sales channel (CPW_iD24) appear to be slightly cheaper.

559 The Commission further notes that the Notifying Party overlooked several information included in the variable "notes" of the dataset. Most notably, while several tariffs are attributed to the operator "CPW Other", the notes show that the majority of these tariffs belong to Talk Mobile, as well as T-Mobile and Orange (that is to say together EE).

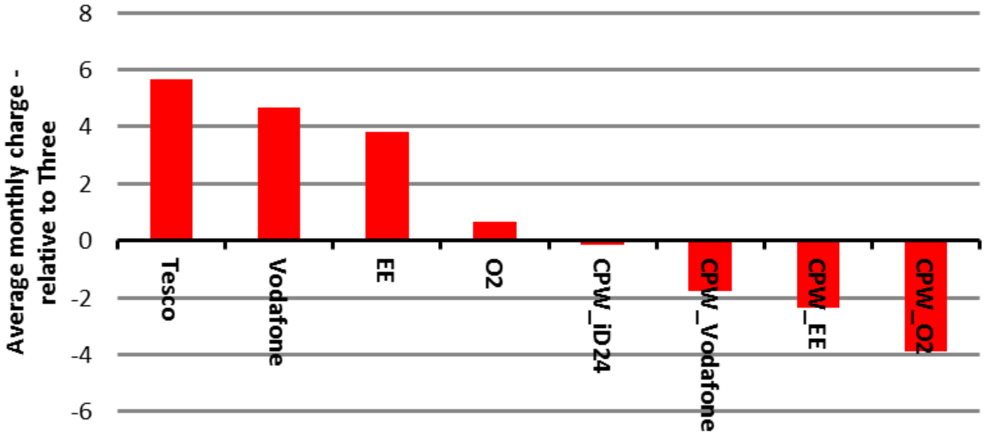
560 This required an assumption of the amount of data (in GB), SMS and minutes for the "unlimited" allowances. The Commission assumed an allowance of 1 million (GB of data, sms and minutes) for this category of allowances. Although different assumptions change the results of the analysis, in the Commission's view assuming 1 million for the unlimited allowances is reasonable and possibly conservative, as it appears unlikely that a customer may reach such amount of consumption in one month.

561 The Commission also excluded from the analysis other brands with a very limited number of observations. Specifically, it excluded "CPW Other" (which had only 32 observations after amending the data issue explained in footnote 559), and "CPW iD 12" (which had only nine observations).

562 CPW indicates the operator's tariffs offered through the indirect sales channel Dixons.

563 The results represent the coefficients to the operators' dummy variables in a regression including as control variables (i) the continuous variables representing tariffs' allowances of minutes, sms and data, and (ii) time and devices fixed effects.

Figure 61: Results of the Notifying Party's analysis as modified by the Commission – All tariffs



Note: "Tesco" stands for "Tesco Mobile".

(618) Despite the modifications, however, the Commission considers that significant limitations in the revised Notifying Party's econometric analysis still remain and may hinder the reliability of its results. In particular, some variables of interest are likely to be still affected by the multicollinearity issue and the model may still be misspecified.

(619) The Commission notes that even including continuous variables to control for the allowances does not completely solve the multicollinearity issue in the Notifying Party's econometric analysis. In particular, the continuous variable for the allowance of SMS appears to be still highly correlated with Tesco Mobile's and iD's dummy variables.[564] To show the effect of this, Figure 62 displays the results excluding the control variable representing the SMS allowances. Comparing Figure 61 and Figure 62 shows that, while the price differentials of the MNOs (in direct and indirect sales channels) change only slightly, the price differentials of Three and iD are significantly reduced. Although the overall conclusions do not change, as Three appears to be the least expensive operator through direct sales channel, the comparison shows that issues of multicollinearity may still be present in the model.

(620) In the case of the control variable representing SMS allowances, the Commission considers that such variable should be excluded from the regression as its inclusion raises issues of multicollinearity. However, the Commission notes that by excluding this control variable the issue of misspecification of the model may become more severe, as price premiums that should be attributed to different SMS allowances may be erroneously attributed to the operators' price differentials. Moreover, the Commission cannot exclude that other variables may still suffer from multicollinearity or that the model may still be misspecified.

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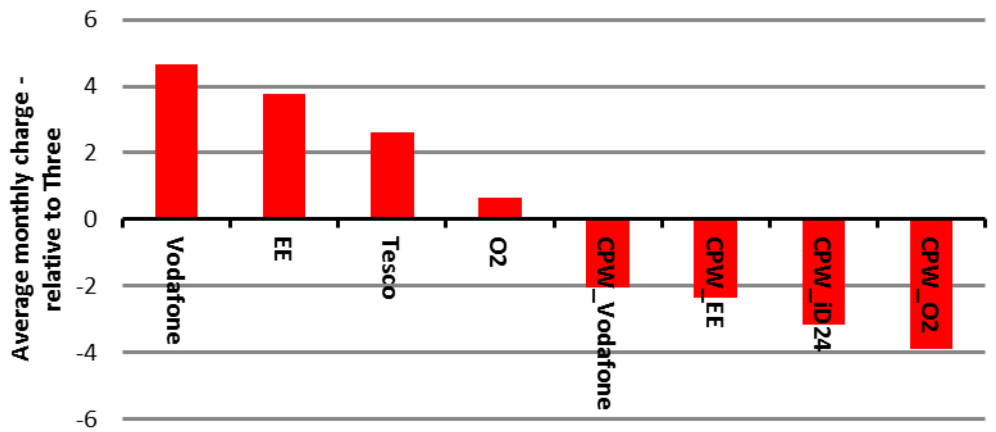
564 This is because the vast majority of the tariffs (99.8%) have either unlimited SMS allowance (92.5%), or 5000 SMS allowance (7.3%, of which 80% are Tesco Mobile's and 13.5% are iD's). As all Tesco Mobile tariffs have 5000 SMS, and 99.5% of iD's tariffs have 5000 SMS, even constructing a continuous variable representing the SMS allowance, such variable is subject to the same limitation mentioned in recital (609) for the dummy variables.

Figure 62: Results of the Notifying Party's analysis as modified by the Commission – All tariffs, excluding the control variable for SMS.

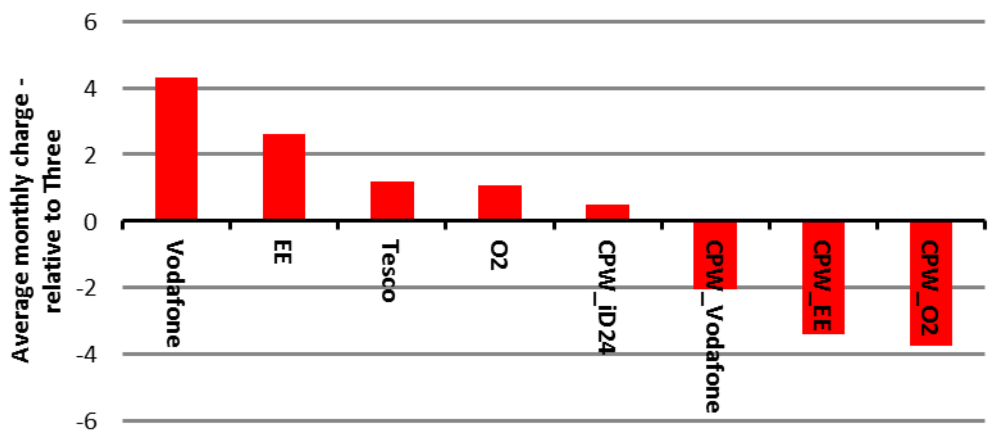


Note: "Tesco" stands for "Tesco Mobile".

(621) The Commission used the Notifying Party's econometric model as modified by the Commission also to investigate price differentials across operators for tariffs offering either iPhone or Samsung devices, the most widely spread devices in the United Kingdom, as explained in recital (606).[565]

(622) Figure 63 and Figure 64 display, respectively, the results of the analysis by restricting the sample to only tariffs with iPhone devices and to only tariffs with Samsung devices. In both scenarios Three remains the least expensive operator through direct sales channel, while Vodafone, O2 and EE appear to be less expensive than Three through indirect sales channels. Contrary to the scenario with all tariffs, iD appears to be slightly more expensive than Three for tariffs offering iPhone and Samsung devices. Tesco Mobile appears to be significantly more expensive than Three for tariffs offering Samsung devices.

Figure 63: Results of the Notifying Party's analysis as modified by the Commission – Only iPhone tariffs, excluding the control variable for SMS.



Note: "Tesco" stands for "Tesco Mobile".

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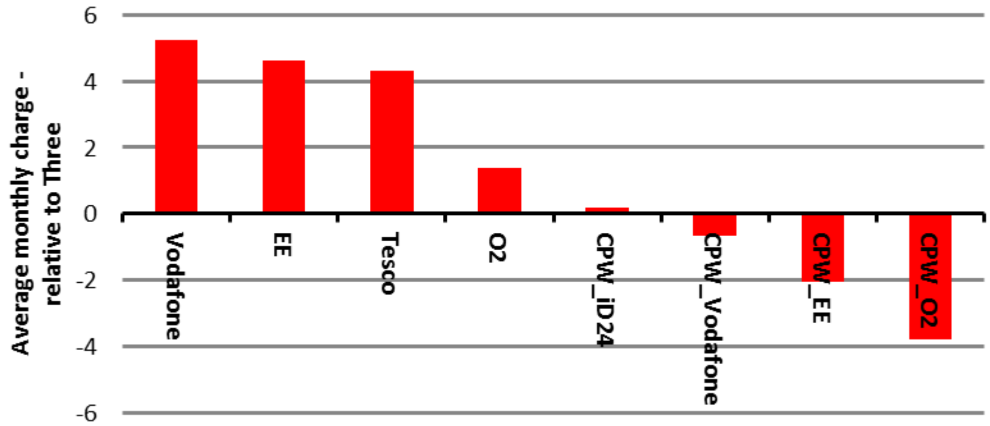
565 The two analyses exclude the control variable representing the SMS allowances.

Figure 64: Results of the Notifying Party's analysis as modified by the Commission – Only Samsung tariffs, excluding the control variable for SMS.



Note: "Tesco" stands for "Tesco Mobile".

(623) In conclusion, the results of the Notifying Party's econometric analysis as modified by the Commission support the Commission's findings gathered from the market investigation. Three appears to be the least expensive operator in the direct sales channels, and it appears that the indirect sales channel of Dixons appears to play an important role of discounter. The Commission, however, has concerns regarding the robustness of the econometric analysis and possible misspecification and multicollinearity issues, and considers that the interpretation of the results of the revised Notifying Party's econometric analysis, and their weight in the overall assessment of horizontal non-coordinated effects, should be limited.

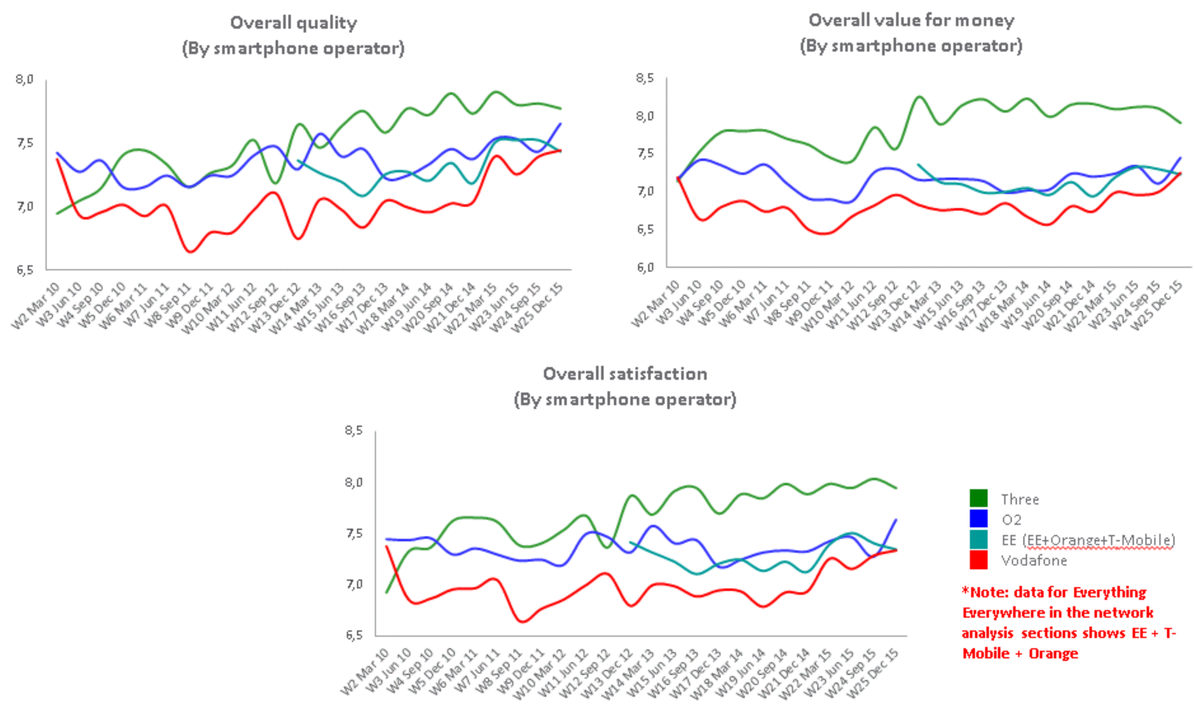
Other qualitative evidence on Three's pricing positioning

(624) On the basis of the pricing analysis performed in the subsection above, the Commission considers that pre-Transaction Three still competes very fiercely on price and exerts an important competitive pressure on the market on the basis of this parameter of competition.

(625) This finding is corroborated by independent third parties' surveys and the views of other market participants, as well as by the review of O2's internal documents.

(626) The latest third party independent survey submitted by the Notifying Party with the notification is YouGov's survey for Q1 of 2015. That survey shows that customers, and in particular smartphone users, have consistently rated Three as the best operator overall in terms of value for money since the second half of 2010, as well as in terms of overall satisfaction and quality as from late 2012 and early 2013 respectively, as shown in Figure 65 below.

Figure 65: MNOs rating in YouGov[566] surveys (Q4 2015)



Source : Annex B3.5 to the Reply to the Statement of Objections, page 37.

(627) Further, the majority of respondents to the market investigation stated that Three is very competitive today with respect to price and rated Three the highest in terms of competitiveness with respect to its current offering for private customers.[567]

(628) The majority of respondents also stated that, in the last two years, despite a certain price increase, Three's prices are still very competitive.[568] In this regard, […] considers that "*Three has been able to maintain its strong pricing proposition in the UK market in the past two years. Three remains the market leader on pricing*."[569]

(629) Finally, O2's internal documents, […],[570] […][571]

(630) […][572]

(631) […]*:*

- *[…]*
- *[…]*[573]

[566] See footnote 182.

[567] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 32 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 30. This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

[568] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 35 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 33. This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

[569] […].

[570] Reply to the Statement of Objections, paragraph 318.

[571] O2's internal documents, […] [ID 000048508.00001].

[572] O2's internal documents, […] [ID 000092534.00001].

(632) […].[574]

(633) […][575]

Figure 66: […]

[…]

Source: O2' internal documents, […] [ID000065478].

Three's […]

(634) With respect to the Notifying Party's assertion that […],[576] […][577] […].[578]

(635) Nonetheless, the Commission recalls that Three's subscriber base has been constantly growing before and after the […], as illustrated in recitals (476) and following, and so has done its market shares (see Figure 20).

(636) Further, the Commission notes that the history of the competitive behaviour of Three described in recitals (485) onwards, in particular the more recent history, shows that Three has been able to strongly influence the market even alongside the […]. Therefore that […] did not diminish Three's competitive significance. Those examples also show that Three's competitive significance on the market is clearly greater than its market share would suggest.

(637) Moreover, the Commission notes that, on the basis of the results of the Commission's investigation summarised in the preceding subsection, […]. This is evidenced by the pricing analysis undertaken in recitals (580) onwards. Other market participants, […], still see Three as very competitive in terms of price, […]. Likewise, […].

(638) Further, the Commission notes that, in the period between January 2014 (after the launch of 4G services by all MNOs) and June 2015, […]. This provides a further indication that Three's pricing position vis-à-vis its MNO competitors has not been affected by the […]. To this aim the Commission has […].

573 O2's internal documents, […] [ID 000003715.00001]. See also Annex 130 to the Form CO, […].

574 Annex 130 to the Form CO, […].

575 O2' internal documents, […] [ID000065478].

576 Internal documents cited in Form CO, Section 6, paragraph 328 and following.

577 O2's internal documents cited in Form CO, Section 6, paragraphs 902 to 903, and in the Reply to Article 6(1)(c) Decision, Section 2.1.3.

578 Three's internal documents, PurePricing's "UK mobile pricing developments Q2/2015" [ID 011800060.00001].

Figure 67: […]

	2014				2015		Change Q2 2015 over Q1 2015 (QoQ)		Change Q2 2015 over Q2 2014 (YoY)	
	Q1	Q2	Q3	Q4	Q1	Q2	GBP	%	GBP	%
O2										
*O2**	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
giffgaff	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
*Tesco Mobile**	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Three	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
EE	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Vodafone**	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]

Source: O2's internal documents, […] [ID000104341]
[…]

(639) Likewise, Three's ARPU […]

Figure 68: Three's ARPU

Year	ARPU (GBP)	Change compared to previous year (%)
2012	[…]	--
2013	[…]	[…]
2014	[…]	[…]

Source: Commission's compilation based on Annex 9 to the Form CO (subscribers and revenues data for the private segment).

(640) In addition, the review of Three's internal documents provides evidence that […].

(641) First, Three's internal documents show that […].[579] […].[580] […][581]

(642) [..]. In this regard, in an interview to the Financial Times in 2014, Three's CEO stated that "*We have gone from being subscale to being profitable with a positive free cash flow and the opportunity to keep that momentum going. There is a good level of confidence in the broader market in the UK. We are continuing to challenge the market, and that comes from our shareholder.*"[582]

579 See for example Three's internal documents, […].
580 Three's internal documents, […] [ID 012601633.00001].
581 Annex 7.048 to the Form CO, […].
582 Daniel Thomas, "Rule of Three comes good by playing the long game", Financial Times, 2 February 2014 [ID1860].

(643) […][583] […][584] […][585] […],[586] […][587]

(644) Second, Three's […][588]

(645) For example, […].[589]

(646) Similarly, with respect to the increased retail mark-up on new iPhones at launch since 2012 referred to by the Notifying Party in the Reply to the Statement of Objections, the Commission notes that in itself the evolution of such mark-up is not indicative of a diminishing pricing pressure by Three in the market, as that evolution is observed by comparing only Three's tariffs with respect to always newer and more expensive devices. Further, as illustrated in Figure 63, the regression analysis undertaken by the Commission shows that Three's prices for iPhone handset contracts are still among the cheapest in the market.

(647) Further, […].[590]

(648) The observations taken from Three's internal documents are therefore in line with the results of the pricing analysis of the Commission's in terms of Three's pricing position.

(649) Third, Three's […].[591]

(650) Fourth, Three's […].[592]

(651) Finally, with respect to the Notifying Party's claim that […].

Figure 69: […]

[…]

Source: Three's internal documents, […] [ID 001310584.00001].

(652) The Commission also notes that Yougov reports a decline in the number of Three's customer likely to churn, as shown in the Figure 82 below.

Positioning with respect to network related competition

(653) The roll out of Three's network has benefitted from reliance on the MBNL network sharing agreement with EE. The participation in MBNL has allowed Three to swiftly roll-out and to maintain a competitive nationwide 3G network. According to a

583 Three's internal documents, […].
584 Three's internal documents, […].
585 Three's internal documents, […].
586 See above Figure 55.
587 Three's internal documents, […]. See also Three's internal documents, […] [ID 005701222.00001].
588 Annex 7.048 to the Form CO, […].
589 Annex 7.194 to the Form CO, […].
590 Three's internal documents, […] [ID 000602129.00001]. See also, […], Three's internal documents, […] [ID 000602129.00001]; […] (submitted as Annex B3.7 to the Reply to the Statement of Objections), […].
591 For example see Three's internal documents, […] [ID 024100472.0000]; […] [ID 005700608.00001]; […] [ID005700999.00001]; […] [ID 005701222.00001].
592 For example Three's internal documents, […] [ID 024100472.0000]; […] [ID 005700608.00001]; […] [ID 005701225.00001]; […], Annex 194 to the Form CO; […] [ID 005701222.00001]; […] [ID 027500860.00001]; […] [ID 002100233.00001]; […], [ID 000602129.00001]; […], Annex B3.7 to the Reply to the Statement of Objections.

submission of Three in a previous merger proceeding in 2010, the MBNL network allows Three to […].[593]

(654) Within this context, the quality of Three's network has significantly improved since its launch and Three is currently providing a competitive offer also against network performance related parameters of competition.

(655) In more detail, since its launch, Three has improved its network coverage, speed and reliability, by […].

Figure 70: […]

[…]

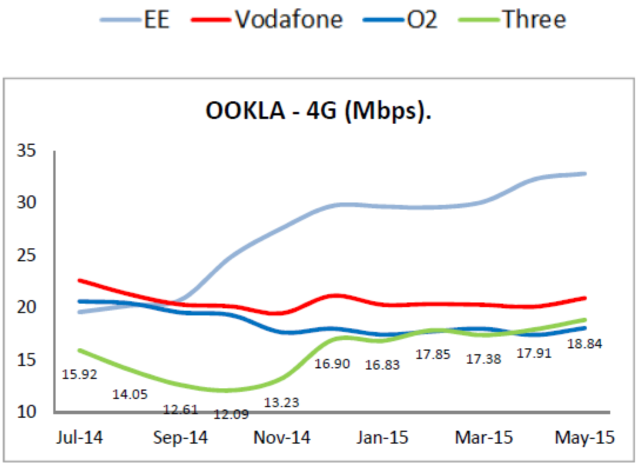
Source: Annex 186 to the Form CO, page 8.

Figure 71: […]

[…]

Source: Annex 186 to the Form CO, page 11.

Figure 72: Evolutions of Three's 4G downlink speed (July 2014-May 2015)



Source: Annex 156 to the Form CO, page 2.

(656) Three's data services have higher geographic coverage than those of O2 or Vodafone[594] and the time taken to load a web page, as well as latency,[595] were found by Ofcom to be the best among the MNOs.[596]

(657) The improvements of Three's network quality are illustrated by its rating in terms of network reliability. Network reliability is measured by independent third party surveys, such as those carried out by YouGov, as well as by specialized, independent network performance firms such as Rootmetrics.

593 Annex 54.2 to response to RFI 81, […].

594 Ofcom, Connected Nations Report 2015, Figure 21, available at: http://stakeholders.ofcom.org.uk/binaries/research/infrastructure/2015/downloads/connected_nations2015.pdf (provided with the access to file on 4 February 2016).

595 The responsiveness of the network, measured by recording the time it takes for a small piece of data to travel to one point and return a response to the user's device.

596 Ofcom, Measuring mobile broadband performance in the UK: 4G and 3G network performance, November 2014, available at: http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/mbb-nov14.pdf (provided with the access to file on 4 February 2016).

(658) YouGov surveys rate smartphone customers' satisfaction across a number of measures related to mobile internet services, such as overall network reliability, network coverage, download speeds, etc.

(659) Three's network has consistently been ranked number one for network reliability in YogGov's surveys throughout 2013, 2014 and 2015 as shown in Figure 73 below:

Figure 73: Three's ranking in YouGov surveys from Q1 2013 to Q2 2015

Customer KPI

Customer KPI: Customer Feedback.

	2013				2014				2015	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
SMIX	1st	2nd	1st	1st	1st	1st	1st	1st	1st	1st
iPhone	1st		1st		1st	1st	1st	1st	1st	1st
Tablet	1st	1st	1st	1st	1st	1st	1st	1st	2nd	1st
MBB	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st

Three rated The Most Reliable Network by consumers for the 4th Quarter in a row.

YouGov
What the world thinks

Customer experience feedback continues to be better than competition; Recovered leadership for Tablets

Source: Three's internal documents, […].

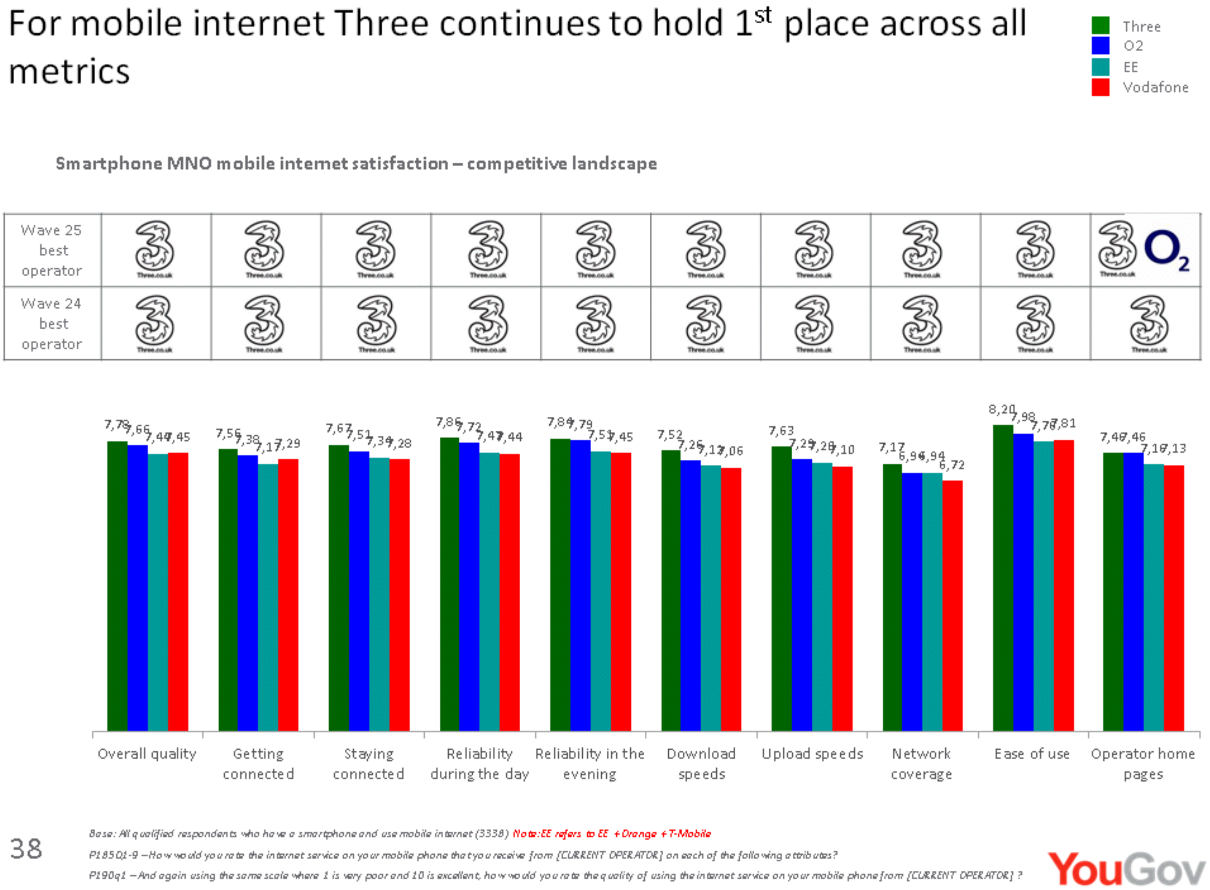
(660) Three was again rated number one network for iPhone according to iPhone owners surveyed by YouGov also in Q3 (September 2015 survey)[597] and Q4 2015 (dated December 2015).

(661) Yougov's survey dated December 2015 is the latest available in the Commission's file. The survey rates Three as leader for mobile internet, followed by O2 and

597 On its website Three reported the results from YouGov's September 2015 surveys: "*For Apple lovers on Three, the news won't come as a surprise. Once again Three came out on top, leading the league table by some distance. Across the board, Three was judged best-in-class in 12 out of 18 categories. When it came to data, we led in ten of ten measures. The survey revealed Three is particularly strong in download speeds, network coverage for data and reliability during the day and night for data. In the voice category, we scored the highest satisfaction levels across seven of eight measures including, ability to make calls or send texts outdoors and call quality. YouGov surveyed 1,691 iPhone owners. This survey was conducted between 4th and 10th of September and is the twenty-fourth wave of a larger independent study, which is conducted quarterly. Interviews were carried out online by YouGov panellists. Three is the highest rated MNO. Mobile Virtual Network Operators (MVNOs) were excluded from the analysis,"* see Ofcom, Phase 2 submission to the European Commission, "Ofcom comments on the effects of the Three/O2 merger on prices", Annex 1.36, page 19, [ID3703].

outperforming EE and Vodafone in all the metrics considered in the survey as shown in the below Figure 74.

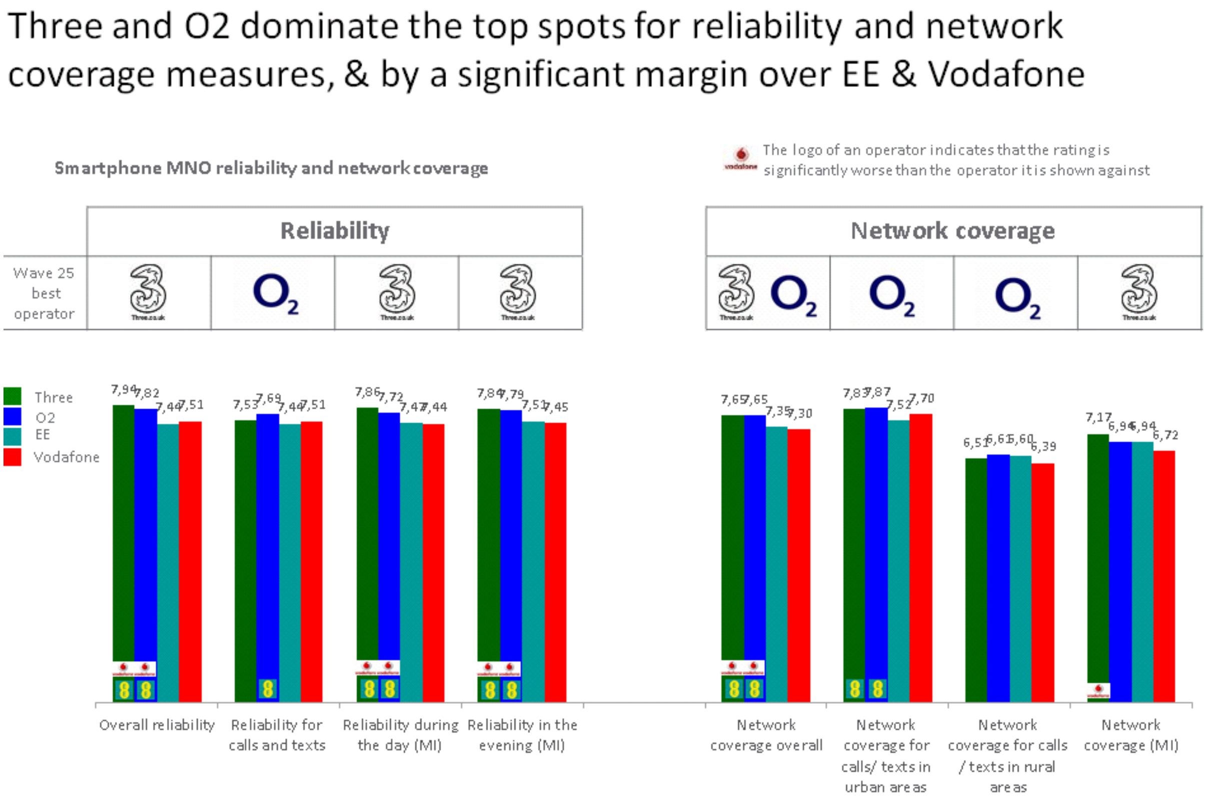
Figure 74: Smartphone MNO mobile internet satisfaction (September 2015 compared to December 2015)



Source: Annex B3.5 to the Reply to the Statement of Objections, page 38.

(662) Likewise, according to YouGov, Three is the most reliable network overall, as well as for mobile internet, and *"Three and O2 dominate the top spots"* for network coverage overall in customer perception, as shown in the below Figure 75.

Figure 75: Overall network satisfaction – voice, text and data (September 2015 compared to December 2015)



Source: Annex B3.5 to the Reply to the Statement of Objections, page 49.

(663) Rootmetrics publishes biannual reports on the reliability, call and text performance and data speed of the four MNOs in the United Kingdom. Rootmetrics tests are performed at randomly chosen sites to avoid collection bias and focus on real world situations and cover mobile internet, voice calls and texting. The results are comprised in one single index for reliability and speed. Testing looks at performance across the breadth of the United Kingdom itself, in each of the four nations, and within the 16 most populous metro areas in the United Kingdom.[598]

(664) Three has constantly been rated high in Rootmetrics' surveys on network reliability, at the first or the second place after EE, both in 2014 and 2015. According to the latest results published on 10 February 2016 (the "2016 Rootmetrics Report"), operators have continued to expand their 4G coverage and deliver improved reliability and speed. Moreover, Three has been awarded the most reliable network: Three's customers get connected and stay connected in 97% of cases.[599]

(665) With respect to the Notifying Party's claim that the 2016 Rootmetrics Report cannot be used to demonstrate that Three exerts an important competitive constraints on the market because it has scored highly in only one of six categories,[600] the Commission notes that the overall results of Three in the Rootmetrics report, the Commission notes that Three has obtained high scores in much more categories of the 2016 Rootmetrics Report than the Notifying Party suggests. Indeed, the "*second-highest*

598 http://www.rootmetrics.com/uk/methodology (provided with the access to file on 4 February 2016).

599 Report available at http://rootmetrics.com/uk/blog/special-reports/2015-2h-national-uk (provided with the Letter of Facts of 17 March 2016).

600 Reply to the Letter of Facts of 17 March 2016, paragraphs 32 to 35.

award total was earned by Three, which won or shared seven nation-level RootScore Awards," with Three outperforming EE in network reliability not only at United Kingdom level, but also in England, Scotland and Wales and sharing the first place with EE in Northern Ireland. Further, Three was awarded with three others national first places and 28 first places for metro areas. In addition, Three was awarded second-place finishes in three categories at United Kingdom level, including overall performance, mobile internet performance and call performance, as well as several other categories at nation and metro areas. Finally, according to the 2016 Rootmetrics Report Three had faster download speeds in the second half of 2015 compared to the first half of the same year.[601]

(666) Three increasingly markets its offering on the basis of network performance, claiming that it has the most reliable network in the United Kingdom citing the above mentioned surveys.[602]

(667) Not only third party analyst surveys report Three's high network quality, […]

Figure 76: […]

[…]

Source: Three's internal documents, […]

(668) It is worth noting that Three has outperformed its rivals in 2014 and 2015 in relation to both 3G and 4G network performance, despite owning the least amount of spectrum and the lowest amount of sites. As a result of its market strategy to attract data-hungry customers and its investments in the latest mobile data technology, Three's network carries the highest amount of traffic among the four MNOs and does that by achieving outstanding performance and ensuring a very reliable experience and a consistent quality of service. The Commission has calculated the network efficiency (in bits/Hz) of all MNOs in the United Kingdom and finds that Three has the highest network efficiency of all of them, meaning that Three is able to carry the highest amount of data per MHz than any other operator.[603] In particular, in Annex

601 See footnote 599.

602 See http://www.three.co.uk/discover/Awards/YouGov_most_reliable_network and http://www.three.co.uk/Discover/Awards/RootMetrics_RootScore (provided with the access to file on 4 February 2016). For example, with respect to YouGov's December 2015 survey, Three's website reads: "*We're still rated the best network for mobile internet, according to iPhone owners surveyed by YouGov in December 2015. For Apple lovers on Three, the news won't come as a surprise. Once again Three came out on top, leading the league table by some distance. Across the board, Three was judged best-in-class in 7 out of 10 mobile internet categories. The survey revealed Three is particularly strong in download speeds, network coverage for data and reliability during the day for data. In the voice category, we scored the highest satisfaction levels across seven of eight measures including, ability to make calls or send texts outdoors and call quality. YouGov surveyed 1,656 iPhone owners. This survey was conducted between 8th and 14th of December 2015 and is the twenty-fifth wave of a larger independent study, which is conducted quarterly. Interviews were carried out online by YouGov panellists. Three is the highest rated MNO. Mobile Virtual Network Operators (MVNOs) were excluded from the analysis*," see http://www.three.co.uk/Discover/Awards/iPhone_users_rate_us_top_for_mobile_internet_speeds (provided with the access to file on 4 February 2016).

603 Three carries [40-50]% of all data and it has 12% of the total spectrum traffic in the United Kindom, see Section 1.2.5.2a of Annex C.

C, the Commission shows that Three's network efficiency is […] that of O2.[604] […].[605]

(669) More details on Three's performance are provided in Section 1 of Annex C, which forms an integral part of this Decision.

(670) On the basis of the above, the Commission considers that pre-Transaction Three competes very fiercely on network quality and exerts important competitive pressure on the market on the basis of this parameter of competition.

Positioning with respect to other parameters of competition

(671) With respect to customer service, Three offers a call centre from 9 am to 6 pm as well as assistance through a retail outlet network of over 330 shops.

(672) Three has improved considerably since its launch and […].

Figure 77: […]

[…]

Source: Three's internal documents, […] [ID 026600033].

(673) The quality of Three's customer service, both online and in physical stores, is evidenced by the awards given to Three by several third party surveys such as those showed in Figure 78 below.

Figure 78: Service Awards recognised to Three

Source: Three's internal documents, […] [ID 026600033]

(674) Moreover, the constant improvement of Three's customer service is demonstrated by the decreasing number of complaints lodged with Ofcom by customers, which resulted in Three's moving from most to least complained about operator in the United Kingdom in Ofcom's analysis from 2012 to 2014.[606] The latest report on the volumes of consumer complaints made against mobile operators published by Ofcom

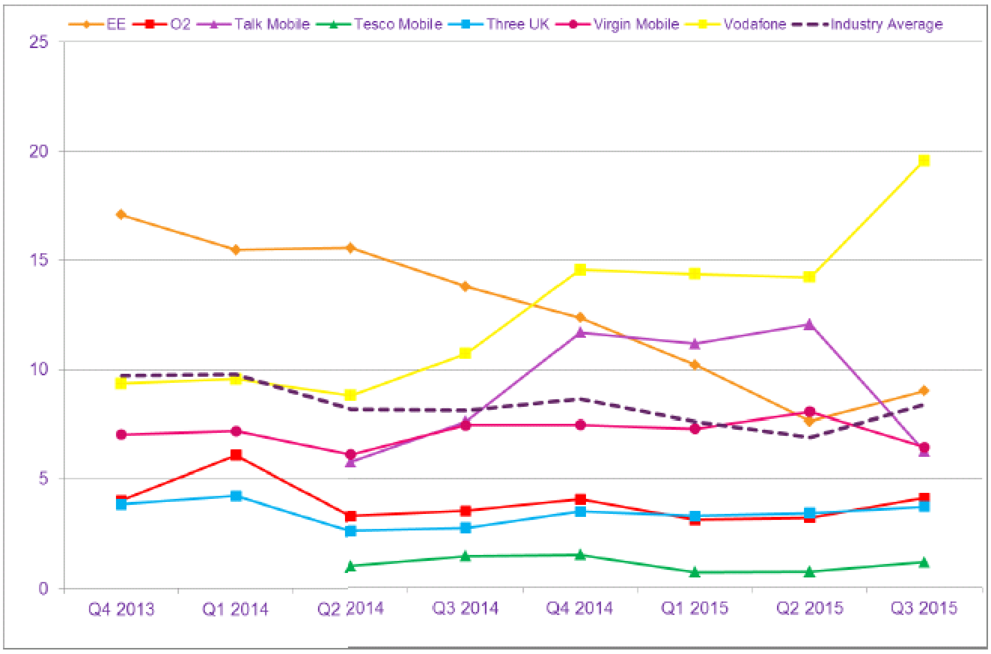
604 […] Annex C.

605 Three's internal documents, […] [ID009700719.00001].

606 Three's internal documents, […] [ID 026600033].

in December 2015 still shows that Three has the lowest number of complaints among MNOs and non-MNOs considered, beaten only by Tesco Mobile and closely followed by O2, as shown in the below Figure 79.

Figure 79: Complaints per 100,000 postpaid mobile customers/connections from Q4 2013 to Q3 2015



Note: Industry average is limited to those providers included in the report
Source: Ofcom, CCT data

Source: Ofcom, Telecoms and Pay TV Complaints. Q3 (July to September) 2015, 15 December 2015, Figure 7[607]

(675) Finally, the commitment of Three in improving the quality of its customer service is demonstrated by the constant improvement of its net promoter score in customer satisfaction since 2012, both in […] and in the survey of independent third parties, such as YouGov. The latter, presented in the below Figure 80(b), shows that Three's customer service is improving, against a negative trend of the industry average.

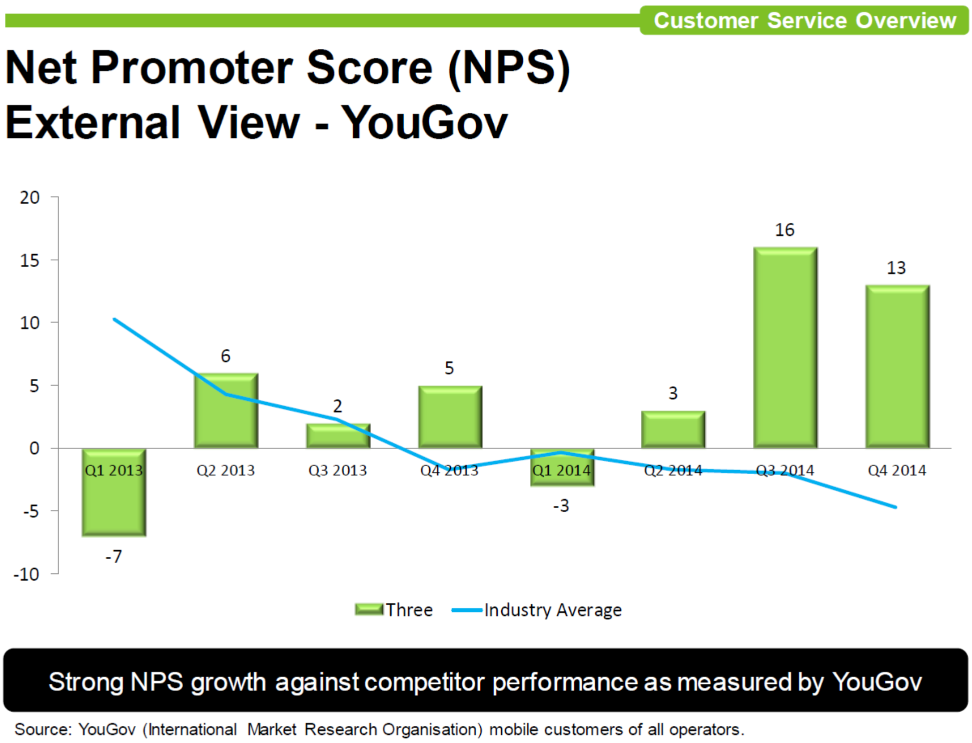
[607] Available at http://stakeholders.ofcom.org.uk/binaries/research/telecoms-research/complaints/Q3_2015.pdf [ID6163].

Figure 80: Three's net promoter score on customer service

(a) […]

[…]

(b) YouGov survey results on customer service – net promoter score from Q1 2013 to Q4 2014

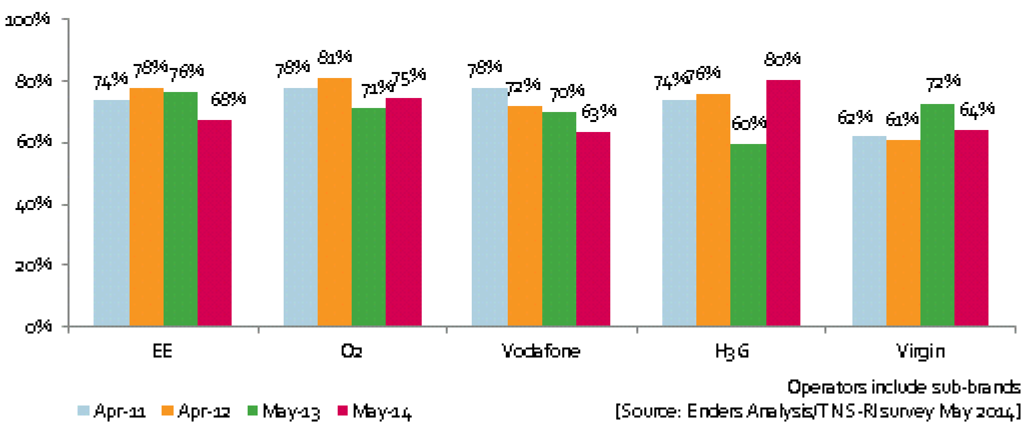


Source: Three's internal documents, […] [ID 026600033]

(676) With respect to brand competition, the Commission notes that the Notifying Party […].

(677) In this regard, Enders Analysis considers the steady improvement of Three's customer base loyalty "dramatic". Indeed, as shown in the below Figure 81, while in May 2013 the percentage of surveyed customers of Three expected to keep the operator was the lowest in the market at 60%, in May 2014 it jumped ahead of all operators and increased up to 80%.

Figure 81: Current owners expecting to keep the same operator

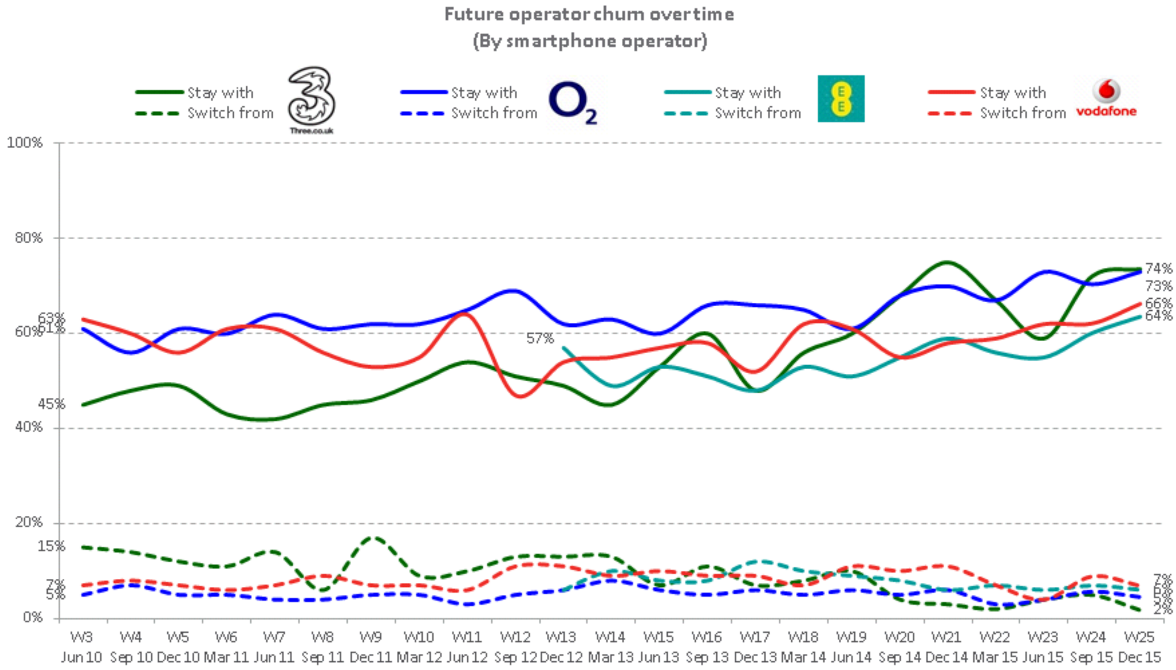


Source: Annex 100 to the Form CO, page 10.

(678) Likewise, Yougov reports a constant increase in Three's customer base loyalty, which in the latest survey available in the Commission's file is the least likely to

churn, closely followed by O2, the historical leader in this regard. The increase in customer loyalty is also demonstrated by the decline in customers likely to churn, as shown in Figure 82 below:

Figure 82: Operator churn over time according to YouGov surveys



Source: Annex B3.5 to the Reply to the Statement of Objections, page 59.

(679) Three has launched very successful advertising campaigns, such as the "Dance Pony Dance," whose success has been recognised in […][608] and in the press.[609] Moreover, it has recently […].[610]

(680) On the basis of the above, the Commission considers that pre-Transaction Three competes very fiercely on customer service and is improving its brand image and it therefore exerts an important competitive pressure on the market on the basis of these parameters of competition.

Conclusion on competitive constraint exerted by Three pre-Transaction

(681) In light of the above, the Commission concludes that pre-Transaction Three constitutes an important competitive force in the market for retail mobile telecommunications services in the United Kingdom pursuant to paragraph 37 of the Horizontal Merger Guidelines, or in any event it exerts an important competitive constraint on that market.

608 For example, […].

609 See for example http://www.express.co.uk/news/weird/381775/Dance-Pony-Dance-goes-viral-as-moonwalking-horse-gets-over-a-million-YouTube-hits (provided with the access to file on 4 February 2016). http://www.express.co.uk/news/weird/445884/Three-brings-back-dancing-Shetland-pony-for-Christmas-TV-advert-Watch-video-now (provided with the access to file on 4 February 2016). http://www.mirror.co.uk/news/weird-news/moonwalking-pony-three-ad-owner-1744776 (provided with the access to file on 4 February 2016).

610 Annex 7.186 of the Form CO, page 19.

ii. Likely competitive constraint to be exerted by Three absent the Transaction

<u>Notifying Party's view</u>

(682) As mentioned in recital (470), the Notifying Party argues that Three's business model has undergone a significant transformation since its launch in 2003. The Notifying Party claims that Three is sub-scale and that it will not be able to grow organically.

(683) Moreover, the Notifying Party argues that Three faces […]capacity and speed constraints which put it at a competitive disadvantage relative to its larger rivals and that its ability to address these constraints in the future […]. As a result, Three's ability to compete would be seriously undermined absent the Transaction. More details on the Notifying Party's claims in this regard are provided in Section 1 of Annex C, which forms an integral part of this Decision.

<u>Commission's assessment</u>

(684) Under paragraph 8 of the Horizontal Merger Guidelines, the assessment of the competitive effects of a merger is undertaken by comparing the competitive conditions that would result from the notified merger with the conditions that would have prevailed without the merger. According to the same paragraph, in most cases the competitive conditions existing at the time of the merger constitute the relevant comparison for evaluating the effects of a merger. Nonetheless, in some circumstances, the Commission may take into account future changes to the market when such changes can reasonably be predicted. The Horizontal Merger Guidelines mention as example of those changes the likely entry or exit of firms absent the merger.

(685) Within this framework, the Commission has investigated whether the competitive constraint currently exerted by Three in the retail market for mobile telecommunications services in the United Kingdom, illustrated in Section 8.2.1.2.b(i) of this Decision, is viable and therefore constitute the relevant comparison for the assessment of the Transaction.

(686) The Commission's assessment is set out in the following recitals. To perform this assessment the Commission has in particular assessed Three's financial position and network assets: its findings in this regards are set out in recitals (763) and following.

General assessment

(687) In the market investigation the Commission asked MNOs and non-MNOs to assess how the competitive position of Three will evolve, with respect to the several competitive parameters[611] in the next two to three years absent the Transaction in the retail market for mobile telecommunications services to residential customers in the United Kingdom.

(688) As mentioned above in Section 6.6.2., price currently is, and is likely to remain, the main parameter of competition, followed by network reliability and coverage, customer services as well as brand/reputation. The majority of respondents to the

611 That is to say, in particular: a) Price; b) Network reliability: c) Network coverage; d) Network capacity; e) Average download speed; f) Peak download speed; g) Customer service; h) Brand; i) Handset subsidy; j) Alternative financing schemes for handsets; k) Product innovation (e.g. additional services, innovative tariffs, technology upgrades); l) Distribution.

market investigation expect Three to continue being competitive with respect to all these parameters.[612]

(689) In more detail, as regards price, […] states that Three "*will carry on competing strongly on price and value for money*".[613] Likewise, […] expects Three to "*remain as competitive in terms of price*".[614] According to […] "*Three will continue to demonstrate price leadership across all segments*".[615]

(690) With respect to network reliability and coverage, a majority of respondents expect Three's network to improve in the near future.[616] In this context, […] believes that Three "*is likely to continue to invest in its network capacity, speeds, coverage and reliability over the next two to three years in order to protect its market share and maintain customer satisfaction*" as shown in Three's recent robust investment in the 4G network.[617] […] expects Three's network reliability "*to continue to improve* as *a key area of focus for Three*", and likewise "*Three will look to improve its network coverage*".[618] Finally, […] also expects "*improved network reliability performance over time due to increases in the amount of LTE-enabled spectrum that it [Three] has deployed".*[619]

(691) Moreover, the majority of respondents to the market investigation do not expect Three's resources to be insufficient for it to roll-out a 4G network absent the Transaction.[620] In particular, […] does not consider that it is credible that Three is currently capacity constrained, or would absent the Transaction become capacity constrained in the foreseeable future in such a way that could reduce the strength of its competitive constraint in the retail mobile market.[621]

(692) More details on Three's ability to compete with respect to network performance are provided in recitals (764) and following below.

(693) With respect to customer service, respondents expect no material change in the competitive position of Three.[622] In this respect, […] reckons that "*Three's customer service will continue to improve over time, reflecting the emphasis placed by its*

612 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 36 a), b), c), g) and h), and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 34 a, b), c), g) and h). This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

613 […].

614 […].

615 […].

616 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 36 b) and c), and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 34 b) and c). This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

617 […].

618 […].

619 […].

620 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 63 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 59. This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

621 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 63.

622 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 36 (f) and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 34 f). This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

management on this area".[623] The majority of non-MNOs also forecast that the customer service of Three will remain at the current level or even improve.[624]

(694) In this regard the Commission notes that Three's standalone business plan, […].[625] […].[626]

(695) Last, with respect to brand, respondents to the market investigation expect Three's brand to improve in the next two to three years.[627] […] expects it to "*increase over time, driven by network performance and service improvements*".[628] […] highlights that Three "*has improved its customer loyalty*" and refers to an Enders analysis[629] according to which Three has the highest customer loyalty share.[630] […] adds that probably "*Three will continue to reposition its brand to be more customer-focused*".[631]

(696) This is consistent with […]:

- *[…]*
- *[…]*
- *[…]*
- *[…]*[632]

(697) […][633]

(698) The Commission also asked MNOs and non-MNOs to assess whether Three's current lack of ability to provide fixed telecommunication services (e.g. fixed broadband, fixed telephony) and/or TV services will affect its competitiveness in the next two to three years absent the Transaction.[634] In line with the limited importance of the ability to provide fixed-mobile bundles as parameter of competition (see Section 6.6.2.), the majority of respondents to the market investigation do not expect Three's competitive position to deteriorate in the near future as a result of its strategy to be a "mobile only player".[635]

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623 […].

624 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 34 g). This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

625 Annex 7.186 to the Form CO, pages 24 to 26. In this regard see also Section 8.2.2.2.b(ii).

626 In the Reply to the Statement of Objections, paragraphs 476 and 477, the Notifying Party claims that, to […]. However, the Commission notes that […].

627 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 36 (h) and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 34 h). This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

628 […].

629 Source: Enders Analysis, "UK mobile user survey 2014", p 10.

630 […].

631 […].

632 Annex 7.186 to the Form CO, page 17

633 O2's internal documents, […] [ID 000065627].

634 One of the two aspects of convergence, see recital (63).

635 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 37, and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 35. This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

(699) Furthermore, as shown in Section 6.3, the Commission considers that it is unlikely that fixed-mobile bundles will significantly pick-up in the next two-three years.

(700) In this respect […] "*does not expect there to be a significant uptake of fixed-mobile bundles in the next two to three year.*"[636] […] does not see any reason as to why Three (or O2) would be at a material competitive disadvantage without a fixed broadband/telephony or TV product offering.[637] In the same vein, […] points out that consumers *"will not necessarily demonstrate brand loyalty to fixed line operators".*[638] Although […] considers that the ability to offer fixed-mobile bundles will grow in importance over time, it does not presume that *"Three's competitiveness will be affected across the market as a whole, nor that it will become an ineffective competitive constraint due to the increasing importance of fixed-mobile bundles*".[639]

(701) In the same vein, Ofcom considers that "*bundling is unlikely to present a material risk to the viability of a standalone O2 or Three. We are of this view for the following reasons:*

- *Current levels of bundling including mobile are low;*
- *It is unclear whether there will be substantial future growth in demand for bundles in the UK; and*
- *Even if there is strong future demand for bundles, […O2 and] Three would have available strategies to protect their viability without the merger."*

(702) Ofcom expects that "*the pricing of the components of bundled services, when offered outside fixed/mobile bundles, will constrain the pricing of bundles*" and therefore Three (and O2) are not likely "*to be at a significant disadvantage to those providers offering bundles*." Indeed, according to Ofcom, even if fixed/mobile bundles were to become more important in the United kingdom, a " mobile only" strategy is likely to remain viable in the United Kingdom, as "*there may still be enough consumers willing to buy components separately/unpick the bundle for Three and O2 to be viable as standalone mobile operators*" or Three (and O2) could promote MVNO agreements with existing fixed operators.[640]

(703) The viability of Three's business model in the United Kingdom even in case of increased fixed-mobile bundles is assessed in O2's internal documents. […][641]

(704) In addition, the fact that fixed-mobile bundles does not constitute a threat for Three's business model is clear from […],[642] as well as from [..] public statement […] of David Dyson, CEO of Three.[643]

(705) Furthermore, the results of the market investigation show that, should the ability to provide fixed-mobile bundles become more important and convergence pick-up in the United Kingdom, entry with such a bundled offer could be done relatively

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636 […].

637 […].

638 […].

639 […].

640 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, Confidential version for Hutchison 3G UK Limited, 5 October 2015, paragraphs 9.121 to 9.134 [ID2069].

641 Annex 120 to Form CO, page 35.

642 Annex 7.186 to the Form CO, page 5.

643 See above Section 6.3, for example, […], Three's internal documents, […] [ID 013403004].

quickly. Indeed, the majority of respondents to the market investigation indicated that a company which currently does not offer any combination of mobile telecommunications services with one or more fixed telecommunications services, could do so in the next two years.[644] In this respect […] points out that, "*should Three decide that it does wish to commence providing fixed services to its customers, […] the barriers to so doing (e.g. using a wholesale model such as is currently used by […]) are low*".[645] Furthermore, the technical feasibility of this option was confirmed by [..].[646] […].[647] In relation to this latter argument, the Commission considers first that Three could acquire bitstream access[648] in order to be able to competitively offer broadband services together with mobile services in a bundle. Moreover, some of the Parties' internal documents indicate that […].[649]

(706) Furthermore, with respect to technology convergence,[650] as explained in recital (66), both fixed and mobile players use Wi-Fi to offload a very similar proportion of their traffic onto fixed networks via Wi-Fi. Three itself […].[651] These are the main methods that both converged players and mobile only players employ in order to offload traffic and improve quality of service at the current level of technological development (4G roll out). Therefore also in respect to this aspect of convergence, the Commission considers that Three's ability to compete is not likely to deteriorate in the next two to three years.

(707) Finally, the Commission notes that in 2014 the CEO of Three made a public statement[652] where he ruled out a bid for O2 in the United Kingdom and justified it on the basis of the scale and viability of Three's business going-forward on a stand-alone basis, as follows: "*I'm comfortable with our position. We don't need to be consolidated or to consolidate anybody. […] We're not looking to acquire or to be acquired. I think we've got an opportunity to build a standalone business that delivers against customer and shareholder expectations.*" Three's CEO further stated that: "*Mobile operators have to have a reasonable amount of scale because there is a large fixed cost. […] We've got ourselves into a position in the UK with 8m customers and £2bn revenue where our margins are reasonable and they're improving. […] In the UK we're certainly in a position where we don't need to consolidate with anybody. We've got a solid business with solid foundations. We were the first to do a network share deal . . . and I fundamentally believe that's the right thing to do for most mobile businesses. It keeps the costs down and allows you to invest in quality and delivery*." The network sharing relationship with EE is mentioned as another factor reducing efficiencies from consolidation: "*In effect the UK has already been consolidated because of the network share deals,*" Three's CEO

644 Responses to Questionnaire Q67 to non-MNOs of 4 December 2015, question 7.

645 […].

646 […].

647 […].

648 Through BT Wholesale. Ofcom has considered that the market for access to bitstream is competitive (see Ofcom, Review of the wholesale broadband access markets. Statement on market definition, market power determinations and remedies, 26 June 2014 [ID6072]).

649 […], Annex B5.8 to the Reply to the Statement of Objection.

650 The other of the two aspects of convergence, next to fixed-mobile bundles, see recital (63).

651 Reply to the Statement of Objections, Annex 1, paragraph 117 to 119.

652 In its Reply to the Statement of Objections, the Notifying Party explains that […]. However, the Commission considers that the facts described in the public statement are worth taking into account when assessing Three's competitive position absent the Transaction.

said, "*There is so much cost and potential synergy wrapped up in that. You can say consolidation has happened.*"[653]

Specific assessment of Three's financial position

(708) The Commission will first assess Three's current financial performance to be followed by its financial outlook for the next few years.

(709) Two useful financial indicators of financial performance are EBITDA[654] and EBITDA margin.[655] EBITDA measures the profitability of core operations as it excludes factors – interest, depreciation and amortisation – that are less relevant to the profitability of day-to-day operations and are discretionary to a business, such as the type of financing (debt financing increases interest expenses as opposed to equity financing) or, to some extent, the chosen accounting method for depreciation and amortisation. Isolating these factors eliminates the possibility that these discretionary decisions distort the picture of operating profitability. In addition, by excluding interest expenses, EBITDA excludes the effect of bad, debt-financed investment decisions in the past, which is unrelated to the current operational performance of the business. EBITDA also excludes taxes as taxes are also of limited relevance to, and could distort the assessment of, the underlying profitability of operations. For example, carry forward provisions of past losses, tax incentives, special depreciation rules in the tax code or the treatment of intercompany transfers and loans could affect substantially the after-tax results and thus can mask the profitability of the underlying operations. Moreover, interest expense is generally tax-deductible, which means that interest expenses linked to loans taken up in the past would decrease the after-tax profits whereas, again, such costs are unrelated to current operational performance.

(710) EBIDTA margin indicates the operating profitability (as expressed by EBITDA) relative to size (as expressed by revenues). It is therefore useful for comparing businesses of different size in the same sector. The evolution of EBITDA (and EBITDA margin) over time gives a reliable indication on the company's potential to make profits from its operations. If EBITDA is expanding over time, this indicates that the business is able to generate cash flow from its operations, which forms the basis for investment and returns to shareholders and debtholders. If EBIDTA is decreasing over time, this indicates that the company may soon face difficulties in making necessary investments, servicing its debts or providing shareholders with a sufficient return. Therefore, while EBITDA does not give a complete picture of a company's financial health, most importantly because it ignores investments, it is a good measure of the profitability of core operations, which is a critical aspect of the financial health of a business.

(711) In this regard, Three's EBITDA and EBITDA margin have been increasing in recent years and its EBITDA margin has surpassed that of its competitors as shown in Figure 83 below.[656]

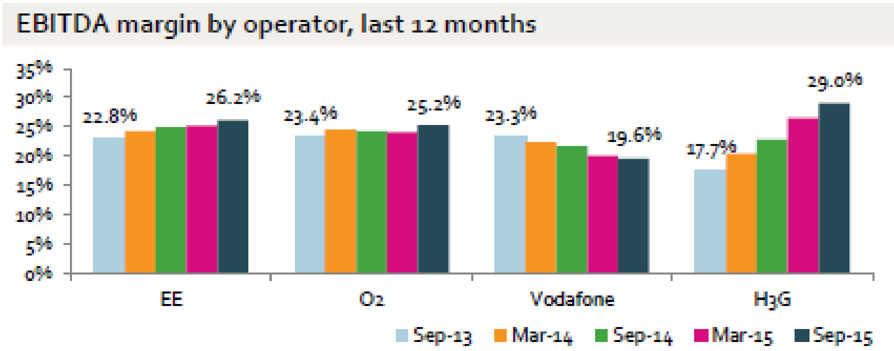
653 Christopher Williams, "Three rules out O2 UK acquisition. Mobile operator presses for stronger competition," Telegraph, 1 April 2014 [ID4017].

654 Earnings Before Interest, Taxes, Depreciation and Amortization.

655 EBITDA as percentage of revenues.

656 Vodafone's figure is slightly understated due to the phasing of its group company costs, see Enders Analysis UK mobile market Q3 2015, page 12 [ID 4172].

Figure 83: EBIDTA margin by MNO 2013-2015



Source: Enders Analysis UK mobile market Q3 2015, page 12 [ID 4172].

(712) In other words, Three's core operations are more profitable than its competitors' and its core operating profitability is showing a markedly positive trend. Three's high EBITDA margin also contradicts the Notifying Party's claim that Three is sub-scale. While there are economies of scale in the mobile industry, if Three were sub-scale one would expect that, due to the prevalence of high fixed costs and the inability of a sub-scale operator to spread those costs over many customers, Three would have higher overall costs relative to revenues than its competitors. Yet this is not the case, suggesting that Three has already achieved a size that allows it to operate profitably.

(713) Ofcom also emphasized that Three's EBITDA margins suggest that Three is not sub-scale nor significantly disadvantaged by economies of scale, as claimed by the Notifying Party:[657] *"[w]hile there are economies of scale in the mobile industry, and Three did struggle financially for many years, it has now grown to a point where it is in a strong financial position in the UK and has the highest EBITDA margin of all the UK MNOs*."[658]

(714) Another important financial indicator is EBIDTA less CAPEX. While EBITDA and EBITDA margin capture the profitability of operations, by excluding depreciation and amortisation these indicators ignore the costs incurred in relation to investments, which are important in the mobile industry. EBIDTA minus CAPEX reflects the impact of such investments on profitability as it accounts for capital expenditures. The metric uses CAPEX rather than depreciation and amortisation as the latter can vary depending on the accountancy treatment of the cost of fixed and long term intangible assets by the business, for example the assumptions used for the useful lifetime of the asset and the method to spread the depreciation costs over the years. By looking at CAPEX, the metric eliminates the possibility that these potentially subjective assumptions influence the profitability picture.

(715) As both EBIDTA and CAPEX are cash items, these metrics measures the underlying cash earning potential of the business: they show how much cash a business generates over and above necessary investments that ensure cash-generating potential in the future. Just like EBITDA, the metric excludes interest payments and taxes as interest expenses for the reasons discussed in recital (709). Namely, interest expenses

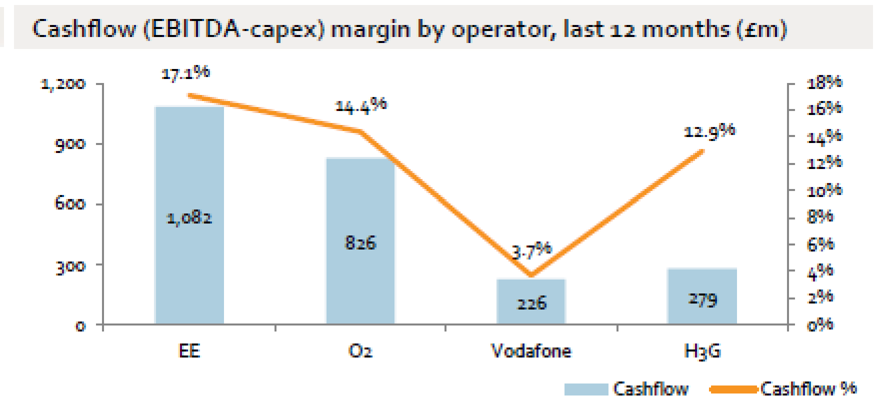
[657] Ofcom, Phase 2 submission to the European Commission, "Comments on Annex B6.1 of the Reply to the Statement of Objections", paragraphs 9-10 [ID5083].

[658] Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger", paragraph 1 [ID3450].

reflect discretionary decisions on debt versus equity financing and past investment decisions unrelated to current profitability, while taxes can distort the picture of the current underlying earning potential and can also be influenced by tax optimisation strategies, especially in the case of large international groups. Due to these characteristics, EBITDA minus CAPEX is also useful to compare businesses in a sector and even across different tax regimes. Subject to taxes, EBITDA minus CAPEX measures the cash available to the providers of capital irrespective of the capital structure (debt or equity) and thus it approximates free cash flow. Just like in the case of EBITDA, EBITDA minus CAPEX as percentage of revenues (for simplicity: "cash flow margin") gives a better sense of a company's financial health when comparing it to peers as it shows the cash earning potential relative to the size of the business. Likewise, the evolution of this metric over time, as opposed to a single data point, provides a more reliable indication of the forward looking financial health of a company as it shows the general trend of its earning potential.

(716) In this regard, Enders Analysis compared the EBITDA minus CAPEX figures of the four MNOs in the second quarter of 2015 looking at the previous 12 months. Three's EBIDTA minus CAPEX was strongly positive at GBP 279 million, corresponding to a cash flow margin of 12.9 %, which is comparable to the cash flow margin of the industry, as shown in Figure 84 below.

Figure 84



Source: Enders Analysis UK mobile market Q2 2015, page 10 [ID 4169].

(717) Three's cash flow margin is similar to O2's, higher than Vodafone's and slightly below EE's. Vodafone's low cash flow margin partially reflects the fact that the Vodafone figure in this comparison includes Vodafone's low margin corporate fixed line business[659] and partially the higher capital expenditure related to an exceptional investment program referred to as Project Spring. Even allowing for these factors, however, Three's cash flow margins are in line with that of the industry. Three's cash flow margin also benchmarks well against the European average of 10.9 %.[660]

(718) Moreover, […].

659 Enders Analysis, UK mobile market Q2 2015, page 10 [ID 4169].

660 GSMA, *European mobile network operator mergers. A regulatory assessment, December* 2014, [ID 6073].

Figure 85

	2012	2013	2014	2015
EBITDA minus CAPEX (million GBP)	[…]	[…]	[…]	328
Cash flow margin	[…]	[…]	[…]	14.9 %

Source: for the years 2012-2014 Three financials, Annex 35 to the Form CO; for the year 2015: CK Hutchison Holdings Limited annual report[661]

(719) As can be observed from these figures, Three's position relative to the competition in the Enders analysis was influenced by the timing of the comparison: […].

(720) In addition to EBITDA and EBITDA minus CAPEX, the return on capital employed or ROCE also confirms that Three is a healthy and viable business. ROCE is the ratio of EBIT (earnings before interest and tax) and the capital employed. In contrast to EBITDA and EBITDA minus CAPEX, ROCE gives a measure of the profitability relative to the capital used by the business. A ROCE equal to or greater than the weighted average cost of capital (WACC)[662] is an indication that the business generates sufficient returns to its investors. The capital employed is the shareholder capital plus the long term liabilities of the business (that is to say debt capital), which by definition equal to the totality of assets the business uses less the current liabilities. EBIT is the profit the business generates before interest expenses and tax. Interest is excluded because ROCE measures return on debt capital, not only on equity capital and tax is excluded as the WACC is also determined on a pre-tax basis.

(721) The potential drawback of ROCE is that it is usually calculated on the basis of statutory accounts in which the assets are recorded at their historical costs less the depreciation according to the chosen depreciation method and thus the recorded book values of the assets have to be applied with caution. Also, EBIT grows with inflation whereas inflation does not affect the book value of assets.

(722) In its submission to the Commission, Ofcom estimated Three's ROCE in 2014 based on Three's public statutory accounts for 2014.[663] To address the potential drawbacks of ROCE, Ofcom amended the value of Three's 2100 MHz spectrum as it is widely recognised that operators overpaid for this spectrum. To arrive at a fair value of this spectrum, Ofcom used linear interpolation between the per MHz values of the 2.6 GHz and the 1800 MHz spectrum, which were based on its previous assessment of the licence fees for these spectrums. As regards inflation, Ofcom considered that inflation has been low in recent years and prices of telecom assets often have a downward trend, which means that probably inflation does not distort the ROCE; nonetheless, Ofcom used a nominal, as opposed to an inflation adjusted, cost of

661 Section "Operations review", page 41. Available at: http://www.ckh.com hk/upload/attachments/en/pr/e_CKHH_AR_2015_full_20160317.pdf [ID 6074].

662 This is a measure of the average return that a company is expected to produce to its debt and equity holders. The rate is determined by capital markets. If the rate of return offered by the company is below the WACC, the investors are better off investing elsewhere.

663 Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger" [ID3450].

capital (WACC) for comparison. In addition, Ofcom ignored working capital[664] as these items were unusually large (current liabilities of over GBP 12 billion and current assets of 1.8 billion), which means that they probably reflect inter-company arrangements and are therefore unnecessary to run the business. Using this approach, Three's 2014 ROCE was 10 %.[665] Independently of the Transaction, Ofcom estimated the pre-tax nominal WACC in its March 2015 statement on mobile call termination for 2015-18 to be 9.1 %.[666] On this basis, Ofcom concluded that Three's ROCE was above its cost of capital, indicating that it uses its capital more productively than the general rate of return.

(723) The Commission considers that it is justified to reassess the value of the 2.1 GHz spectrum. Bidders paid GBP 22.5 billion for this spectrum, the largest sum ever paid in an auction in history,[667] leading to write-downs of GBP 6 billion at O2.[668] The method for determining the real value of this spectrum is reasonable as the estimates are based on licence fee assessments that were carried out by the national regulator independently of this Transaction.

(724) It is also justified to exclude working capital as recorded, given that current assets and liabilities in the order of GBP 1.8 billion and 12 billion respectively cannot be related to the running of a business with revenues of approximately 2 billion (in 2014). Working capital that is actually used by the business is the balance of account receivables, account payables, inventories (for example handsets the business has on stock) short term loans to finance operations and other similar items and thus the recorded values, which are likely to represent intercompany arrangements, would heavily distort the amount of capital that is actually employed by Three for running its operations. The actual working capital genuinely necessary for the business of a mobile operator is unlikely to modify meaningfully the employed capital figure derived on the basis of fixed assets (and intangibles), which amount to GBP 3.1 billion. Three's public accounts[669] indicate GBP 78.9 million of Trade creditors and GBP 114.9 million of Trade debtors,[670] the balance of which (GBP 36 million) is a more realistic measure of its working capital. Even if all the short term assets and liabilities that are reported on Three's balance sheet and can potentially be relevant for running the business are taken into account, its working capital is GBP 136.3 million.[671] Adjusting Ofcom's capital amount with this figure would result in a slightly lower ROCE of 9.6 % but still above the WACC of 9.1 %.

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664 Working capital is current assets less current liabilities. An identical way of looking at total assets less current liabilities (that is to say capital employed) is to look at fixed assets, intangibles (that is to say long term assets) plus working capital.

665 Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger", paragraph 12 [ID3450].

666 Ofcom, Mobile call termination market review 2015-18, 17 March 2015, Annex 10, Table A10.20, [ID4231].

667 http://www.cramton.umd.edu/papers2000-2004/01nao-cramton-report-on-uk-3g-auction.pdf [ID 6075]

668 http://www.telegraph.co.uk/finance/2852952/The-3G-bubble-is-finally-pricked html [ID 6076].

669 Three's publicly available balance sheet [ID6127].

670 "Trade debtors" is the sum of all invoices not paid by customers at the point of preparing the balance sheet. "Trade creditors" is the sum of all supplier invoices that are not paid by the company.

671 Current assets of GBP 767.4 million versus current liabilities of GBP 631.1 million. Current assets include cash at bank (251.9 million), stock (that is to say unsold goods), such as telecom equipment and handsets (65.2 million), Trade debtors (114.9 million), accrued income (195.1 million), other debtors (53.8 million), prepayments (86.5 million). Other items in the "current assets" category are amounts that fall due after more than a year (that is to say they are more long term assets than current assets) and amounts owed by group undertakings, which, as discussed before, do not necessarily reflect assets

(725) As regards the value of long term assets other than the 2100 MHz spectrum, the Commission notes that even the price of new telecom equipment has a downward trend,[672] and old equipment loses its value quickly, which makes it unlikely that the balance sheet understates the asset values (in which case the computed ROCE would be higher than the real ROCE). In any event, as it is not possible to value each asset individually and the accounts are audited, the use of balance sheet values is generally acceptable save for cases when there is an obvious discrepancy between book value and real value (2100 MHz spectrum) or where the assets are not used for running the business (the reported working capital in this case). It is also correct that inflation has been low in recent years. Further, since telecom asset prices are trending downwards there is less of a risk that there is a discrepancy between the EBIT and the asset values due to inflation. In addition, the use of a nominal WACC (which is higher than the inflation adjusted WACC) also ensures that the resulting comparison between the ROCE and the WACC will not be flawed due to inflation and results in a conservative estimate. Finally, the WACC was also estimated by Ofcom in a different procedure, namely the procedure to determine mobile call termination rates, and thus can be considered reliable.

(726) The Commission considers therefore that Ofcom's approach to ROCE calculation is generally sound and its results are not significantly affected even if working capital is included.

(727) Accordingly, on the basis of a number of key financial indicators, the Commission considers that Three's current financial position is healthy.

(728) As regards the outlook for the next couple of years, several forecasts of Three's financial position absent the Transaction on the Commission's file project improved financial performance as well as further growth of the business.

(729) […].[673] […].

Figure 86: […]

[…]

Source: Annex 35 to the Form CO.

(730) As discussed in recitals (709) and (714) EBITDA, EBITDA margin, EBITDA minus CAPEX and cash flow margin are useful figures to assess the future viability of the business. EBITDA shows the profitability of operations and EBITDA minus CAPEX shows the potential of the business to generate cash over and above the necessary investments.

(731) The Commission notes, however, that Three's CAPEX figures do not include spectrum costs both according to the 2015 annual report[674] and the Annex to the Form CO. Namely, the Form CO indicates CAPEX of 271 for 2013 whereas Three

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linked to the operation of the business. Current liabilities include Trade creditors (78.9 million), amounts owed to group undertaking specifically for trading (220.2 million), taxation and social security (7.1 million), other creditors (31.7 million), accruals and deferred income (293.2 million). Since in the case of liabilities Three splits the intercompany liabilities between loans (11.7 billion) and trading amounts (220.2), it is justified to count the latter in the working capital.

672 https://www.federalreserve.gov/econresdata/notes/feds-notes/2015/recent-trends-in-communications-equipment-pricing-20150929.htm [ID 6058].

673 Reply to the Statement of Objections, Annex B6.1, paragraph 26

674 Section "Operations review", page 41. Available at: http://www.ckh.com hk/upload/attachments/en/pr/e_CKHH_AR_2015_full_20160317.pdf [ID 6074].

paid GBP 225 million for spectrum in that year, which would leave very little for non-spectrum related CAPEX. The likely reason is that spectrum payments tend to be large and infrequent and thus would distort the picture on regular investment activity and cash flows. On this basis Ofcom adjusted the projections with the annualised costs of all existing spectrum holdings,[675] which resulted in a yearly decrease of GBP 100 million both under the budget and the credit plan as shown in Figure 87 below. The Commission considers that Ofcom's adjustments overstate the effect on the EBITDA minus CAPEX figure. First, Ofcom deducted the annual license fees for Three's 1800 Mhz spectrum, which amounted to GBP 25 million per year; however, yearly license fees are standard operating costs already recognised in EBITDA and thus this deduction is not necessary. Second, Ofcom included the time value of money in the adjustment for the 800 MHz spectrum whereas this is not necessary as it would include interest or other capital costs that the measure intends to exclude. The difference in this case is minor, however, which follows from the fact that a simple amortisation of this amount with a straight line method results in a yearly adjustment of GBP 11 million[676] versus the adjustment of GBP 14 million that Ofcom used for deduction. Thus, […].

(732) The picture does not change even if Three acquires spectrum in the upcoming PSSR auction, where 40 MHz of 2.3 GHz and 150 MHz Of 3.4 GHz spectrum will be offered. Predicting the price of the spectrum and the amount Three will obtain is not possible with certainty, but the likely order of magnitude is already indicated based on the fact that the annualised costs of Three's current spectrum holdings range from GBP 11 million to GBP 26 million.[677] Furthermore, the spectrum on offer in the PSSR is less valuable than the spectrum Three already has, since in general the lower the frequency, the more valuable the spectrum is.[678] By way of an illustrative example, Three could acquire 20 MHz (that is to say half) of the 2.3 GHz spectrum on offer and a sizable portion of the auctioned 3.4 GHz spectrum, say 40 MHz out of the 150 MHz on offer. Using a conservative assumption on the market value for this spectrum (consisting in equating the per Mhz cost of the 3.4 GHz spectrum to that of the 2.6 GHz spectrum and the per Mhz cost of the 2.3 Ghz spectrum to that of the 2100 MHz spectrum), Three would pay GBP 424 million, which would have to be spread over twenty years,[679] corresponding to a yearly adjustment of GBP 21.2 million. The full cost may not apply before 2018. That is, even buying this amount of spectrum, the adjusted EBITDA minus CAPEX would be slightly above Ofcom's adjusted levels, which are already strongly positive and show a positive trend. The Commission notes that the assumption on the cost of the spectrum in this example likely overstates the true cost as the per MHz prices used are derived from the price of spectrum that has lower frequency and is therefore likely to be more valuable than

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675 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, [ID2069], paragraphs 9.26 -9.29 and Figure 36

676 Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger" [ID3450].

677 See the yearly amortisation costs in the ROCE calculation in Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger" [ID3450].

678 Ofcom estimated the market value of the 2.6 GHz spectrum to be GBP 5.5 million per MHz, the value of 2100 MHz spectrum to be GBP 10.2 million per MHz, the value of 1800 Mhz to be GBP 13 million per MHz. See Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger",[ID3450] Three paid GBP 225 million for its 2x5 Mhz of 800 MHz spectrum, resulting in a market value of GBP 22.5 million per Mhz.

679 The spectrum will be subject to license fees twenty years from acquisition.

the spectrum on offer in the PSSR. Further, in the illustrative example Three acquires a sizable amount of spectrum, which would allow it to compete strongly. This in turn implies that […], which would compensate it for the increased CAPEX.

(733) The Commission also notes that by annualising spectrum costs, the adjusted EBITDA minus CAPEX is no longer a pure cash flow based measure. In general the cash flow based measure eliminates the distortive effect of arbitrary depreciation methods; however, the adjustments in this case are not arbitrary but spread the cost proportionally. Further, spectrum costs are indeed lumpy and thus spreading them across years helps in obtaining a clearer picture on the entity's profitability. In any event, the overall picture is the same in that it does not matter whether e.g. an entity has decent and growing profitability over 10 years or it has one break-even years combined with 9 years of even stronger profitability. Only by having a selective and thus incorrect assessment (looking at either only years without spectrum purchases or only years with spectrum purchases) can one conclude that the same entity is either non-profitable or excessively profitable.

(734) Accordingly, […].

Figure 87

[…]

Source: Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, Figure 36 [ID2069].

(735) Ofcom also forecast Three's ROCE in the years ahead.[680] […][681] […].[682] […].[683] […].

Figure 88

[…]

Source: Ofcom, Appendix to Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger", Figure 1 [ID3450].

(736) As discussed in recitals (722) to (726), the Commission considers Ofcom's approach sound as regards the adjustments made to the capital employed and the WACC, except the exclusion of working capital, which however does not change the results meaningfully. It is also appropriate to use the EBIT projections based on Three's own projections and to assume an increase in capital employed, which reflects the growth of the business.

(737) On the other hand the Commission considers that it is not necessary to amortise the cost of the 1800 MHz spectrum holding. As discussed in recital (731) this spectrum is subject to license fees, which is a standard operating cost and already included in the EBIT, and thus to make a further deduction would result in double counting. Furthermore, it does not appear necessary to amortise other spectrum holdings either. It is important in this regard that the licences for these spectrum holdings are indefinite and licence fees will apply after the first initial 20 years of the licence.

680 Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger" [ID3450].

681 Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger" [ID3450], paragraph 21

682 Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger" [ID3450], paragraph 21.

683 Ofcom, Phase 2 submission to the European Commission, "Financial position of Three and O2 without the merger" [ID3450], paragraphs 22-27.

Licence fees do not apply currently to any of these holdings and will start to apply, from 2033 for the 800 MHz spectrum, from 2022 for the 1400 MHz spectrum and potentially from 2021 for the 2100 MHz spectrum. Amortisation is used only if the asset has a finite economic life over which the initial cost of the asset would have to be gradually decreased to zero at the end of the lifecycle. However, these deductions are not necessary or appropriate if the asset's life is indefinite, which is why Three does not amortise them either in its audited accounts. Once licence fees start to apply, these fees will be treated as an operating cost as from that future date onwards and directly deducted already in EBITDA. If and to the extent the charging of license fees changes the value of the asset, the asset values will be reviewed for impairment. It appears therefore appropriate not to adjust for spectrum costs and in this sense Ofcom's estimate is conservative.

(738) At the same time, the increase in capital employed assumed by Ofcom may not be sufficiently large to allow for future spectrum acquisition. For example, Ofcom assumed an increase in the capital employed of GBP 23 million between 2016 and 2017, whereas according to recital (732), the value of the spectrum Three may acquire in the PSSR could be as high as GBP 424 million. Further, as discussed in recital (724) and (736) above, working capital needs to be added to Three's capital employed.

(739) If all these factors are taken into account and Ofcom's results are adjusted accordingly, […].[684]

(740) The Commission also notes, however, that even in the extreme scenario where i) adjustment is made for the costs of the 800 MHz, the 1400 MHz and the 2100 MHz spectrum holdings in line with Ofcom's calculation[685] ii) the capital employed is adjusted to include working capital in line with recital (724) iii) the capital employed is adjusted to allow for spectrum acquisition in line with recital (732), […].[686] […]. Further, the adjustment for the cost of the spectrum to be acquired in the PSSR is based on a conservative estimate of the per MHz cost of this spectrum.[687] If less conservative assumptions are used for the growth of the business and the cost of acquiring new spectrum, Three's ROCE will exceed the WACC even in this scenario. For example, […].

(741) Accordingly, Three's financial position looks healthy on the basis of ROCE as well, and, consequently, it is unlikely to face problems of raising capital for future investments in the coming years.

(742) In addition […].

(743) […]:

Figure 89: […]

[…]

Source: Annex 7.186 to the Form CO, page 29.

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684 The results are obtained by making the following adjustments to Ofcom's figures under the Credit Plan: […].

685 No adjustment needs to be made for the 1800 MHz spectrum holding. In the case of this spectrum licence fees already apply and thus these are already included in the EBIT, see recital (731)

686 The results are obtained by making the following adjustments to Ofcom's figures under the Credit Plan: […].

687 See recital (732).

(744) Further, more recent figures submitted by the Notifying Party estimate an increase in Three's customer base of […] by […].[688] This means that Three would increase its customer base in the next approximately […] in a market far more saturated (mobile up-take[689] was slightly above 80% in 2003[690] and it reached almost 140% in 2015[691]). As pointed out by Ofcom, this means that Three would achieve a market share of […] by […].[692] The Commission considers that this is indicative of an aggressive business strategy aiming at customer growth. Coupled with Three's more recent commitment to make its customers more loyal to its brand, the Commission considers that in the near future Three's is likely to benefit from a growing and stable customer base and related revenue flow. The Commission notes that in the Reply to the Statement of Objections the Notifying Party did not contest this finding.

(745) Three's financial plan from […].

Figure 90: Three's financial plan (in GBP million)

[…]

Source: Commission's compilation based on Annex 7.186 to the Form CO, pages 37 and 38.

(746) According to forecasts contained in an investor presentation […].[693]

(747) In summary, various sources, […] external, show a consistent picture of a growing business with improving financial performance in the coming years. These positive forecasts build on a set of current financial results that already compare well with the competition and with the European average.

(748) The Notifying Party submits that […].[694]

(749) […].

(750) […].[695] […].

(751) In this regard, the Commission notes it did not look at EBITDA only but considered a number of financial indicators, including EBITDA margin, EBITDA minus CAPEX, cash flow margin and ROCE. Furthermore, while EBITDA margin does not give a complete picture, as explained in recital (709) it is a good measure of the profitability of operations, which is an essential part of the financial health of a business. Three's argument on disadvantage in economies of scale also cannot be accepted, given that, as explained in recital (712), disadvantages in economies of scale would mean that its costs relative to revenues would be higher than competitors' and not lower as is currently the case. Its impressive free cash flow margin in 2015 ([…]) also shows that it is not disadvantaged due to lack of scale when CAPEX is taken into account: in an industry with economies of scale one

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688 Notifying Party, Phase 2 submission to the European Commission, […].

689 Number of mobile subscriptions per habitants.

690 49.7 million subscriptions (Ofcom's 2004 CMR, page 48) and population of 59.65 million (see UK Office for national Statistics at http://www.ons.gov.uk/ons/dcp171778_345500.pdf, provided with the access to file on 4 February 2016).

691 89.9 million subscriptions (see above paragraph (47)) and population of about 65 million (see UK Office for national Statistics at http://ons.gov.uk/ons/taxonomy/index.html?nscl=Population, provided with the access to file on 4 February 2016).

692 Ofcom, Phase 2 submission to the European Commission, "Ofcom comments on the effects of the Three/O2 merger on prices," paragraph 1.27.1 [ID3703].

693 Annex 7.178 to the Form CO, […].

694 Annex B6.1 to the Reply to the Statement of Objections, Paragraph 7.

695 Annex B6.1 to the Reply to the Statement of Objections, section 1.1.2.

would expect that small and large operators have less difference in CAPEX then their size would suggest and thus a smaller operator would have an inferior free cash flow margin, which is not the case as Three was on par with the industry at the time of the Enders comparison discussed in recital (716) and has improved its free cash flow margin substantially in 2015. Finally, comparing absolute EBITDA levels across businesses of different size is misleading: according to the Notifying Party's logic, an operator with 1 % EBITDA margin (that is to say one that barely produces enough revenues to cover its costs from operations, leaving very little room for investments) but with ten times the revenue relative to a smaller operator that has 9 % EBITDA margin would be healthier financially than the smaller operator, which is clearly not the case.

(752) The Notifying Party further argues that […].[696] […].

(753) In this regard, the Commission considers that […].

(754) The Notifying Party also […].[697] […].

(755) The Commission considers that […].

(756) The Notifying Party also submits that […].[698] […].

(757) The Commission considers that this argument […].

(758) The Notifying Party further argues that the most appropriate measure to assess the sustainability and earning potential of Three is to look at its "Net Profit After Taxes ("NPAT") (adding back depreciation) less CAPEX".[699] The Commission interprets this as the net after-tax profit figure plus depreciation less CAPEX, which results in an after-tax profit figure where the deduction for investments is reflected by deducting CAPEX instead of depreciation. This includes the interest charges incurred as well as taxes. In the Notifying Party's view this measure allows for the consideration of tax charges as well as interest charges related to financing network plans and spectrum purchases that Three has relied on. Furthermore, in the Notifying Party's view, not even this measure is an appropriate indicator as […].

(759) The Commission considers that EBITDA minus CAPEX is preferable to NPAT plus depreciation less CAPEX as an indicator of Three's earning potential. As the Notifying Party itself recognises "NPAT plus depreciation less CAPEX" […],[700] whereas, as explained in recitals (749) (753) and (755) in more detail, […]. In addition, NPAT plus depreciation less CAPEX is the result of a particular mix of equity and debt financing and therefore the metric reflects not only Three's cash generating potential but also the effect of the decision on the type of financing. Furthermore, the measure includes deductions for taxes as well, which can also distort the picture on Three's earning potential. Namely, as noted in recital (709), various provisions of the tax code – carry forward provisions of past losses, tax incentives, special depreciation rules or the treatment of intercompany transfers and loans and the deductibility of interest expense – can distort the picture of profitability. […], while the tax deductibility of interest would reduce the profitability based on NPAT as a result of the past investment decisions, which are

696 Annex B6.1 to the Reply to the Statement of Objections, section 1.1.3.
697 Annex B6.1 to the Reply to the Statement of Objections, paragraphs 19-20.
698 Annex B6.1 to the Reply to the Statement of Objections, paragraphs 25-26.
699 Annex B6.1 to the Reply to the Statement of Objections, section 1.2.2.
700 Annex B6.1 to the Reply to the Statement of Objections, paragraph 27. […].

irrelevant to Three's financial health. For these reasons, and consistent with the explanation on the use of EBITDA minus CAPEX in recitals (709), (714) and (715), the Commission considers that EBITDA less CAPEX is a better measure of Three's earning potential. The Commission also notes that the Hutchison Group's annual report also uses EBITDA minus CAPEX when reporting on Three's financials.[701] […].[702] […]. In other words, investors trust this metric, rather than an NPAT-based measure, to assess Three's financial performance, knowing that other measures would be less reliable. The Commission also notes that the impact of future spectrum acquisition was considered in both the EBITDA minus CAPEX and the ROCE forecasts.[703]

(760) The Notifying Party also argues that Ofcom's ROCE calculation is inflated and refers to the ROCE calculation by Enders Analysis,[704] according to which Three's ROCE is 6-7%.[705]

(761) The Commission notes that, as Ofcom pointed out, the main reason for the difference appears to be that Enders Analysis used CAPEX instead of depreciation when calculating the EBIT. As Three's CAPEX is materially higher than its depreciation, the deduction of CAPEX instead of depreciation decreased the EBIT figure and resulted in a lower ROCE. However, ROCE is typically calculated with depreciation. More importantly, as Ofcom noted, if a firm has substantially higher CAPEX than depreciation, this means that it is investing in excess of what is needed to compensate for the annual decrease in the value of its capital stock. This shows the expansion of the business and the expectation of increased future profits. However, these profits are not reflected in the current profit figures that are used for the ROCE calculation by Enders Analysis. In other words, by using CAPEX in the case of an expanding firm like Three, the profitability and thus the ROCE in a given year is decreased without and adequate compensation for this decrease, resulting in a too low ROCE.[706]

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701 Section "Operations review", page 41. Available at: http://www.ckh.com hk/upload/attachments/en/pr/e CKHH AR 2015 full 20160317.pdf [ID 6074].

702 Notifying Party's response to the questions on the first draft Form CO of 5 July 2015, paragraph 2.14.

703 The cost of financing this investment is excluded both in the EBITDA less CAPEX and the ROCE calculation. This is necessary, however, as under the ROCE calculation the cost is reflected in the WACC, while EBITDA less CAPEX is just the measure of the cash flow available to the provider of capital without comparing it against the capital provided and the cost of that capital.

704 Enders Analysis, UK mobile market Q3 2015, page 13 [ID4172].

705 Annex B6.1 to the Reply to the Statement of Objections, paragraphs 30-31.

706 It is true that, as discussed in recitals (714) and (715), when looking at a company's earning potential without reference to the capital it employs, EBITDA less CAPEX is generally preferred by investors and analysts, which implies that deducting CAPEX is generally preferred to deducting depreciation and amortisation. This is because deducting CAPEX eliminates the potential distortion arising from the fact that due to the subjective assumptions on depreciation and amortisation EBIT does not reflect the true earning potemtial. However, Three's depreciation and amortisation methods do not seem arbitrary as it uses a straight line method (note 1, points g) and h) in Three's 2014 balance sheet). Further, for the reasons mentioned in this recital, due to the problem that Three's CAPEX is materially higher than its deprecation and amortisation, using depreciation and amortisation is prefereable when its profitability is assessed relative to the capital it employs, that is to say when its ROCE is calculated. In short, deducting CAPEX is generally preferable to deducting depreciation and amortisation when looking at earnings potential without reference to the capital employed; in contrast, when looking at profitability relative to capital employed in the case of a company like Three, the use of depreciation and amortisations is preferable.

(762) Finally, the Notifying Party claims that […][707] This argument is […],[708] […].

(763) Accordingly, the Commission considers that Three's financial position is robust and that, taking into account its current profitability, it appears unlikely that Three's ability to compete would deteriorate in the next two to three years.

Specific assessment of Three’s network quality

(764) The Commission considers that Three's network assets would allow it to continue being an important competitive force in the market, or in any event exerting an important competitive constraint, in absence of the Transaction.

(765) Indeed, Three's […].[709] […].

(766) The quality reached by Three's network assets is demonstrated by the improved perception of Three's network as illustrated in Section 8.2.1.2.b(i).

(767) Further, given its philosophy of early adopter of new mobile technology (see recital (668)), it likely that, in the absence of the Transaction, Three would maintain its role of challenger MNO in relation to new technology and network quality.

(768) As discussed in more detail in Section 8.2.2.3 a), the MBNL network sharing arrangement would have continued to play an important role absent the Transaction. The agreement cannot be terminated […] and its initial term expires only […]. Furthermore, David Dyson, CEO of Three, explained in a public statement that MBNL is a long-term relationships that works for both of its partners and that all of Three's current sites as well as all sites of a planned increase to […] sites are shared with EE.[710]

(769) Specifically with respect to capacity and speed, the Commission finds that today, despite its lower spectrum holdings in relation to the traffic carried compared to other MNOs, Three's network is not […] and offers a very good quality of service, as confirmed by numerous consumer surveys. This is reflected in Three's continuous increase in market share in recent years.

(770) [Based on the available evidence in its file, the Commission considers it unlikely that Three's ability to compete will materially deteriorate absent the Transaction. The Commission finds that Three’s evidence is not convincing. In particular, Three is unlikely to experience capacity constraints.][711] […].[712]

(771) […].

(772) […].

(773) […].

(774) A more detailed review of future network plans as well as an assessment of Three's claims on capacity constraint is carried in Section 1 of Annex C, which forms an integral part of this Decision.

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707 Annex B6.1 to the Reply to the Statement of Objections, section 1.2.4.

708 Ofcom, Phase 2 submission to the European Commission, “Comments on Annex B6.1 of the Reply to the Statement of Objections”, paragraphs 25-26 [ID5083]. The pairs of figures for 2015 reflect Ofcom's scenarios on spectrum costs.

709 Annex 7.170 to the Form CO, […].

710 Article in mobile news dated 17 February 2015 "Three CEO reveals his big masterplan" [ID3761].

711 […].

712 […].

(775) Therefore, the Commission considers that, based on the available evidence in its file, it cannot be reasonably predicted that Three's ability to compete would materially deteriorate due to capacity constraints in the next two to three years.

Conclusion on likely competitive constraint to be exerted by Three absent the Transaction

(776) In light of the above, the Commission concludes that, absent the Transaction, Three would continue to exert the same competitive constraint it exerted on the relevant market pre-Transaction and that this is the relevant comparison for the assessment of the Transaction pursuant to paragraph 8 of the Horizontal Merger Guidelines.

iii. Conclusion on specific assessment of the competitive constraint exerted by Three

(777) In light of the above, the Commission concludes that pre-Transaction Three constitutes an important competitive force in the market for retail mobile telecommunications services in the United Kingdom pursuant to paragraph 37 of the Horizontal Merger Guidelines, or in any event it exerts an important competitive constraint on that market, and that it is likely to continue exerting such a constraint absent the Transaction.

c) Specific assessment of the competitive constraint exerted by O2

(778) In this Section the Commission assesses in detail the competitive constraint currently exerted by O2 (recitals (779) and following) and the likely constraint it would exert absent the Transaction (recitals (824) and following). In recitals (872) and following the Commission concludes on O2's competitive constraint in the market.

i. Competitive constraint exerted by O2 pre-Transaction

<u>Notifying Party's view</u>

(779) The Notifying Party claims that O2 does not play a unique and irreplaceable role in the competitive process and therefore the fact that it will no longer operate on a stand-alone basis will not result in the removal of an "important competitive force" within the meaning of the Horizontal Guidelines. This is for the following reasons.

(780) First, O2 will […].[713]

(781) Second, O2 does not stand out from its competitors in terms of price aggressiveness or product innovation. In this respect the role of giffgaff and Tesco Mobile should not be overestimated as the former does not address the mass-market and the latter operates independently to a large extent.

<u>Commission's assessment</u>

Introduction

(782) As discussed in Section 8.2.1.2.a.(i), the Commission considers that the size and the evolution of O2's market share in the relevant market and several segments thereof provide a first indication of the important competitive constraint exerted by O2 on the market.

(783) In more detail, O2 is the largest provider of retail mobile telecommunications services by number of subscribers and the second largest in terms of revenues: on the basis of the data submitted by the Notifying Party,[714] in 2014 O2 had about […]

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[713] This claim is examined in Section 2 of Annex C.
[714] Annex 9 to the Form CO, "Market share tables".

subscribers across its different brands and including its Tesco Mobile joint venture. O2 revenues achieved over GBP […]. Likewise, with respect to the provision of mobile telecommunications services to private customers, O2 is the largest supplier by number of subscribers, with […] subscribers in 2014 ([…] more than EE), and the second largest in terms of revenues, with over GBP […] revenues in 2014.[715]

(784) Not only is O2 the operator with the largest customer base, but its customer base has also constantly been growing in the recent past at a rate which is second only to Three, as shown in Figure 40 above.[716] The growth of O2's total customer base has been driven by all of its brands, as well as Tesco Mobile, and it is the largest in absolute terms. In particular, giffgaff customer base has increased by […] from Q2 of 2014 to Q2 of 2015 in the context of a shrinking prepaid segment where all other brands are losing customers (including O2 brand, but with the exception of Three, which in the same period had an increase of the prepaid customer base of […]).[717]

(785) Following the due diligence, Three […].[718]

(786) In the Statement of Objections, on the basis of the indications provided by the data just described, as well as the overall body of qualitative and quantitative evidence in its file at that stage of the investigation, the Commission preliminarily concluded that O2 exerted an important competitive constraint on Three and on the remaining competitors pursuant to paragraph 24 of the Horizontal Merger Guidelines and qualified it as an important competitive force.[719]

(787) Following a further assessment of the arguments brought forward by the Notifying Party in the Reply to the Statement of Objections, the Commission agrees with the Notifying Party that O2 cannot be qualified as an important competitive force under paragraph 37 of the Horizontal Merger Guidelines. Nonetheless the Commission still considers that all the available evidence in its file clearly shows that O2 exerts an important competitive constraint on the market for the reasons set out in this Section.

(788) In recitals (789) and following the Commission provides an overview of O2's role in the relevant market. From recitals (798) onwards the Commission undertakes an assessment of the pre-Transaction competitive position and constraint exerted by O2 on the relevant market with respect to the parameters of competition identified in Section 6.6.2.

O2's competitive behaviour in the mobile market

(789) As mentioned above, in recital (111), O2 was originally the mobile arm of BT, from which it was spun off in 2001 before being acquired by the Telefónica group.

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715 With respect to business customers, O2 is the second largest provider by number of subscriptions, after Vodafone, and the third largest in terms of revenues, although its number of subscribers and its revenues are very close to those of EE.

716 See also Enders Analysis, UK mobile market Q1, Q2 and Q3 of 2015 [IDs 4166, 4169, 4172].

717 O2's internal documents, […] [ID 000104341], reported in Figure 40 above. As mentioned above in recital (268), Ofcom points to giffgaff "recurring goodybag" tariff as an example of blurred distinction between prepaid and postpaid services.
Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, Confidential version for Hutchison 3G UK Limited, 5 October 2015, paragraph 9.4 [ID2069]. According to Ofcom, Phase 2 submission, "Closeness of competition between Three and giffgaff", paragraph 8 [ID3704], giffgaff is the fastest-growing mobile brand in the United Kingdom.

718 Annex 42 to the Form CO, […].

719 Statement of Objections, paragraph 484.

(790) As shown in Figure 20 above, since 2004 and until the creation of EE, O2 was the largest mobile operator in the United Kingdom.

(791) In the business plan for the merged entity, Three qualifies O2's more recent track record in the market as *[...]* thanks to its *[...]* as shown in Figure 91.

Figure 91: […]

[…]

Source: *Annex 42 to the Form CO, page 92.*

(792) In more detail, in April 2013 it has launched "O2 Refresh," the first 24 month tariff to decouple the cost of the phone from the cost of mobile services. Such tariff has introduced a significant simplification in the mobile market of the United Kingdom, because, as described by O2 on its website, *"[b]y signing up to and paying separately for their phone and airtime, customers are given complete transparency, while paying the same overall as they would on a standard 24 month Pay Monthly tariff*." Further, "O2 Refresh" makes it more affordable for customer to get the latest smartphone on offer as "*customers can trade in their old mobile for cash using O2 Recycle, getting up to £260 to put towards their new phone*."[720] It is also a feature of Refresh that after paying the full price of the phone, the customer's bill decreases and contains only the charge for the airtime. With Refresh, O2 is the only network that allows customers to change devices whenever they want without penalty while at the same time lowering the bill at the end of the contract.[721]

(793) Also in 2013, to encourage customers to switch from a 3G to a 4G contract, O2 launched the "4G 90 day happiness guarantee," whereby customers could try 4G services and if they decided that they were not "happy" with the tariff within the first 90 days after signing up they could cancel the up-grade, get their money back and revert to the previous non-4G tariff. In 2013, O2 also launched the "Tu Go" app, enabling users to make and receive phone calls and texts via a tablet, computer or smartphone using their O2 phone number.[722]

(794) Further, in November 2014 O2 launched new shared data plans for both individual customers and families, "*designed to make sharing data between devices and people easier than ever before*."[723] Finally, O2 has introduced iPhone upgrades (building up on its advantage of being the original launch partner for the iPhone in the United Kingdom) and new pay-as-you-go bundled tariffs, such as the one called "Pay & Go Go Go" encouraging customers to stay on the tariff, top up regularly and receive allowances, the size of which increases with the time the customer stays on the tariff.[724]

(795) This series of product launches and related marketing efforts show that O2 is an active competitor on the United Kingdom market, always trying to provide customers better services, and exerting a significant competitive pressure on its competitors.

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720 See http://news.o2.co.uk/?press-release=o2-launches-new-tariff-allowing-customers-to-get-the-latest-phone-whenever-they-want (provided with the access to file on 4 February 2016).

721 O2's internal documents, […] [ID 000013321.00001].

722 See http://www.o2.co.uk/apps/tu-go (provided with the access to file on 4 February 2016).

723 See http://news.o2.co.uk/?press-release=o2-launches-shared-data-plans-for-both-individual-customers-andfamilies (provided with the access to file on 4 February 2016).

724 See http://www.o2.co.uk/termsandconditions/archive/tariffs-and-bolt-ons/3g-pay-and-go-go-go-terms-and-conditions (provided with the access to file on 4 February 2016).

(796) In this context, the sub-brand giffgaff was launched by O2 in 2009 […].[725] giffgaff has been particularly innovative in its proposition to customers as 100% online community-run operator.

(797) Finally, Tesco Mobile has also played an innovative role in the United Kingdom. In 2011, it was the first operator to launch "capped contracts", allowing customers to choose a safety buffer to avoid the risk of bill shock. In the same year Tesco Mobile offered "family perks," extra minutes or data for families who have more than one contract on the same account, which were then followed by O2 and EE. In 2013, almost at the same time with O2 Refresh, Tesco Mobile started offering "Upgrade Anytime", a plan where customers can upgrade to a new phone or tablet and a new 24 month contract at any time, simply settling the outstanding balance of the previous device payments. In 2014, Tesco Mobile was the second operator to offer 4G at no extra cost […]. Finally, in 2015 Tesco Mobile was the first to offer 18 month SIMO contracts.[726]

Positioning with respect to price related competition

(798) With respect to price, the Commission notes that the tariffs comparison undertaken above in recitals (580) and following shows that the O2 brand competes with EE and Vodafone for the second place after Three in terms of price aggressiveness among MNOs.

(799) In this respect, the Notifying Party's regression analysis, whose results are illustrated in Figure 59, shows that the average monthly charges for O2's handset contract tariffs were the second least expensive among MNOs after Three's ones.

(800) Moreover, as shown in Figure 65 above, in the latest surveys, O2 appears to be perceived by customers as the second best network in terms of value for money, lagging far behind Three, but also taking some distance from EE and Vodafone, which is perceived as the worst of the MNOs with respect to this parameter of competition.

(801) The improvement of O2's perception as *"best value mobile internet"* is also […].[727]

(802) Further, as mentioned in recital (796) above, giffgaff was launched by O2 in 2009 […].[728] Giffgaff targets customers (mainly prepaid, although the distinction is blurring)[729] with lower willingness to spend and has grown strongly since its launch as shown in Figure 40 above, which is particularly indicative of price aggressiveness.

(803) Giffgaff is the only brand other than Three which currently offers unlimited data packages in the United Kingdom.[730] As of September 2015 it also offers 4G at no extra cost as a standard.[731] A tariff comparison available on giffgaff's website shows that giffgaff's *"per minute calls, texts and mobile Internet tariffs"* undercut both EE's and Vodafone's branded prepaid services as shown in Figure 92 below. The only network operator missing from the comparison is Three, whose rates *"3p a minute, 2p a text and 1p a MB of data"* are even cheaper than giffgaff's ones.

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725 Form CO, Section 6, paragraph 88.

726 […].

727 Annex 7.057 to the Form CO, slide 20.

728 Form CO, Section 6, paragraph 88.

729 See above recital (268).

730 Ofcom, Phase 2 submission to the European Commission, "Ofcom comments on the effects of the Three/O2 merger on prices", Annex 1, paragraph A1.22 [ID3703].

731 See: https://www.giffgaff.com/4g (provided with the access to file on 4 February 2016).

Figure 92: Prepaid tariffs comparison

Network	Calls	Texts	Mobile Internet
giffgaff	**Free to giffgaff** **10p to other networks**	**Free to giffgaff** **6p to other networks**	**20p a day***
EE	30p	12p	Available with Bundle
Vodafone	35p	14p	£2 per day (Fair use of 50MB/day)
O2	25p	12p	£1 per day (Fair use of 50MB/day)

*Mobile internet is charged at no more than 20p a day (up to 20MB). If you go over 20MB, you'll be charged extra at 20p/MB.

Source : giffgaff's website.[732]

(804) Likewise, Tesco Mobile offers very price competitive postpaid and prepaid tariffs. It offers 4G at no extra cost.[733] Moreover, the tariffs comparison undertaken above in recitals (580) and following shows that Tesco Mobile competes head-to-head with Three to offer the cheapest tariffs in the lowest value segment and in particular for SIMO tariffs in the low data segment.

Positioning with respect to network related competition

(805) O2 entered into a comprehensive network sharing arrangement with Vodafone in 2012. According to their joint submissions to Ofcom in 2012, the aim of the Beacon agreements […].[734] […].[735]

(806) The Commission notes that, based on its network and network sharing arrangements with Vodafone, O2 has […].

(807) The perception of O2 network is good. […].[736] […].[737] […].[738]

(808) YouGov surveys rate O2 high both for voice and mobile internet services. For example in the latest survey available in the Commission's file, dated December 2015, O2 is rated as leader for voice and at the second place for mobile internet, following Three but outperforming EE and Vodafone in the majority of the metrics considered as shown in the above Figure 74 and Figure 75.

(809) Likewise, Rootmetrics evaluates O2 4G services "*incredibly reliable and fast.*"[739] According to the 2016 Rootmetrics Report, O2 has expanded its 4G offering in metro areas, and the operator's overall speed for data services has improved as a result.[740]

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732 See: https://www.giffgaff.com/compare-pay-as-you-go-tariffs, visited on 17 January 2016 (provided with the access to file on 4 February 2016).

733 Form CO, Section 6, paragraph 94.

734 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 1 (submitted by Telefónica in response to RFI 110).

735 […].

736 O2's internal documents, […] [ID 000000688.00001].

737 See for example, O2's internal document […] [ID000052631.00001]. See also O2's response to RFI 100, question 7.

738 Reply to the Statement of Objections, paragraph 450.

739 See: http://www.rootmetrics.com/uk/blog/special-reports/2015-1h-national-uk (provided with the access to file on 4 February 2016).

740 2016 Rootmetrics Report (provided with the Letter of Facts of 17 March 2016).

(810) In the Reply to the Letter of Facts of 17 March 2016 the Notifying Party argues that the 2016 Rootmetrics Report, contrary to the Commission's assessment, would contain a number of statements and results showing O2's low network quality. In particular, the 2016 Rootmetrics Report would show that speed improvements are the result of increased 4G coverage and that O2 does not perform similarly to Vodafone.

(811) In this respect, the Commission notes that indeed Rootmetrics, by way of its survey, intends to measure the overall functioning of networks across the United Kingdom considering different parameters, among which coverage. Therefore, an increased coverage has an influence on the overall performance result. This applies also to O2's network performance. Further, the Commission notes that, as indicated in Section 6.6.2., network coverage is an important parameter of competition. Therefore, any improvement in O2's network coverage is a strengthening of the competitiveness of its offering.

(812) In addition, the Commission notes that, in the 2016 Rootmetrics Report, O2 earned the third-highest award total ahead of Vodafone, with a total of 26 RootScores first places (it shares the first place with EE for text performance in England and won or shares 25 metro areas award) against 23 won by Vodafone. The 2016 Rootmetrics Report notes that "*In the first half of 2015, O2 finished last outright in four out of six categories. But in this round of testing, O2 showed solid improvement. O2 shared second place with Three in the Call RootScore category, ranked second in the Text RootScore category, and finished third in the Network Speed RootScore category. While O2 again ranked fourth in the RootScore categories of Overall performance and Network Reliability, the scoring in these two categories between O2 and third-place finisher Vodafone was quite close.*"[741]

(813) Therefore, the Commission considers that the 2016 Rootmetrics Report is consistent with the overall evidence on network performance, confirm the good quality of O2's network and suggest that O2's overall performance is largely to that of its network sharing partner Vodafone's.

(814) More details on O2's network are provided in Section 2 of Annex C, which forms an integral part of this Decision.

Positioning with respect to others parameters of competition

(815) With respect to customer service, O2 offers assistance to its customers both in its own branded shops as well via a customer service number and a live online chat. O2 customer service is also characterised by innovative products, such as "O2 Guru," which allows customers to book a *"guru session"* in store or online to receive help with his or her device,[742] and "Priority," which offers O2 customers the possibility to get tickets for music, sport and entertainment events up to 48 hours before they go on public sale, discounts *"from high street brands"* and access to Channel 4 shows 48 hours before they go on air.[743]

(816) Further, O2 offers a loyalty scheme, "O2 Reward," which is explained on O2's website as follows: *"You sign up. Every quarter we add up all your top-ups and give you 5% or 10% back. […] You can spend it on extra credit, phones and accessories, shopping vouchers or Ticketmaster tickets. Or save it for later. After you've been*

741 2016 Rootmetrics Report (provided with the Letter of Facts of 17 March 2016).
742 http://www.o2.co.uk/help/guru (provided with the access to file on 4 February 2016).
743 https://priority.o2.co.uk/ (provided with the access to file on 4 February 2016).

with us for six months, we'll give you 10% back instead of 5%. The longer you stay with us, the more you get back."[744]

(817) The Commission notes that the quality and richness of O2 customer service has gained O2 the highest customer satisfaction rate for seven consecutive years in Ofcom's surveys.[745]

(818) Particularly innovative is also the customer service offered to giffgaff customers. Indeed, giffgaff positions itself as a community-run operator, where customer queries are primarily answered by other customers in online forums and customers are rewarded for helping other customers.[746] The Commission notes that, in 2015, giffgaff received the "UK's Best Telecom Service Provider" award for the second year in succession by the consumer organisation Which?.[747]

(819) Tesco Mobile offers its customers assistance through its capillary network of stores. Further, Tesco Mobile's customers' loyalty is rewarded with Tesco Clubcard points on their mobile bills.[748] More generally, *"Tesco Mobile is widely recognised in the UK market as a customer champion brand and has won many awards that recognise the quality, value and distinctiveness it offers to customers*."[749] As shown in Figure 79 above, Tesco Mobile is the operator with the lowest number of complaints reported by Ofcom, closely followed by Three, while O2 has the third position, followed at distance by the other market players.

(820) With respect to brand competition, O2 pursues a multibrand strategy, that it allows it to best target different customer groups. […].[750] The high customer loyalty to O2 brand is evidence also by […].[751]

(821) In this respect, […] stated that O2 "*has the strongest brand in the market, appealing to the wider national geographic base, appealing to all age groups and socio-demographic profiles – O2 customer profile mirrors the Nat Rep mobile base (Source: YouGov. 2015). O2 currently have the highest customer awareness (90%) and consideration (77%) scores in the market. Customers choose O2 for a variety of reasons such as network coverage, good overall package, recommended by friends O2. It has the highest network satisfaction rate in the rate (NPS 31) and consequently the highest customer loyalty rate (70%) (Source: YouGov. 2015).*"[752]

(822) The Commission notes that the focus points of O2's main propositions – increased price transparency through Refresh, flexibility with regard to handset financing also through Refresh, personal technical assistance and popular gifts under a loyalty programme – are all customer centric, which helped O2 secure the highest customer

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744 https://payandgorewards.o2.co.uk/web/o2 (provided with the access to file on 4 February 2016).

745 See for 2014 http://media.ofcom.org.uk/news/2014/latest-customer-service-levels/ (provided with the access to file on 4 February 2016); for 2015 http://stakeholders.ofcom.org.uk/binaries/research/quality-of-customer-service-annual-reports/Quality_of_Customer_Service_report_2015.pdf published in January 2016 (provided with the access to file on 4 February 2016); as well as O2 website at http://www.o2.co.uk/abouto2/awards (provided with the access to file on 4 February 2016).

746 Form CO, Section 6, paragraph 88.

747 Form CO, Section 6, paragraph 88.

748 http://www.tescomobile.com/about-us/clubcard-points (provided with the access to file on 4 February 2016).

749 […].

750 Form CO, Section 6, paragraphs 807 and following. See also O2's internal documents cited in Form CO, Section 6, figure 85.

751 See also Annex 179 to the Form CO, as well as Annex 42 to the Form CO, page 91.

752 […].

satisfaction scores (see recital (817) above) and the strongest brand in the market. High customer satisfaction and a strong brand is a significant asset in O2's hands and a strong competitive constraint on the other operators, which have to compensate on other parameters to compete with O2's strong customer and brand proposition.

Conclusion on competitive constraint exerted by O2 pre-Transaction

(823) In light of the above, the Commission concludes that O2 exerts an important competitive constraint in the market for retail mobile telecommunications services in the United Kingdom.

ii. Likely competitive constraint to be exerted by O2 absent the Transaction

Notifying Party's view

(824) The Notifying Party claims that […]. In addition, the Notifying Party claims that […]. More details on the Notifying Party's claims in this regard are provided in Section 2 of Annex C, which forms an integral part of this Decision.

(825) In addition, the Parties have indicated that […].[753]

Commission's assessment

(826) The Commission has investigated whether the competitive constraint currently exerted by O2 in the retail market for mobile telecommunications services in the United Kingdom, illustrated in Section 8.2.1.2.c(i) of this Decision, is viable and, therefore, whether it constitutes the relevant comparison for the assessment of the Transaction under paragraph 8 of the Horizontal Merger Guidelines.

(827) The Commission's assessment is set out in the following recitals. To perform this assessment the Commission has in particular assessed O2's financial position and network assets. These specific findings are set out from recital (841) onwards.

General assessment

(828) In the market investigation the Commission asked MNOs and non-MNOs to assess how the competitive position of O2 will evolve, with respect to several competitive parameters[754] in the next two to three years absent the Transaction in the retail market for mobile telecommunications services to private customers in the United Kingdom. The majority of respondents to the market investigation expect O2's competitive position not to deteriorate, but to remain constant or improving with respect to the main parameters of competition identified in Section 6.6.2.[755]

(829) More precisely, with respect to price, […] stated that "*O2 is expected to maintain its relatively strong price positioning across most product segments*."[756] Likewise, […] expects "*headline pricing to remain relatively flat in the direct channel as plateaus [sic] and MNOs seek to maintain market share, with O2's position relative to its competitors likely to remain broadly stable over time. However, more competitive pricing from O2 (as well as from EE and Vodafone) is likely to be seen in the indirect channel, consistent with recent market behaviour, as well as in 'below the line' offers*

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753 Reply to the Statement of Objections, Section 6.5.

754 See above footnote 611.

755 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 39 a), b), c), g) and h), and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 37 a, b), c), g) and h). This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.

756 […]

such as upgrades or second contracts." [757] […] expects O2 to "*continue to focus on existing segments and not lead with low price. It will continue to address lower value customers through its other MVNO brands i.e. GiffGaff and Tesco Mobile*."[758]

(830) With respect to network reliability, […] expects O2 "*to achieve improved network reliability by deploying further LTE-enabled spectrum. It may also derive further network performance benefits from the impact of the Cornerstone network sharing arrangement*,"[759] while […] states that "*as a result of the network refresh being carried out of existing 2G and 3G networks as part of the broader 4G network rollout that network reliability should improve*."[760] As regards coverage, all competitors responding to the market investigation point out that O2's 4G coverage will improve to meet its 800MHz licence obligation to provide 4G to 98% of the population of the United Kingdom by 31 December 2017.[761]

(831) Moreover, the majority of respondents to the market investigation do not expect O2's resources to be insufficient for it to roll-out a 4G network absent the Transaction.[762] In particular, […] does not consider that it is credible that O2 is currently capacity constrained, or would, absent the Transaction, become capacity constrained in the foreseeable future in such a way that could reduce the strength of their competitive constraint in the retail mobile market.[763]

(832) As regards customer service, […] expects O2 "*to maintain its leading customer experience offering*"[764] and […] believes that "*O2 would continue to invest in and differentiate itself on the basis of its strong position in the marketplace for customer service.*"[765]

(833) Finally, with respect to brand, […] considers that O2 will "*maintain its brand consideration leadership through implementation of further loyalty and customer experience initiatives.*"[766] Likewise, according to […], "*O2 arguably has the strongest brand in the market, appealing to the wider national geographic base, appealing to all age groups and socio-demographic profiles – O2 customer profile mirrors the Nat Rep mobile base (Source: YouGov. 2015)*" and it believes that "*absent the proposed merger the O2 brand would remain strong*."[767] Finally, […] believes that "*O2 would continue to invest in its strong brand positioning creating the perception that customers get more with an O2 contract*."[768]

(834) In this regard, O2's strategic plan aims at […].[769]

757 […].
758 […].
759 […].
760 […].
761 […].
762 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 62 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 57. This would be true even if discounting the replies of BT/EE and Sky that in the Reply to the Statement of Objections, paragraphs 461-465, the Notifying Party qualifies as uninformative.
763 […].
764 […].
765 […].
766 […].
767 […].
768 […].
769 […] [ID 000033859.00001].

(835) With respect to the impact on O2 competitiveness of its current lack of ability to provide fixed telecommunication services (e.g. fixed broadband, fixed telephony) and/or TV services,[770] the view of respondents to the market investigation are mixed.[771] Nonetheless, […] notes that "*O2 did have a fixed telecommunications business (Be Unlimited) until 2013, when it decided to sell the business (which at that time comprised a base of fixed customers that was larger than […]'s) to Sky. O2 would not have sold its fixed business had it expected the need to provide fixed services to its mobile customers in order to remain competitive*."[772] […], which believes that "*the number of customers purchasing multiple services will evolve in the next 2 years in the UK*", considers that in any event "*consumers are likely to shop around for the best deals on standalone mobile, and will not necessarily demonstrate brand loyalty to fixed line operators. As with Three, O2 will be able to adapt to market conditions and remain a key contender*."[773] Ofcom is also of the view that "*bundling is unlikely to present a material risk to the viability of a standalone O2*" for the reasons illustrated from recital (701) onwards.

(836) Moreover, as mentioned in recital (705) above, should the ability to provide fixed-mobile bundles become more important and convergence pick-up in the United Kingdom, entry with such a bundled offer could be done relatively quickly.

(837) Furthermore, as is the case for Three, O2's public statements […] also indicate clearly that O2 does not consider fixed-mobile bundles as a threat for its business going forward. Indeed, at the hearing with the CMA in the context of the BT/EE review, O2 noted that in the United Kingdom, there are "*relatively few benefits to customers from purchasing bundles, which was why there was limited customer pull*."[774] Likewise, […][775] […][776]

(838) In the Reply to the Statement of Objections the Notifying Party argues that the Commission has failed to note that […].[777] In this regard, the Commission notes that […][778] […].

(839) Therefore, with respect to a possible threat deriving from fixed-mobile bundles (if such threat were to materialise), the Commission considers that O2's ability to compete is not likely to deteriorate in the next two to three years.

(840) Finally, with respect to technological convergence, as explained in recital (66), both fixed and mobile players use Wi-Fi to offload a very similar proportion of their traffic onto fixed networks via Wi-Fi O2 itself offloads around 80% of its traffic via Wi-Fi and makes use of femto/small cells to improve in-building coverage.[779] These are the main methods that both converged players and mobile only players employ in

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770 One of the two aspects of convergence, see recital (63).

771 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 40 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 38.

772 […].

773 […].

774 CMA, Anticipated acquisition by BT Group Plc of EE Limited, Summary of hearing with Telefónica on 28 July 2015, paragraph 16, available at https://assets.digital.cabinet-office.gov.uk/media/55df1a4140f0b6467a000007/Summary_of_hearing_with_Telefonica_on_28_July_2015.pdf (provided with the access to file on 4 February 2016).

775 Annex 130 to Form CO, page 66. See also […].

776 Annex B5.8 to the Reply to the Statement of Objection.

777 Reply to the Statement of Objections, paragraph 473.

778 O2's internal documents, […].

779 Reply to the Statement of Objections, Annex 1, paragraph 117 to 119.

order to offload traffic and improve quality of service at the current level of technological development (4G roll out). Further, O2 also has a fixed hotspots network that customer can use.[780] Therefore also in respect to this aspect of convergence, the Commission considers that O2's ability to compete is not likely to deteriorate in the next two to three years.

Specific assessment of O2's financial position

(841) O2's current and recent financial performance will be reviewed first, followed by its outlook for its next two years.

(842) As Figure 93 indicates, O2 uses OIBDA and OIBDA margin[781] to assess its own operating profitability as well as that of its peers. OIBDA and OIBDA margin are very similar to EBITDA and EBITDA margin discussed in relation to Three's financial position, the only difference being that OIBDA excludes one-off items and thus focuses exclusively on recurrent income. In the absence of large, extraordinary income or expenses EBITDA (EBITDA margin) and OIBDA (OIBDA margin) are essentially the same. This appears to be the case as Three's Q2 2015 OIBDA of GBP […] is almost the same as its EBITDA of GBP […],[782] and its OIBDA margin of […] is close to its EBITDA margin of […][783] for the same period. This is true not only for Q2 2015 but also for earlier periods and for the overall trend of Three's EBITDA and EBITDA margin. Furthermore, the trends and the figures of the four MNOs' OIBDA margins follow closely the trends and amounts of EBITDA margins in the comparison of Enders Analysis discussed in recital (716) and reproduced here in Figure 94 below. Accordingly, in the current case the two measures are almost identical and provide the same information, notably it gives a good measure of operating profitability in line with the explanation provided in recitals (709) and (710). It follows that OIBDA less CAPEX is almost identical to EBITDA minus CAPEX and, in line with the explanation in recitals (714) and (715), provides a good measure of the entity's earning potential. OIBDA less CAPEX as percentage of revenues (free cash flow margin) provides the same information relative to the entity's size.

(843) As can be seen on Figure 93 O2's OIBDA in Q2 2015 was strongly positive at GBP […]. Its OIBDA margin of […] and EBITDA margin of […] are also positive. The OIBDA and EBITDA margins compare well with the rest of the industry as they are […] to EE's and only […] Three's. Accordingly O2's core operations currently show […].

Figure 93

[…]

Free cash Flow (OIBDA – CAPEX)

[….]

Source: O2's internal documents, […] [000100206.00001].

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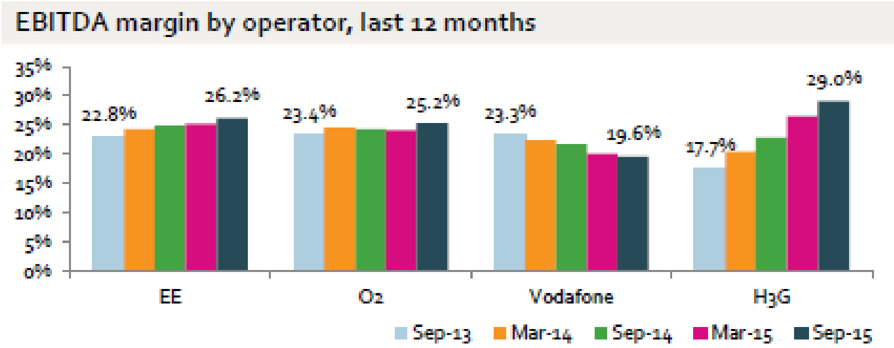
[780] See recital (115).

[781] OIBDA is Operating Income Before Depreciation and Amortisation. OIBDA margin is OIBDA as percentage of revenues.

[782] Annex 35 of the Form CO.

[783] Annex 35 of the Form CO.

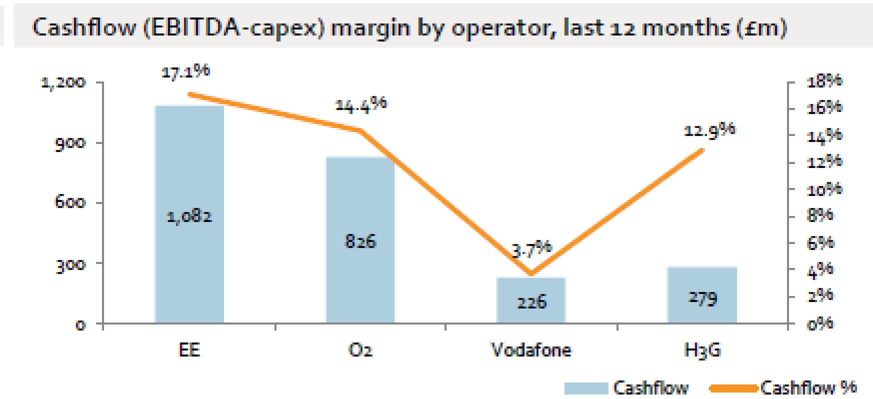
Figure 94: EBIDTA margin by MNO 2013-2015



Source: Enders Analysis, UK mobile market Q3 2015, page 12 [ID4172].

(844) O2's current OIBDA less CAPEX in Q2 2015 is also […] at GBP […]. Its free cash flow margin at the same time (based on EBITDA) is 14.4 % as shown in the comparison by Enders Analysis cited in recital (716) and reproduced in Figure 95 below. This compares well with the industry and exceeds the European average of 10.9 %.[784]

Figure 95



Source: Enders Analysis, UK mobile market Q2 2015, page 10 [ID4169].

(845) In addition, according to the ROCE calculation of Enders Analysis cited by the Notifying Party,[785] O2's ROCE is 24 % or 18 % depending on an adjustment that is partially unclear and partially unnecessary as it concerns inflation whereas Ofcom's WACC is nominal.[786] Nonetheless, even the lower figure is significantly above the WACC of 9.1% estimated by Ofcom. The Commission also notes that, as discussed in recital (761), the Enders calculation understated the ROCE due to the fact that Three has substantially higher CAPEX than depreciation. This does not appear to be the case for O2, […].[787] In any event, the calculated ROCE is significantly above the ROCE under any methodology.

(846) As regards the O2's outlook, the forecasts of O2's financial position absent the Transaction available in the Commission's file show continued profitability with a

784 *GSMA, European mobile network operator mergers. A regulatory assessment, December 2014,* [ID 6073].

785 Annex B6.1 to the Reply to the Statement of Objections, paragraph 30.

786 See recital (720).

787 O2's internal documents, […] [ID000100206.00001].

slight decrease in operating profitability and cash flow generating potential relative to revenues. As shown in Figure 96 below, […]. Given its very high current ROCE and relatively stable profitability, O2's ROCE is likely to remain above WACC for the full period.

Figure 96

	2015	2016	2017
Revenues (million GBP)	[…]	[…]	[…]
OIBDA (million GBP)	[…]	[…]	[…]
OIBDA margin	[…]	[…]	[…]
CAPEX (million GBP)	[…]	[…]	[…]
OIBDA less CAPEX (million GBP)	[…]	[…]	[…]
Free cash flow margin	[…]	[…]	[…]

Source: O2's financial forecasts, Annex 36 to the Form CO.

(847) The Commission also notes that O2's standalone financial plan for the period 2015-2017, […][788] […]:

Figure 97: O2's customer base evolution (excluding Tesco Mobile)

	2014	2015	2016	2017	Year over year (million)			Year over year (%)		
					2015	2016	2017	2015	2016	2017
Postpaid (excluding M2M)	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
M2M	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Prepaid	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]

Source: Annex 1 to O2's response to RFI 61.

(848) Likewise, […].[789] […].[790]

(849) Accordingly given the positive financial outlook and the growing customer base, O2 is likely to remain a formidable competitor in the retail market.

788 […]

789 Frontier Efficiencies Paper, Annex "M.7612 Frontier Economics - Capacity-related efficiencies model - 11-11-20153".

790 Annex 42 to the Form CO, page 7.

(850) The profitability of O2 business is also clearly evidenced by the purchase price of GBP 9.25 billion promised by Three,[791] comparable with that paid by BT for the acquisition of the rival EE (GBP 12.5 billion).

(851) Accordingly, the Commission considers that O2's financial outlook is positive and that, taking into account its current profitability and growing customer base, it appears unlikely that O2's ability to compete would deteriorate in the next two to three years.

(852) The Commission notes that according to the Form CO, […][792] […].[793]

(853) In this regard, the Commission notes that, absent the Transaction, it is unlikely that O2's financial performance is going to deteriorate compared to the projections presented above in this sub-section, as […]. Further, […], O2's financial position is unlikely to be significantly hindered and, in any case, not for a long period. Absent the Transaction, should Telefónica divest O2's business to a third party, such third party would replace Telefónica's incentives to invest in long term profitable projects, preserving the value and the competitiveness of O2 so as not to hinder the value of the business it acquired.

(854) The Commission also finds that […].

(855) In its Reply to the Statement of Objections, the Notifying Party referred to a […][794] […].[795] In this respect, the Commission considers that the Notifying Party's reading of the document is inaccurate. […].[796] […].

(856) The Notifying Party also referred […][797], […][798] […]

(857) The Notifying Party further mentioned […].[799]

(858) In light of the above, the Commission considers that the evidence provided by the Notifying Party […], the evidence provided suggests that in the absence of the Transaction, O2 would continue to be financially sound and to invest in profitable projects.

Specific assessment of O2's network quality

(859) The Commission considers that O2's network assets would allow it to continue exerting an important competitive constraint on the market in the next two to three years.

(860) O2 will further roll out its 4G network to comply with its regulatory obligation to provide 98% population coverage by 2017.

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791 If certain cash flow targets of the combined business are met, an additional consideration of maximum GBP 1 billion will also become payable. See paragraphs 2 and 3 of Schedule 7 of the Sale and Purchase Agreement.

792 Form CO, Section 6, paragraph 497.

793 Reply to the Statement of Objections, sections 5.8.2 and 6.5.

794 O2's internal documents, […] [ID 000033859].

795 Reply to the Statement of Objections, paragraph 464.

796 The upcoming Public Sector Spectrum Release (PSSR) includes 190Mhz of new spectrum to be auctioned. This amount of spectrum is divided in 40Mhz in the 2.3Ghz band, and 150Mhz in the 3.4Ghz band. See Ofcom, Public Sector Spectrum Release (PSSR): Competition and auction design issues for the 2.3 and 3.4 GHz spectrum award, including reserve prices, 26 October 2015 (provided with access to file on 4 February 2016).

797 O2's internal documents, […] [ID 000014982], […] [ID 000014988].

798 O2's internal documents, […] [ID 000014988].

799 […].

(861) As discussed in more detail in Section 8.2.2.3 b), Beacon will continue to play a crucial role for O2 absent the Transaction. The Commission considers that […].

(862) Specifically with respect to capacity and speed, the Commission considers that O2's network (and in particular its 4G layer) is […] and by survey results. O2's network also offers a very good quality of service to its customers, as confirmed by a high customer satisfaction and by O2's recent increases in market share.

(863) The Commission considers that in the short run, O2 would be able to […].

(864) The Commission has also assessed O2's network capacity model, […] discussed in detail in Annex C, which forms an integral part of this Decision.

(865) For this reason, it is the Commission's view that […], it cannot be concluded that it would be likely that O2's network quality would degrade to a point where its ability to compete would be materially undermined.

(866) Moreover, the Commission notes that even within the next three years there are a number of means to increase capacity […]. For example, […], O2 could accelerate refarming […]spectrum for 4G. […] additional capacity that could be provided on the basis of 3.4 GHz spectrum which will be auctioned in the upcoming PSSR auction, some of which is likely to be acquired by O2.

(867) In conclusion, whereas the Commission acknowledges that, […].

(868) A more detailed review of future network plans as well as an assessment of the Notifying Party's claims on […] is carried in Section 2 of Annex C, which forms an integral part of this Decision.

(869) The Commission therefore considers that, based on the available evidence in its file, it appears unlikely that O2's ability to compete would materially deteriorate […] in the next two to three years.

Conclusion on likely competitive constraint to be exerted by O2 absent the Transaction

(870) In light of the above, the Commission concludes that, absent the Transaction, O2 would continue to exert the same competitive constraint it exerted on the relevant market pre-Transaction and that this is the relevant comparison for the assessment of the Transaction pursuant to paragraph 8 of the Horizontal Merger Guidelines.

(871) The above conclusion would apply both in a (short or long term) scenario where O2 were to remain controlled by Telefónica as well as in a scenario where O2 were to be acquired by a third party other than the Notifying Party.

iii. Conclusions on specific assessment of the competitive constraint exerted by O2

(872) In light of the above, the Commission concludes that pre-Transaction O2 exerts an important competitive constraint in the market for retail mobile telecommunications services in the United Kingdom and that it is likely to continue exerting such a constraint absent the Transaction.

d) Likely behaviour of the merged entity post-Transaction

i. Notifying Party's view

(873) According to the Notifying Party, the Transaction will not give rise to a significant impediment to effective competition in the form of unilateral effects as it will not lead to the combined business having market power in the overall market or in any sub-segment thereof. The Notifying Party considers that the Transaction will not result in the creation of a dominant position and will instead enable the merged entity

to significantly improve its network coverage and performance (and in particular download speeds) and to compete with EE and Vodafone on a more equal footing. This would ultimately benefit customers, as it would prevent the mobile market in the United Kingdom developing into a bifurcated market with BT/EE and Vodafone as largely unchallenged market leaders on the one side and Three and O2 operating their businesses defensively and developing increasingly into second tier players.[800]

(874) As regards the merged entity's incentives to compete, in the Reply to the Article 6(1)(c) Decision, the Notifying Party argues that the Article 6(1)(c) Decision only relies on two theoretical concepts to substantiate its concerns that the incentives of the merged entity to compete aggressively are likely to be reduced by the Transaction, that is to say the generic reference that the Transaction will remove the competition between the Parties and the so-called "cannibalization theory".

(875) According to the Notifying Party, the post-Transaction market will remain characterised by a number of strong operators with the incentive and ability to constrain the combined business by competing aggressively on price and quality to retain and attract customers. In the face of the challenges presented by the dynamism of the mobile market in the United Kingdom, driven by competition from new players and technological developments, the combined business will have all the incentives to compete aggressively to retain its existing customer base and attract new customers.[801]

(876) The Notifying Party further argues that the rationale of the Transaction is to […][802]

(877) Finally, the Notifying Party argues that the competitive concerns raised by the Commission are rebutted by the evidence from recent mergers in the mobile telecommunications sector. In particular, the Notifying Party submitted a paper on the effects on competition and consumer welfare of the acquisition of Orange Austria by Hutchison 3G Austria that was consummated in Austria in late 2012 (the "Compass Lexecon Study").[803] The Notifying Party argues that the Compass Lexecon Study, as well as the developments in Ireland and Germany, refutes the notion that the merged entity is likely to have incentives to raise prices post-Transaction. More details on the Notifying Party's claims in the Compass Lexecon Study are provided in Annex B.

ii. Commission's assessment

(878) The Commission considers, for the reasons set out below, that the Transaction is likely to negatively impact the incentives to compete that Three and O2 would have on a standalone basis.[804]

(879) First, the Transaction would eliminate competition between the Parties. According to the Horizontal Merger Guidelines, the loss of competition between merging parties is likely to provide the merged entity with the incentives to compete less aggressively on the market and to raise prices, in particular because some of the customers who

800 Form CO, Section 6, paragraph 554 and following.

801 Form CO, Section 6, paragraph 631 and following.

802 Form CO, Section 6, paragraph 631 and following.

803 Alina Goad, Thilo Klein, and Jorge Padilla (Compass Lexecon), "Case Study – Effects of the H3A/Orange Austria Transaction", 21 October 2015.

804 As regards the Notifying Party's claim that the merged entity will have a greater ability to compete than Three and O2 separately, the Commission notes that this is an efficiency claim and as such it is separately discussed in Section in Section 8.4.

would have been lost to the other Party pre-Transaction would be recaptured by the merged entity post-Transaction.[805]

(880) Second, the Transaction would bring about a significant increase in the merged entity's revenues and customer base. In previous cases the Commission notes that "*the incentives for an operator to attract new customers by offering aggressive prices depend on the size of the customer base": "Attracting new customers by bringing out new offers and adopting an aggressive pricing policy reduces the profitability of the existing customer base over time as those tariffs and conditions are likely to be extended to existing customers at some point in time."*[806]

(881) In *T-Mobile / Tele.ring*, the Commission noted that this "*effect is not necessarily felt immediately: for a certain period it is possible to differentiate between tariffs for new customers and tariffs for existing customers (particularly where offers are confined to temporary benefits, such as a discount on the standing charge or an increase in airtime for the first few months). In time, however, lower tariffs for new customers always have medium-term implications for the customer base, as existing customers will not tolerate discrimination*." Hence, if existing customers whose minimum contract duration has already ended realise that their MNO offers very attractive tariffs, this may induce them to switch to those new offers. "*So, the bigger the customer base, the less likelihood of low price offers aimed at attracting new customers, as the threat of lost income from existing customers would no longer be offset by the additional income to be expected from new customers*".[807]

(882) Likewise in *Telefónica Deutschland/E-Plus,* the Commission noted that "*Telecom operators compete for new customers by offering cheaper tariffs than for their existing customers. Offering cheaper tariffs is necessary since firms want to attract new subscribers from rivals. In the short term, it is therefore possible to differentiate between tariffs for new customers and tariffs for existing customers. This possibility to price discriminate in the short term relies on the assumption that existing customers are not able to switch to alternative tariffs because of the minimum contract period by which they are bound. However, in the medium term, these existing customers will become contestable, for example once their minimum contract period ends, and this may induce them to switch to those new cheaper offers available in the market. The incumbent provider would therefore face incentives to offer prices that are mainly aimed at ensuring that its customers would not churn to more aggressive competitors. By the same token, attracting new customers by launching new aggressive commercial offers reduces the profitability of the existing customer base over time as those tariffs and conditions are likely to be extended to existing contestable customers in the medium term. Therefore, (...), if there is a large(r) subscriber base, the incentives to offer attractive tariffs would be reduced because over time there would be a risk of losing profits on the existing customer base. As a result, the increase in the merged entity's subscriber base would result in*

805 Horizontal Merger Guidelines, paragraph 24.

806 Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recital 464, which refers to Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria / Orange Austria,* recital 256; Commission Decision of 26 April 2006 in case No M.3916 – *TMobile Austria / Tele.ring*, recitals 74 and following.

807 Commission Decision of 26 April 2006 in case No M.3916 – *TMobile Austria / Tele.ring*, recital 77.

lower incentives to offer lower prices in the medium term as compared to each of the Parties' incentives on a standalone basis."[808]

(883) The Commission considers that the same reasoning is applicable in the present case as the increase in the customer base of the Notifying Party would be significant and [..] times larger than the one of Three today.

(884) As regards the Notifying Party's argument that […], the Commission notes that such profitability may also be eroded by the need for the merged entity to apply lower prices to its existing customers to match those offered to attract new customers. Indeed, according to the Horizontal Merger Guidelines, "*[t]he larger the increase in the sales base on which to enjoy higher margins after a price increase, the more likely it is that the merging firms will find such a price increase profitable despite the accompanying reduction in output.*"[809]

(885) Furthermore, according to the Horizontal Merger Guidelines, the merged entity's expectations that the remaining competitors would also follow its unilateral price rises due to reduced competitive pressure may also be "*a relevant factor influencing the merged entity's incentives to increase prices*".[810] In this respect the Commission notes that, post-Transaction, not only would the merged entity have an expectation that its main competitors, that is to say EE and Vodafone, will have the incentives not to compete with the merged entity, but also the Transaction is likely to hinder the same ability to compete of EE and Vodafone as discussed in Sections 8.2.1.3.A) and 8.2.2. Likewise, the effects of the Transaction on the wholesale market for access and call origination on public mobile networks, presented in Section 8.3., would further reduce the already limited ability to compete of non-MNOs. These elements, taken together, are likely to lead to a significant impediment of effective competition as they hinder the ability of competitors, "*either individually or in the aggregate, [to] be in a position to constrain the merged entity to such a degree that it would not increase prices or take other actions detrimental to competition*."[811] Further, these elements increase the incentives of the merged entity to raise prices as customer loss is reduced.

(886) The reduction in the incentives of the merged entity to compete post-Transaction is further supported by the likelihood of price increases indicated by the Commission's quantitative analysis (see Section 8.2.1.4.b. and Annex A). The pre-Transaction degree of competition between the Parties as shown by the diversion ratios illustrated in Figure 37 and Figure 38 above is significant. The magnitude of the likely price increases deriving from the Transaction and estimated on the basis of those diversion ratios are a clear indication of the merged entity's reduced incentives to compete following the removal of the competition between the Parties.

(887) The change in the incentives to compete of the merged entity is further supported by the results of the market investigation. The Commission notes that the majority of respondents to the market investigation consider that the merged entity is likely to be less aggressive than the standalone merging companies and to have lower incentives to compete with the other MNOs on the retail mobile telecommunications market

[808] Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recitals 468 and 469.

[809] Horizontal Merger Guidelines, paragraph 27.

[810] Horizontal Merger Guidelines, endnote 28.

[811] Horizontal Merger Guidelines, paragraph 36.

and/or some of its possible segments. This is because the competitive constraint currently exerted by the Parties on each other will disappear. Respondents point out that the merged entity will become the largest retail mobile provider in the United Kingdom, serving over […] customers; thus, attracting new customers by launching new offers and adopting an aggressive pricing policy would reduce the profitability of the existing customer base over time as those tariffs and conditions would have to be extended to the existing customer base.[812] In this vein, according to […], "*Three is likely to move further away from offering unlimited data tariffs, which have been the foundation of Three's competitive position in the market, towards capping all of its tariffs. This will both avoid it cannibalising O2's customer base, and be part of the increasing coordination between the retail offers of the various MNOs that TalkTalk expects following the merger*."[813] Likewise, […]stated that the "*merger would eliminate competition between two separate MNOs. Prior to the merger Hutchison and O2 are constrained, inter alia, by each other as some subscribers would switch to the other in case of a price increase. This competitive constraint on one another would be lost as a result of the merger. [...] Additionally, we also believe the economic drivers for the merged entity will be different from those of the merging companies due to the significant increase in customer base (especially Hutchison). As the Commission noted in both the Irish and German mergers, such an increase will give the merged entity lower incentives to offer attractive tariffs to obtain new customers, since it has to offer these attractive tariffs to its entire customer base. Customer retention would therefore be a driver over growth.*"[814] Finally, […]stated that post-Transaction it is likely that "*Three may no longer feel the need to lead the market on price*."[815]

(888) Finally, the Commission's review of the Notifying Party's internal documents further supports the likelihood of the Parties' decreased incentive to compete aggressively, and related price effects, following the Transaction and the reduction of the number of MNOs from four to three.

(889) In this respect the Commission notes that, in its response to Ofcom's consultation on the assessment of future mobile competition and proposals for the award of 800 Mhz and 2.6 GHz spectrum[816] in June 2011, Three argued that having four MNOs is a superior market structure to having only three: "*Three fully supports Ofcom's provisional conclusion that there would be a risk to wholesale competition in the UK mobile market if fewer than four credible national wholesalers are active in the market following the Combined Auction [...]. The experience of 3G licensing in Western Europe during the last ten years provides strong evidence of the benefits to consumers of markets with a minimum of four players, particularly where there has been sustainable market entry by a new 3G operator. This experience reflects the theoretical economic models which support a four rather than three player market.*

812 Responses to Questionnaire Q26 to MNOs of 11 September 2015, questions 42 and 43 and to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 40 and 41.

813 […].

814 […].

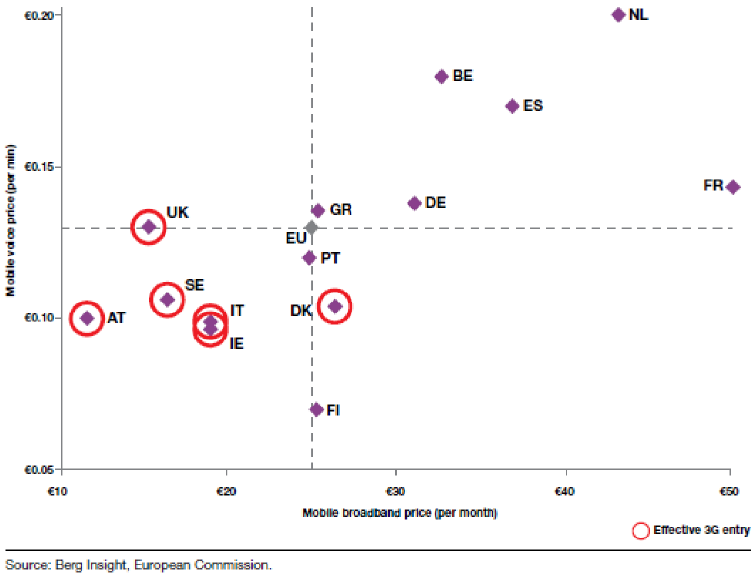
815 […].

816 […] "Three response to Ofcom consultation on assessment of future mobile competition and proposals for the award of 800MHz and 2.6GHz spectrum," 7 June 2011, [ID 023600260].

Three also believes that a four player market offers wider social and economic benefits that would not be secured in a three player market."[817]

(890) In this document, Three submits a cross-country analysis of prices and quality in Western Europe. Three compares the prices of voice calls and data (mobile broadband, 3G at the time) of countries that attracted and successfully retained a new 3G entrant in 2011. The comparison is reproduced in Figure 98: Mobile voice and broadband pricing in Western Europe below:

Figure 98: Mobile voice and broadband pricing in Western Europe



Source: […], "Three response to Ofcom consultation on assessment of future mobile competition and proposals for the award of 800MHz and 2.6GHz spectrum," 7 June 2011, Figure 12 [ID 023600260].

(891) Countries with effective 3G entry are circled in red. These are also the countries with four operators, except Spain, where the fourth operator entered much later than in other countries and had not yet had a significant impact on the Spanish market in 2011, and Germany, where there were four 2G operators. Most of the effective 3G entries were companies belonging to the today CKHH group just like Three[818].

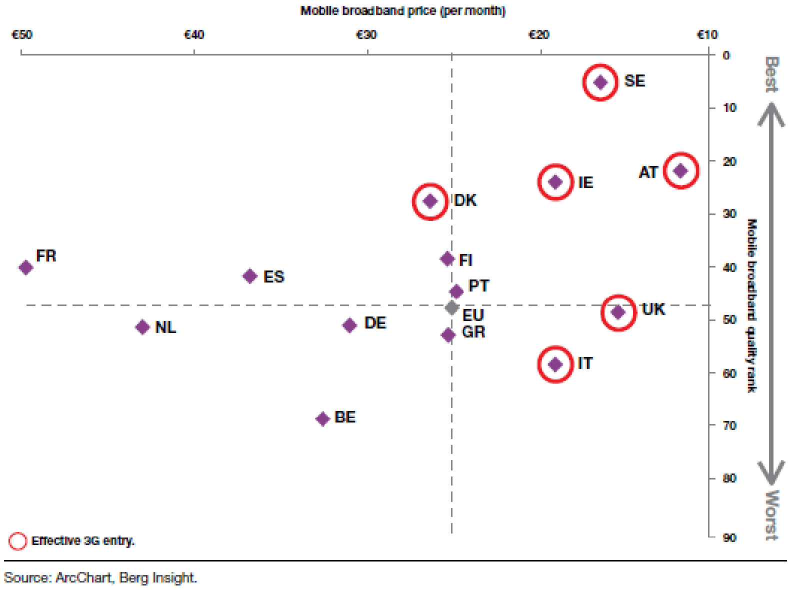
(892) As can be seen from the above Figure 98: Mobile voice and broadband pricing in Western Europe, according to Three, the price differences between the four-operator countries with effective 3G entry and the countries with three operators are significant. In voice calls the difference can reach 100 %, notably if Austria, Sweden, Italy, Ireland and Denmark were compared to the Netherlands. The same is true in mobile broadband where the difference exceeded 100 %, notably if Ireland, Italy, Sweden, the United Kingdom and Austria, which all had prices below EUR 20, are compared to the Netherlands and France, both of which showed prices above EUR 40.

817 […] "Three response to Ofcom consultation on assessment of future mobile competition and proposals for the award of 800MHz and 2.6GHz spectrum," 7 June 2011, paragraphs 146 and 149 [ID 023600260], […] available at http://stakeholders.ofcom.org.uk/binaries/consultations/combined-award/responses/Three.pdf.

818 […], "Three response to Ofcom consultation on assessment of future mobile competition and proposals for the award of 800MHz and 2.6GHz spectrum," 7 June 2011, paragraph 157 [ID 023600260].

(893) Three adds that the lower prices of the four-operator countries with effective 3G entry did not come at the price of lower quality. On the contrary, network quality was better in the four-operator countries with efficient 3G entry, despite lower prices as shown in Figure 69:

Figure 99: Western European mobile broadband price and network quality



Source: […], "Three response to Ofcom consultation on assessment of future mobile competition and proposals for the award of 800MHz and 2.6GHz spectrum," 7 June 2011, Figure 13 [ID 023600260].

(894) Finally, Three concludes its argumentation in 2011 as follows:

"*In summary:*

– *Consumers in countries that have managed to attract 3G entrants and sustain a market in which four or more national wholesalers compete (such as Sweden, Austria and Ireland), generally benefit from materially lower than average mobile voice and mobile broadband pricing, while simultaneously experiencing substantially higher than average mobile broadband quality and penetration; whereas*

– *Consumers in countries that did not attract 3G entrants and have fewer than four national wholesalers competing in their markets (such as Belgium, France and the Netherlands), generally suffer from materially higher than average mobile voice and mobile broadband pricing, while simultaneously experiencing substantially lower than average mobile broadband quality and penetration. In particular, the Netherlands has the highest level of mobile voice prices; the second highest level of mobile broadband prices and lowest level of mobile broadband penetration in Western Europe.*"[819]

(895) Even though Three's submission is from 2011, it is still relevant as the comparison presented above was done to support its view on how the dynamics of competition in the United Kingdom would have been negatively affected absent a fourth MNO.

819 […], "Three response to Ofcom consultation on assessment of future mobile competition and proposals for the award of 800MHz and 2.6GHz spectrum," 7 June 2011, paragraph 174 [ID 023600260].

(896) While compared to 2011 data is becoming more important and data usage is forecast to grow significantly (see above Section 6.2.), this has not altered significantly the competitive dynamics between MNOs in mobile telecommunication markets. In particular, regardless of the impact of the technological shift from 3G to 4G, the Commission notes that 4G rollout and take-up is already in an advanced stage in the United Kingdom (see Section 6.2.), as was 3G in 2011.[820] Further, the 4G technology advancement took place without any disruption in key financial indicators as MNOs' capital expenditures and EBDITA margins have remained stable and in line with previous years.[821] In summary, all indications are that the move to 4G and more data usage has not changed the competitive dynamics in the United Kingdom in a way that would render Three's submission to Ofcom in 2011 irrelevant in the present context. Regardless of the results of the 4G auction, the four MNOs are still the key players in the market, and while the evolution of their market shares has been different, their reciprocal positions in the market have remained unchanged (see Figure 20).

(897) Likewise, with respect to the impact of multi-play offers and the evolution since 2011, things has not changed significantly from 2011 until today and are not likely to change in the near future either, as discussed in Section 6.3. (see in particular Figure 7: Take-up of bundled services in the United Kingdom, Q1 2014).

(898) It follows that there appears to be nothing in today's market that would render inapplicable 2011 Three's advocacy for a four MNO market in the United Kingdom.

(899) Nonetheless, in the context of the present Commission's proceedings, the Notifying Party has submitted the Compass Lexecon Study, which seeks to demonstrate that the reduction of the number of players from four to three in Austria following the acquisition by a company within the CKHH group of Orange Austria Telecommunication GmbH in 2012 had a positive impact on competition and consumer welfare.

(900) Regardless of the contradictions between Three's 2011 statements and the Compass Lexecon Study, the Commission does not consider that the general conclusions that the Notifying Party seeks to draw on the basis of the Compass Lexecon Study could replace the specific assessment of the Transaction.

(901) A more detailed review of the Notifying Party's claims in this respect, as well as of other studies aimed at assessing the effect of concentrations on outcome variables relevant for competition and consumer welfare in the mobile telecommunications sector, is carried out in Annex B.

(902) Further, the Commission notes that, […][822]

(903) […]. This is also in line with the Commission's assessment that convergence is not a meaningful trend in the United Kingdom, see Section 6.3. above.

(904) Finally, the Commission notes that also O2 […].[823] While the Commission acknowledges that O2 is not aware of nor responsible for Three's post-Transaction

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[820] Ofcom, CMR 2011, Section 5 [ID6079].

[821] Enders Analysis, UK mobile market Q3 2015, page 12 [ID4172].

[822] […] The Commission notes that in the Reply to the Statement of Objections, paragraph 549, the Notifying Party only criticism on the interpretation of this statement is that "*the Commission has attributed disproportionate weight to the statement*".

[823] […].

plans for the merged entity, as the Notifying Party claims, nonetheless O2's comment reveals […].

(905) With respect to the Notifying Party's claim that the Commission's analysis of the likely behaviour of the merged entity ignores the combined business plan which […],[824] the Commission considers that such prediction, made by the Notifying Party itself, has to be weighed against the overall body of evidence illustrated in this Decision. The Commission considers that the combined business plan […].[825]

(906) On the basis of the above, the Commission therefore concludes that the merged entity's incentives to compete aggressively are likely to be significantly weaker than those of Three and O2 pre-Transaction.

8.2.1.3. Assessment of competitive position of the Parties' competitors

a) MNOs

i. Competitive position pre-Transaction

(907) As mentioned in Section 6.5.1., the MNO competitors of the Parties are EE (whose acquisition by BT was approved in January 2016 by the CMA[826]) and Vodafone.

BT/EE

(908) In its Final Findings Report, the CMA concluded that the combination of BT and EE was not likely to give rise to a significant lessening of competition as a result of a strengthening of EE in the retail market for mobile telecommunications services.

(909) Therefore, in this subsection, when analysing the current competitive position of BT/EE in the market, the Commission only considers the specific position of EE. The limited impact of BT Mobile as a standalone player pre-Transaction is discussed in Section 8.2.1.3.b).

(910) As shown in Section 8.2.1.2.a) EE is currently the second largest MNO by subscribers and the largest by revenues both in the overall market and for private customers.

(911) EE was the first operator to launch 4G services and its network has currently the largest coverage in the country. EE benefits from the MBNL network sharing arrangement with Three. The parties […] share the MBNL site grid of approximately […] and […] share a 3G network in areas with limited demand for data services. Due to these MBNL arrangements, EE benefits from fixed cost savings for operating its network.

(912) EE's network performance is good. It has been rated the highest in Rootmetrics latest reports, although in the 2016 Rootmetrics Report Three was awarded the most reliable network. In all recent YouGov surveys EE has been rated lower than Three and O2.[827]

(913) Respondents to the market investigation considered that EE is currently able to effectively compete in the mobile telecommunications retail market on the basis of

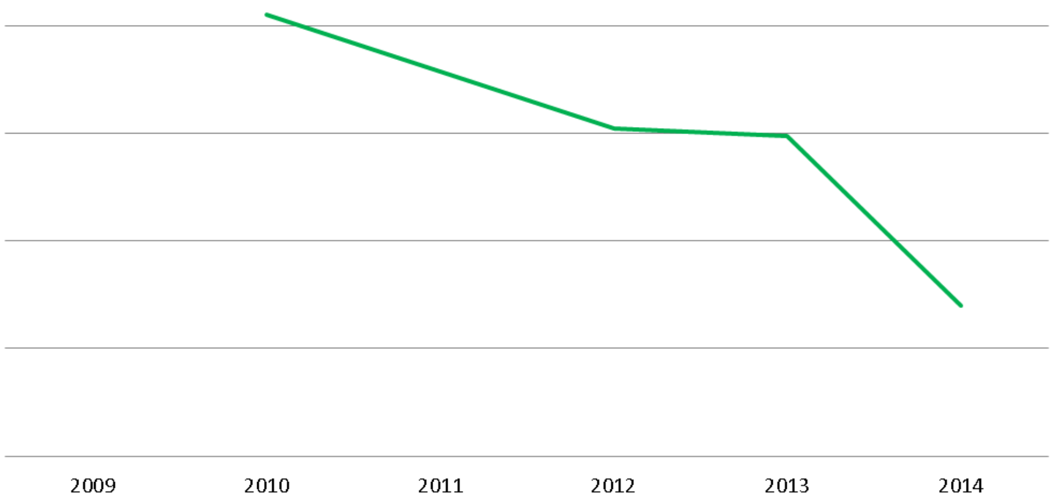
[824] Annex 42 to the Form CO.
[825] See recital (650).
[826] See recitals (109)-(110).
[827] See recitals (658)-(662).

its network assets.[828] The Commission considers that the current ability to compete of EE is further evidenced by its financial performance.

(914) In light of the above, the Commission considers that, in line with the Notifying Party's submission, EE is currently able to compete in the retail market.

(915) Notwithstanding the above, since its creation EE has been losing subscriber market share as shown in Figure 20 above, reproduced in the following.

Figure 100: Evolution of EE's subscriber market share (2010-2014)

[]

Source: Figure 20 of this Decision.

(916) In line with the observation of the evolution of its market shares, the history presented in recitals (485) and following paints an image of EE as an active, but not aggressive player, pursuing a premium strategy. Indeed, EE was part of the industry trend to limit data usage and increase data prices in late 2010 and changed its approach only as a result of the competitive pressure from Three's One Plan (see recitals (497)-(510)). EE also exploited to the fullest its early monopoly on 4G and followed the policy of charging a premium for 4G even when other MNOs were close to launching their own service. Its CEO made public comments in the presence of the CEOs of other MNOs, confirming that it would not offer unlimited data under 4G, and indeed it did not make its unlimited product available within its 4G plans. Its shareholder also made public comments on how MNOs should monetise the 4G service, in agreement with similar comments from a high ranking executive of Vodafone. Moreover its CEO publicly accused Three for giving 4G away for free and stated that EE will not be drawn into a price war. In other words, EE tried to maintain higher prices even in the face of intense competitive pressure from Three. Although subsequently EE decreased its 4G prices, largely as a result of Three's behaviour, it still maintained a small premium. EE also kept its roaming prices high despite more competitive pricing from Three.

(917) Further, the pricing analysis undertaken from recital (580) onwards, as well as third party surveys (see Figure 65), show that EE's direct pricing positioning is higher than Three and O2. This is confirmed by the results of the market investigation,

[828] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 43 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 41.

where non-MNOs rated EE lower than Three in terms of competitiveness of prices.[829]

(918) On the basis of the evolution of its subscriber market share, its history and pricing behaviour the Commission considers that, in past and recent years, EE has competed on the relevant market mostly focussing on value generation and customer retention rather than subscriber growth.

Vodafone

(919) Vodafone is the third largest operator in the mobile market in the United Kingdom and in the private segment.

(920) It is part of a network sharing agreement with O2. Under the Beacon arrangements, Vodafone and O2 roll-out a joint grid of sites that is scheduled to amount to […] sites once completed. In addition, […]. Vodafone benefits from significant fixed cost savings under these arrangements.

(921) Vodafone's network performance is consistent with its competitors'. Vodafone has expanded its 4G coverage in urban areas and continues to roll-out its 4G network outside the major city centres. Its network performance is therefore set to show further improvements at the national levels in 2016 and beyond. According to the 2016 Rootmetrics Report Vodafone’s network speed is second only to EE's.

(922) Respondents to the market investigation consider that Vodafone is currently able to effectively compete in the mobile telecommunications market on the basis of its network assets.[830] The Commission considers that the current ability to compete of Vodafone is further evidenced by its financial performance.

(923) In light of the above, the Commission considers that, in line with the Notifying Party’s submission, Vodafone is currently able to compete in the retail market.

(924) With respect to Vodafone’s market performance in recent past, in the five full years before notification of the Transaction it has been losing subscriber market share and only very recently kept it constant, as shown in Figure 20 above, reproduced in the following.

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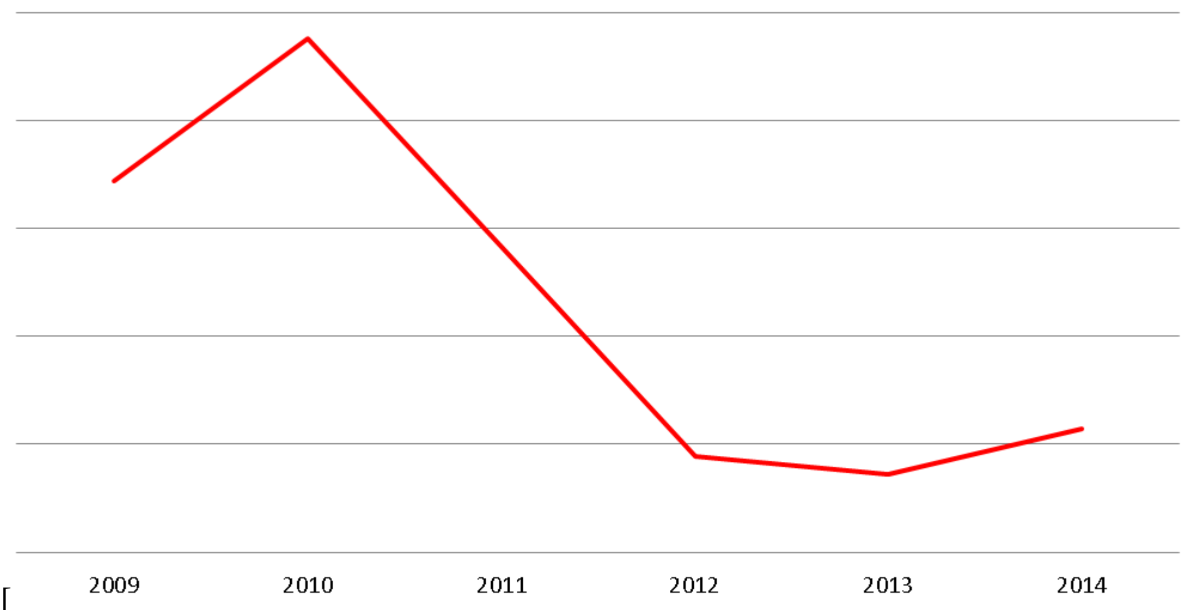
829 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 30.

830 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 43 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 41.

Figure 101: Evolution of Vodafone's subscriber market share (2009-2014)



[ ]

Source: Figure 20 of this Decision.

(925) Vodafone's history is similar to EE's. Namely, Vodafone was also part of the tendency to limit data usage around late 2010 and kept its roaming prices high in line with the industry. In the second wave of attempted data monetisation, Vodafone set a premium price for 4G, following EE's lead instead of undercutting it, which is a clear demonstration of its incentives to compete. Furthermore, Vodafone's strategy to follow EE's pricing was in line with its CEO's public comments on how it was "*the way to go*", giving thereby forward guidance to competitors on Vodafone's 4G pricing. These comments followed other comments by its CEO in the presence of the CEOs of MNOs that it would not offer unlimited data under 4G. Moreover, Vodafone kept its prices high even in the face of losing market share in 4G. That is to say, Vodafone acted in the opposite way than what would follow from its low market share.

(926) Further, the pricing analysis undertaken from recital (580) onwards, as well as third party surveys (see Figure 65), show that Vodafone's pricing positioning is higher than Three, O2 and EE. This is confirmed by the results of the market investigation, where non-MNOs rated Vodafone lower than Three in terms of competitiveness of prices.[831]

(927) On the basis of the evolution of its subscriber market share, its history and pricing behaviour the Commission considers that, in past and recent years, Vodafone has competed on the relevant market mostly focussing on value generation and customer retention rather than subscriber growth.

ii. Competitive position absent the Transaction

(928) On the basis of the overall evidence in its file the Commission considers that there is no reason to believe that, absent the Transaction, the competitive position of EE and Vodafone would change.

[831] Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 30.

(929) As regards network sharing, both EE and Vodafone would continue relying on their network sharing agreements with respectively Three and O2. As discussed in more detail in Section 8.2.2.3, both network sharing arrangements can be assumed to continue more or less in line with their current situation absent the Transaction. MBNL would likely be […]. Beacon would likely […].

(930) The Commission considers that this finding does not change also as a result of BT's acquisition of EE. Indeed, in its Final Findings Report, the CMA has not found any concerns as regards an increased ability of BT/EE to attract customers away from its competitors as a result of a combination of BT's and EE's assets and abilities pre-Transaction.[832]

(931) Likewise, the Commission considers that this finding would not change as a result of the impact of convergence, as for the reasons set out in Section 6.3 it is unlikely that customer demand for multi-play products including a mobile component would significantly increase in the next two to three years to an extent that competitive dynamics in the mobile market would change.

iii. Likely reaction post-Transaction

Notifying Party's view

(932) The Notifying Party claims that the other MNOs will continue to compete on the retail market after the Transaction.

(933) The Notifying Party submits that the combined scale of Three and O2 will ensure that EE, Vodafone and the non-MNOs will continue to face strong price and quality competition. BT/EE's and Vodafone's incentives to compete will also increase as a result of the Transaction because of the more significant competitive threat posed by the combined business. Post-Transaction, the merged entity will therefore continue to face aggressive competition from BT/EE and Vodafone, both of which will be seeking to attract the merged entity's customers and expand their own footprints in line with their individual strategies and incentives.

(934) In relation to BT/EE, the Notifying Party submits that BT/EE will be a significant competitive threat to the combined business post-Transaction as: (a) EE already is the market leader with the largest and highest quality network in the United Kingdom; (b) EE is pursuing a convergence strategy by offering fixed broadband, fixed telephony and TV propositions, allowing it to offer 'best value' bundle deals and (c) BT's acquisition of EE will add further dynamism to the market due to immediate increase in scale, customers and network operations and its likely aggressive pursuit of cross-selling opportunities.

(935) In relation to Vodafone, the Notifying Party submits that Vodafone will continue to compete aggressively against the merged entity as: (a) Vodafone continues to enjoy a strong reputation for quality in the market and Vodafone continues to invest heavily in its network and customer experience; (b) Vodafone differentiates itself from its competitors through often exclusive content propositions; and (c) Vodafone is pursuing a convergence strategy to monetise on the opportunity to tie in customers through multi-play propositions.

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832 CMA, Final Findings Report, Section 12 [ID 4112].

Commission's assessment

(936) A merger is unlikely to harm competition where the reaction of the remaining competitors would discipline the behaviour of the merged entity. On the other hand, the remaining competitors may not be willing or able to compete sufficiently post-Transaction so as to compensate for the loss of competition.

(937) For this purpose, the Commission assessed the likely reaction of the remaining competitors post-Transaction. In particular the Commission examined whether BT/EE and Vodafone, as well as the non-MNOs (see Section 8.2.1.3.b) below), would have sufficient ability and incentives to compensate for the degree of competition lost due to the Transaction.

Ability to compete

(938) Concerns have been raised in relation to the merged entity's ability to marginalise post-Transaction the other two MNOs. Indeed, while EE and Vodafone appear as two strong competitors today, their ability to compete effectively with the merged entity post-Transaction significantly depends on the future development of the MBNL and Beacon network sharing agreements.

(939) Post-Transaction the merged entity would hold a stake in both network sharing agreements. This would decrease the alignment of interest between the respective network sharing partners. The merged entity has the ability and, depending on its network consolidation plans, also the incentive to disrupt the functioning of one or even both network sharing agreements. This would have the effect of weakening the respective network sharing partners (namely Vodafone and/ or BT/EE) and reduce their ability to compete post-Transaction in particular with respect to network performance related parameters of competition. This effect of the Transaction on the ability to compete of Vodafone and EE is further discussed in Section 8.2.2.

(940) Overall, taking into account the concerns raised in relation to the merged entity's ability to marginalise the other two MNOs, the Commission concludes that post-Transaction BT/EE and/or Vodafone are unlikely to have the ability to compete against the merged entity as effectively as prior to and in the absence of the Transaction.

Incentives to compete

(941) Even if the Commission were to consider that the merged entity does not have the ability to marginalise the other two MNOs, as described in recitals (938) to (940), and therefore assuming that BT/EE's and Vodafone's ability to compete is fully preserved post-Transaction, the Commission considers that they would not, in any event, have the incentives to compete as vigorously as prior to the Transaction.

(942) According to the Horizontal Merger Guidelines, "*non-merging firms in the same market can also benefit from the reduction of competitive pressure that results from the merger, since the merging firms' price increase may switch some demand to the rival firms, which, in turn, may find it profitable to increase their prices*".[833] Furthermore, recital 25 of the Merger Regulation and paragraph 25 of the Horizontal Merger Guidelines state that mergers in oligopolistic markets "*involving the elimination of important competitive constraints that the merging parties previously exerted upon each other together with a reduction of competitive pressure on the*

[833] Horizontal Merger Guidelines, paragraph 24.

remaining competitors may […] also result in a significant impediment to effective competition."

(943) In *Hutchison 3G Austria/Orange Austria*, the Commission stated that, just as the merged entity, "*competitors would also face the same trade-off between attracting additional new customers by practising lower prices and cannibalising the flow of customers who would anyway have switched to them*" and found that "*other competitors are unlikely to increase supply or reduce prices in response to a price increase by the merged entity. Even assuming that competitors are not capacity constrained, it is unlikely that they would increase supplies in response to a price increase of the Parties. Since the products are endogenously differentiated in terms of their market positioning, generally accepted and robust economic theory demonstrates that the profit-maximising response of competitors to a price increase would be to increase prices themselves*."[834]

(944) In *Hutchison 3G UK/Telefónica Ireland*, the Commission also found that the "*change of incentives of the merged entity following the merger and the likely price increase by the merged entity would significantly reduce this pressure on Vodafone's customer base and lead some of the merged entity's customers that would have remained with the Parties in the absence of the transaction to switch to Vodafone. Accordingly, Vodafone would find it easier to retain its customers and could even attract new customers who would switch away from the merged entity. This resulting increase in the demand faced by Vodafone provides Vodafone with an incentive to raise its prices in turn. Despite Vodafone's claims during the Oral Hearing and written submissions that it would continue to effectively compete post-merger, the Commission therefore considers that Vodafone's likely strategy would be a moderate price increase (inferior to that of the merged entity) in order to optimise profits from this additional demand· The finding that competing firms have incentive to raise prices as a response to a price increase by another firm is called "strategic complementarity" of pricing decisions and is a general characteristic in standard models of oligopolistic competition. This feature is also reflected in the Commission's quantitative analysis which shows that, in response to a price increase by the Parties, the Parties rivals, including Vodafone, would, all else being equal, also likely raise their prices so that the transaction is likely to lead to general price increases on the market compared to what would be the case in the absence of the merger*."[835]

(945) Likewise, in *Telefónica Deutschland/E-Plus* the Commission considered that, "*if the merged entity were to raise prices, some customers would consider switching to the rival MNOs, which would not have been the case in the absence of the merger. These newly available customers then increase the demand faced by the other competing MNOs, and as a result they have an incentive to raise prices themselves. This relates to the concept of "strategic complementarity" in the economic theory, where competing firms have the incentive to raise prices as a response to a price increase by another firm. The Commission notes that strategic complementarity of pricing*

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[834] Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 367 and 374.

[835] Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*, recitals 572 and 573.

decisions is a general characteristic in standard models of oligopolistic competition."[836]

(946) The Commission considers that the principles of the Horizontal Merger Guidelines, as well as the findings in the Commission's decisions in past cases related to the assessment of mergers in the mobile telecommunications sector, are also applicable to the assessment of the Transaction and that the Parties' MNO competitors would not have the incentive to compete vigorously post-Transaction.

(947) In this respect the Commission notes that, in the context of the market investigation, Ofcom has submitted that it does not consider that the remaining two MNOs would provide a sufficient competitive constraint to prevent price increases. Ofcom considers that, if the merged entity increased its prices, then, given how concentrated the market would become, EE and Vodafone are likely to find it most profitable to also increase their prices.[837]

(948) With specific regard to EE's incentives, the majority of respondents indeed stated that post-Transaction EE would have an incentive to follow a price increase by the merged entity.[838] For instance, according to […], "*As the proposed transaction will lead to a more concentrated retail mobile telecommunications market and EE will lose its current leading position in this market it will be in the interest of EE to follow a price increase by the merged entity. The reason for this is that there are less players in the market and therefore less possibilities for customers to switch after a price increase*."[839] […] also submitted that if the merged entity increased its prices in the retail mobile market in the United Kingdom, then it expects that EE would follow the increase, in an attempt to increase its margins, rather than trying to win market share from the merged firm instead.[840]

(949) EE's history recalled in recital (916) also confirms that it is likely to follow a price increase and unlikely to be a price aggressive player post-Transaction. In summary, despite having spare capacity, EE’s history shows that it follows a premium strategy and monetisation, which makes it likely that it would follow a price increase even if its ability to compete were not compromised.

(950) Further, given the risk to its network quality, investments and financial position that arises from the network sharing arrangements, its incentive to compete would be further reduced even absent any steps by the merged entity to frustrate BT/EE for fear of retaliation by the merged entity.

(951) As regards Vodafone's incentives, the majority of respondents to the market investigation were equally negative. Similar to EE, respondents pointed out that Vodafone would have an incentive to follow a price increase by the merged entity, as the market becomes more concentrated due to the Transaction.[841] […] stated that if the merged entity increased its prices in the retail mobile market, Vodafone would

[836] Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recital 531.

[837] Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 3.6 [ID2069].

[838] Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 41(a).

[839] […].

[840] […].

[841] Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 41(b).

also follow the increase, instead of attempting to win market share from the merged entity.[842]

(952) Vodafone's history recalled at recital (925) provides a similar indication. The Notifying Party argues that given Vodafone's low post-Transaction market share and spare capacity it will be incentivised to be price aggressive. However, as the example of 4G pricing showed, those factors give an operator various strategic options but do not determine an MNO's pricing behaviour. Given its low market share and spare capacity Vodafone would have the ability to be price aggressive but that does not mean it would choose to do so. The same factors were present in 2014 as Vodafone already had significant spare capacity due to its spectrum holdings, and was losing market share in 4G and yet it rather kept its prices high. Thus, if these factors really predetermined Vodafone's price behaviour, Vodafone would already be a price aggressive player but it is not. If that was Vodafone's reaction in a competitive, four-player market with an aggressive competitor like Three, its reaction in a three-player market with less competitive pressure is bound to be even more accommodating to price increases. No element in the Commission's file suggests that Vodafone would not continue its historical strategy post-Transaction.

(953) More generally, EE's and Vodafone's performance in past and recent years suggests that they have been mostly focussed on value generation and customer retention rather than subscriber growth (see subsection 8.2.1.3.a(i)). In particular, both EE and Vodafone have been losing subscriber market shares, or at least kept it constant, in the recent years as shown in the above Figure 100 and Figure 101. This trend in the Parties' MNO competitors' market shares provides an important indication of the lack of effective incentives of EE and Vodafone to compete post-Transaction, and the more reactive nature of their current competitive behaviour.

(954) The results of the Commission's quantitative analysis are in line with the qualitative evidence. The magnitude of the likely price increases deriving from the Transaction as shown by the results of the quantitative analysis (which takes into account the Parties' rivals' reactions, see Section 8.2.1.4.b. and Annex A) are a clear indication of BT/EE's and Vodafone's reduced incentives to compete post-Transaction.

(955) Despite EE's and Vodafone's responses in the course of the proceedings that they would continue to compete (should their ability to do so be preserved)[843] and given of qualitative analysis carried out above in this subsection and the results of the quantitative analysis (see Section 8.2.1.4.b. and Annex A), the Commission therefore considers that EE's and Vodafone's likely strategy would be at best a moderate price increase (inferior to that of the merged entity) in order to optimise profits. In this respect the Commission notes that already in March 2015 the CEO of Vodafone Group said that "*European mobile operators need higher prices to be able to invest in 5G data networks*."[844] Following a price increase by the merged entity would be in line with this statement.

(956) The Commission considers that this finding does not change as a result of BT's acquisition of EE. Indeed, the Commission notes that, according to the CMA's Final

842 […].

843 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 43; Vodafone, comments on the Statement of Objections, Section 3 [ID4947].

844 Original version: "*Die Preise sollten steigen, wenn wir Investitionen in 5G haben wollen*," see http://www.manager-magazin.de/finanzen/artikel/a-1021455 html, 3 March 2015 (provided with the access to file on 4 February 2016).

Findings Report, pre-Transaction BT/EE's rivals would have a range of counter strategies to respond to any increased strength which would allow them to compete for customers.[845] In this context the Commission notes that the Parties' internal documents […].[846] As Post-Transaction EE's profitability can realistically increase due to the reduced competitive pressure, BT would have even less incentives to disrupt the market and more incentives to follow a price increase post-Transaction to protect EE's profitability.[847] In this respect the Commission notes that, even before BT decided whether to acquire EE or O2 and when there was uncertainty in the market as regards BT's target, analysts considered that "*any acquisition [BT] makes will be rendered more valuable if Three is also successful in purchasing one of its peers (due to the market repair then likely).*"[848]

(957) This view is supported by the CMA, according to which "*the market is concentrated with only three MNOs remaining after the merger. The loss of an important competitor which customers would have diverted to in the face of price rises, increases the ability and incentive to profitably raise prices. Given Ofcom's view that the market requires four MNO competitors in order to maintain competition, it seems unlikely that the remaining MNO competitors, EE and Vodafone, would have the ability or incentive to replace the constraint lost by the merger*."[849]

(958) Regarding the Notifying Party's argument that, as converged players, BT/EE and Vodafone will be incentivised to offer mobile services at zero or even negative margins to win customers in fixed business, the Commission notes that, as explained in section 6.3, there appears to be limited demand for quad-play bundles and this would limit the incentives to engage in such strategy and limit its success even if it is tried. Namely, over 70 % customers are not willing to take mobile from their fixed provider even with a substantial discount.[850] The Commission also notes that given the very competitive pricing of mobile products, there is not much scope for the kind of very large discounts that seem necessary to convince the minority of consumers who would consider a quad-play offer at such discounts. O2's internal assessments […].[851]

(959) In light of the above, the Commission considers that, even if BT/EE's and Vodafone's ability to compete is preserved post-Transaction, nevertheless it is likely that they would not have a strong incentive to compete vigorously.

iv. Conclusions on MNOs

(960) In summary, the Commission considers that, post-Transaction, it is unlikely that BT/EE and Vodafone will have the same ability to compete than pre-Transaction due to network sharing concerns. In any event, should their ability to compete be fully

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845 CMA, Final Findings Report, paragraph 12.63 [ID 4112].

846 […] [ID 000065478.00001].

847 As regards the impact of convergence see Section 6.3.

848 […].

849 CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraph 14 [ID4116]. The CMA further states that "*the impact of the Notified Concentration on the network sharing arrangements (as summarised more fully below and explained in detail in the submissions made by Ofcom) may additionally seriously impede either or both of EE and Vodafone as effective competitors*."

850 Enders Analysis, UK broadband, telephony and pay TV trends Q3 2014, Quad play and convergence focus, 5 December 2015, page 19 [ID 3456].

851 O2's internal documents, […] [ID000065478]. See also in O2's internal documents, […] [ID000065479].

preserved post-Transaction, it is likely that they would not have a strong incentive to compete vigorously.

b) Non-MNOs

i. Competitive position pre-Transaction

(961) As laid out in 6.5.2, apart from the four MNOs, a number of non-MNOs offer retail mobile telecommunications services to end customers. The Commission has assessed the ability of non-MNOs to compete in the current market conditions.

Notifying Party's view

(962) In the Form CO, the Notifying Party claims that all non-MNOs will have a strong incentive to compete post-Transaction. Three submits that non-MNOs have played an ever increasing role in the retail market for mobile telecommunications in the United Kingdom and that they will continue to strengthen their position in the future, as the market is characterised by the imminent entry of a number of ambitious non-MNOs (such as Sky or the UK Post Office). Multi-play non-MNOs will benefit from the trend towards convergence and will be able to cross-sell their mobile services to their fixed customer base. In particular Virgin Media, TalkTalk and Sky are expected to grow strongly over the next few years by extending mobile to their existing household customers.

(963) In its Reply to the Statement of Objections, the Notifying Party further argues that non-MNOs exercise an important competitive pressure on the MNOs.

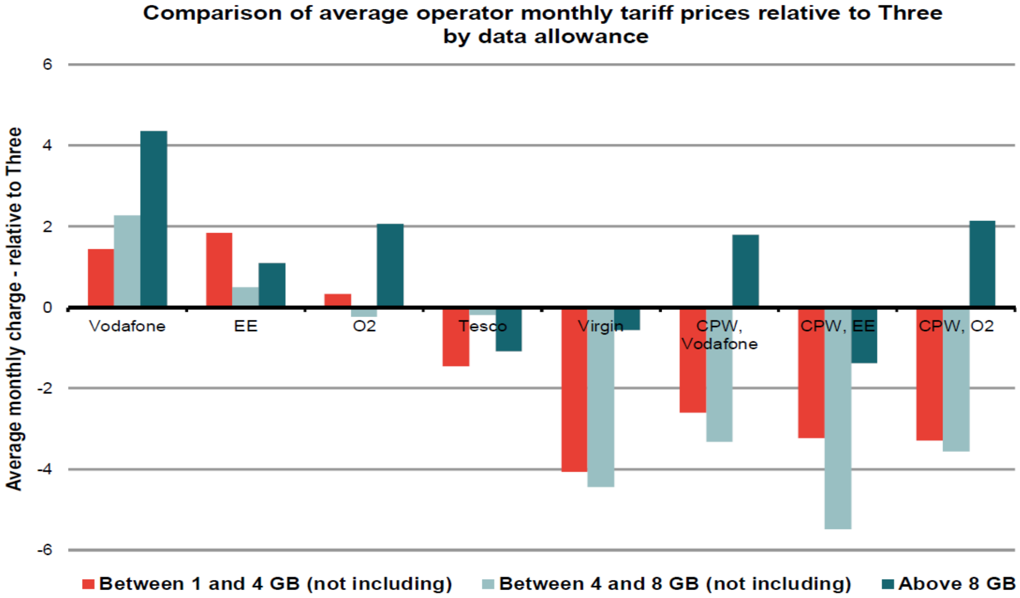
(964) First, the Notifying Party considers that the Commission's approach in the current case is inconsistent with its considerations on the competitive constraint exercised by the non-MNOs in its previous decisional practice, and in particular its decision in the *T-Mobile/Orange* case.[852] The Notifying Party considers that the fact that the Commission indicated in its *T-Mobile/Orange* decision that there was a strong presence of non-MNOs in the United Kingdom market is at odds with its current assessment of the competitive constraint exercised by the non-MNOs in the current case.

(965) Second, the Notifying Party claims that the collective market share of the non-MNOs exceeds that of Three in the overall retail market, in the overall private segment and in the prepaid segment. Furthermore, it submits that non-MNOs taken together have a larger gross adds share than Three. The extent of the competitive pressure exercised by non-MNOs is also demonstrated by the diversion ratios: among the customers who switch away from O2 more customers are lost to the non-MNOs than to Three. Three itself also loses a significant number of subscribers to the non-MNOs. The Notifying Party has submitted figures based on Three's leavers' survey of December 2015 and Kantar Worldpanel data. According to the Notifying Party, the diversion ratios submitted show that non-MNOs exert a greater competitive constraint on O2 than Three (as a destination for leavers, many more subscribers switch away from O2 to non-MNOs than to Three – […] versus […]). Similarly non-MNOs exert a significant constraint upon Three, with Three losing […] of its switchers to O2 and […] of its switchers to Virgin Media and Tesco Mobile.[853]

[852] Commission decision of 1 March 2010 in case No. M.5650 – *T-Mobile/Orange*.
[853] Reply to the Statement of Objections, paragraph 57.

(966) Third, according to the Notifying Party, non-MNOs are able to compete on price with the MNOs, even for larger data packages. As shown in Figure 102, the Notifying Party provided an econometric analysis of average prices focusing on tariffs with larger data bundles when controlling for other differences between bundle offers. According to the Notifying Party, the analysis provided shows that non-MNOs such as Tesco Mobile and Virgin Media can compete with the MNOs even on large data bundles and they are sometimes even cheaper than Three. The Notifying Party also puts forward the argument that the fixed-mobile operators such as Virgin Media or Talk Talk are able to offload data traffic onto their fixed network infrastructure; this allows them to manage their customer's growing demand for data consumption, thereby enabling them to compete with the MNOs on large data packages.

Figure 102: Comparison of average operator monthly tariff prices relative to Three by data allowance (October 2014 to February 2016)



Source: Frontier

(967) Fourth, the Notifying Party considers that 4G technology is common among non-MNOs. In particular, Talk Talk and Sky will soon offer 4G services. Moreover, in the Notifying Party's view, non-MNOs will have access to the newest technologies, such as 5G, since this technology is expected to be based on micro-cells and Wi-Fi, which are areas where many fixed-mobile non-MNOs have strong capabilities.

(968) Finally, the Notifying Party submitted that the importance of the fixed-mobile non-MNOs should not be discarded, since these players have significant cost advantages and will be able to offer significant discounts in mobile, thereby becoming increasingly competitive in the next few years.

<u>Commission's assessment</u>

Introduction: competitive position of non-MNOs in the United Kingdom market

(969) The Commission, based on the results of the market investigation and the analysis of the internal documents of the Parties, considers that non-MNOs are unable to meaningfully constrain the competitive behaviour of MNOs on the retail market for mobile telecommunications services today. Moreover, as shown in Section 8.3.1, the Transaction would limit the non-MNOs' ability to compete on the retail market even more. This view is shared by the CMA which noted in its Phase II submission to the Commission that: "*The greater the magnitude of the loss of competition at the MNO*

level resulting from a merger, the less sufficient the limited constraint from MVNOs is to mitigate this loss. In the present case the CMA considers that the existence of even a relatively large number of MVNOs in the UK telecoms market is therefore insufficient to address the significant loss of an important MNO competitor the serious impact of which is compounded by additional concerns caused by the network sharing arrangements and the impact on the wholesale mobile market."[854]

(970) In its Reply to the Statement of Objections, the Notifying Party argues that the Commission's views on the non-MNOs' ability to compete in the present case are not in line with its conclusions in the 2010 *T-Mobile/Orange* case, where the Commission considered that "*In the UK retail market, MVNOs play a significant role. (...) MVNOs not only compete on price and consumer services with their host networks, but they also stimulate competition by introducing innovative business models*". [855]

(971) However, the Commission notes that the statement corresponds to different market conditions. The Commission notes that in 2009 and early 2010, competition in the retail mobile market was still based to a large extent on voice calls and SMS and much less on data packages; data usage was still low and in a more incipient stage with the introduction of smartphones. Or, as shown in recital (1030), competition today is largely based on data, non-MNOs struggling to compete on data packages, due to their cost structure, which is different from that of the non-MNOs. Therefore, the Commission considers that non-MNOs' ability to compete with the MNOs in the market as it is today has decreased as compared to the years 2009 -2010, and therefore there is actually no contradiction between its assessment in the *T-Mobile/Orange* decision and its assessment in the current case.

(972) The Notifying Party also argued that the Commission's conclusions in this case are also not in line with its conclusions in the recent *Liberty Global/Base* decision.[856] According to the Notifying Party, the Commission's reasoning in relation to the competitive constraint imposed by all non-MNOs in the market in the United Kingdom versus only one non-MNO in the Belgian market is contradictory, since the Commission has concluded that on the one hand, Telenet is an important competitive force in the Belgian market, whereas on the other hand, non-MNO in the United Kingdom market (despite sharing the same characteristics) exert little, if any, constraint upon MNOs.

(973) However, the Commission points out the following in relation to the specific situation of the Belgian operator Telenet, which is not comparable, despite the Notifying Party's claims, with the situation of any of the non-MNOs in the United Kingdom. First of all, Telenet had a market share on the retail mobile market in Belgium similar to that of Three in the United Kingdom and was a well-established market player, whose success in the mobile retail market was due to several exceptional factors. When Telenet entered the market as a light non-MNO in 2006 and a full non-MNO in 2012, it was already an established market player, particularly in the Flemish Region, where it provided retail fixed telecommunications services to customers, including TV and internet services. In the footprint of its cable network, Telenet had very high market shares for these services ([70-80%] by revenue and [70-80%] by revenue and [60-70%] by subscribers on the retail TV

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854 CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraph 28 [ID4116].

855 Commission decision of 1 March 2010 in case No. M.5650 – *T-Mobile/Orange*, paragraph 46.

856 Commission decision of 4 February 2016 in case No. M.7637 - *Liberty Global/Base*.

market in 2013 and similar or higher shares in the years preceding 2013; [60-70%] by subscribers for fixed internet in 2014). This facilitated Telenet's establishment as a mobile operator, since it already had a well-known brand, distribution channels and a significant and stable customer base, to which it could cross-sell mobile services. Finally, Telenet benefited from a very advantageous wholesale access agreement with its host MNO, which contributed to its ability to compete. None of the non-MNOs in the United Kingdom benefit from a similar set of unique factors and, not surprisingly, none of them have therefore had a similar impact on competition and reached a market share similar to that of Telenet. Finally, the remedy accepted by the Commission in that specific case was proportionate to the concerns identified, and consisted of the entry on the market of another full non-MNO, Medialaan.

(974) The Commission has analysed in detail the types of non-MNOs present in the United Kingdom market and their current weight in the market.

(975) As mentioned in Section 6.5.2., there are different types of non-MNOs in the United Kingdom.[857]

(976) In terms of network assets and infrastructure, it is possible to differentiate between partial (light) and full (thick) non-MNOs.

(a) Partial (light) non-MNOs typically have very little of their own infrastructure and rely on the MNO host for all voice, data, SMS and MMS communications services. For example, Three provides partial non-MNOs with control interfaces through a provisioning application programming interface ("API") and wholesale billing information through a secure server. Partial non-MNOs are completely hosted on Three's network using Three's international mobile subscriber identity ("IMSI") and mobile station international subscriber directory number ("MSISDN") ranges. Three assists light non-MNOs with certain regulatory compliance requirements and MNP.

(b) In contrast to partial (light) non-MNOs, full (thick) non-MNOs have invested in their own core networks. Therefore, full non-MNOs are able to secure their own IMSI and MSISDN ranges from Ofcom and negotiate their own voice, SMS, data and international roaming interconnect agreements.[858]

(977) In terms of target customer groups and offerings, it is possible to differentiate between mass-market and niche non-MNOs. Within mass-market MNOs, it is also possible to differentiate between mass-market fixed-mobile and mass-market mobile only.

(a) Mass-market fixed-mobile non-MNOs, such as BT Mobile, TalkTalk and Virgin Media, which provide a variety of fixed telecommunications services (for example fixed voice and broadband) alongside their mobile offerings. Mass-market fixed-mobile non-MNOs often target their existing customer base and either bundle or cross-sell their products.

857 This section refers only to independent non-MNOs and does not take into account non-MNOs which are wholly or partially owned by the MNOs. For example there are low price brands of MNOs (such as giffgaff for O2 and Talk Mobile for Vodafone). As these are 100% owned and fully controlled by MNOs, they do not introduce any additional competition on the market, or place an additional constraint on the MNOs. They are a means of price discrimination so that MNOs do not have to stretch their brands into the value part of the market. In addition, there are joint ventures between an MNO and a separate company (such as Tesco Mobile). They too are controlled by the MNO joint venture partner.

858 Notifying Party's response to RFI 56, Annex 1 – MVNO Types.

(b) Mass-market mobile only non-MNOs, such as the Post Office, Sainsbury's, Asda and iD. These operators do not target particular niche customers, but often cross-sell mobile services with other services (for example supermarket and postal services). These non-MNOs often have a higher proportion of prepaid retail customers than the market as a whole.

(c) Niche non-MNOs, which target certain niche customers. This in many cases consists of a small proportion of the overall mobile market. Some of these operators focus on international communities (such as Lycamobile or Lebara), business services, data-only services or specific age groups (OwnFone, bemilo).

(978) Fixed-mobile non-MNOs are the strongest type of non-MNOs in the United Kingdom. There are several reasons for this: Fixed-mobile non-MNOs typically have well-known brands. They tend to have a higher proportion of postpaid customers than other non-MNOs. In general, fixed-mobile non-MNOs will not significantly expand the market through their presence, but rather (try to) compete with other mobile operators. This makes them less desirable to supply with wholesale mobile capacity than non-MNOs that mainly acquire customers who would not otherwise have owned a mobile phone.

(979) Niche non-MNOs impose a weak constraint on MNOs. Many of these specialise in serving parts of the market which are either difficult to address for MNOs (such as international communities, elderly people with difficulties using mobile phones) or which MNOs are less interested in serving directly (for example, low revenue prepaid customers). A high proportion of the customers of these providers will be generated by the non-MNOs in customer segments that would otherwise go unserved.

(980) Mobile only mass-market non-MNOs fall between these two extremes. As they have weaker brands in the mobile space than fixed-mobile non-MNOs and do not generally have existing contractual arrangements with their customer base, they are unlikely to be able to compete effectively with MNOs. They also generally have a higher proportion of low value prepaid customers than either fixed-mobile non-MNOs or MNOs. They will therefore exhibit greater differentiation from MNOs than fixed-mobile non-MNOs but less than niche non-MNOs.[859] On the other hand, a number of the mass-market mobile only non-MNOs may be linked with other retail services, such as large supermarket chains (for example Sainsbury's and Asda).

(981) There are a very large number of non-MNOs currently active in the market in the United Kingdom. In its submission to the Commission, Ofcom explains that the MNOs have reported to it a total of 41 direct non-MNO customers at the end of 2014.[860] The Parties' internal documents, as shown below, count an even greater number. However, Ofcom also pointed out that despite so many active non-MNOs, most have a small retail mobile market share.

(982) Indeed, despite the large number of non-MNOs competing in the retail telecommunications market, the Commission has found that in fact they account for a small part of the market, both in the overall retail market, as well as on narrower segments. According to the data submitted by the Notifying Party, non-MNOs had a

859 […].

860 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 2.31 [ID2069].

cumulative market share of approximately [5-10%] in terms of subscribers and [0-5%] in terms of revenues in 2014,[861] with the largest one, Virgin Media, accounting for about [0-5%] of the market by subscribers, and [0-5%] by revenues. The situation is similar as regards the postpaid segment, where non-MNO had a cumulative share of [5-10%] in terms of subscribers and [0-5%] in terms of revenues. Finally, in the prepaid segment, where non-MNOs are traditionally stronger, non-MNOs collectively accounted for about [5-10%] both in terms of subscribers and revenues in 2014.

(983) The Notifying Party also submits in the Reply to the Statement of Objections that the number of non-MNOs and their share has doubled since 2010 ([…]). Therefore, collectively, non-MNOs have been growing strongly.[862]

(984) The Commission considers that, while the number of non-MNOs has indeed increased, the claim that their share has doubled is unfounded. Specifically, in the *T-Mobile/Orange* Decision the Commission showed in paragraph 42, Figure "Mobile communication market shares (based on number of subscribers)" and paragraph 45, Figure entitled "Mobile providers' retail market shares 2004-2008", that the share of non-MNOs (excluding Tesco Mobile) was around [5-10]% in 2008, which is not materially different from what it is today. Furthermore, the Commission notes that Virgin Media's share, which was in 2008-2009 the biggest non-MNO by subscribers and revenues, with a market share of around [5-10]%, has decreased to around [0-5%] today (see also Figure 20).

(985) The high number of non-MNOs and the fact that most of them account for a small part of the market today is […].[863] […][864], […].

Figure 103: […]

[…]

Source: O2's internal documents

(986) […]

Figure 104: […]

[…]

Source: O2's internal documents

(987) Furthermore, […]:

Figure 105: […]

[…]

Source: O2's internal documents

(988) The Commission notes that, […]. This is because, as explained in recital (113), Tesco Mobile is jointly controlled by O2 and Tesco and post-Transaction will come under the joint control of the merged entity and Tesco. Giffgaff is a sub-brand of O2 and Talk Mobile is a sub-brand of Vodafone. Finally, the other two top non-MNOs,

861 Excludes Tesco Mobile's market share.
862 Reply to the Statement of Objections, of 26 February 2016, paragraph 45.
863 […], ID: [000063628]
864 […], Annex 133 to the Form CO.

Lebara and Lycamobile are niche players focusing on low cost international calls and normally targeting ethnic minorities.

(989) Therefore, […] namely Virgin Media (with a limited market share of [0-5%] in the overall private retail segment nevertheless), is legally independent from all the MNOs and may be considered to be directly competing with the MNOs, although more as part of its converged strategy than as a pure mobile player. Indeed, as the CMA noted, "*The evidence we have seen suggests that fixed providers are cross-selling mobile to their existing customers, rather than using mobile to attract new customers.*"[865] For example, residential customers of Virgin Media can add a mobile SIM to any fixed bundle for GBP 5 per month. Another converged player, Talk Talk, offers mobile services to residential customers, bundled with fixed and broadband services. For consumers, it currently offers its mobile service only to broadband customers, and certain mobile packages are free.[866] The Parties' […].

(990) The Notifying Party also claimed that converged players such as Virgin Media or Talk Talk compete well on the retail mobile market by using their advantage of being able to cross-sell their products.

(991) The Commission notes that, as shown in Section 6.3, the current take-up of mobile-fixed bundles remains low and that there is serious uncertainty as regards this trend. This uncertainty […].[867]

(992) The Commission also notes that several players (Virgin Media, Talk Talk, EE) already sell both fixed and mobile services, without bundles gaining substantial importance (consistent with the proportion of customers that buy in this way today). Moreover, Telefónica itself used to sell both mobile and fixed services before it sold its business to Sky in 2013, which could suggest that there were no substantial foreseeable gains from bundling fixed and mobile at the same time.[868] As shown in recital (83), […].

(993) […] an Ender Analysts survey which states that 24% of EE's customers would be interested in taking mobile services from their broadband provider, versus 3% amongst Sky's customers.[869] This shows on the one side that […].

(994) Moreover, […].[870]

(995) Furthermore, in the context of the BT/EE merger, the CMA analysed the competitive strength of BT Mobile and concluded that the additional competitive impact in the supply of retail mobile services that BT would have brought as a non-MNO, absent that merger, would have been limited. Specifically, the CMA took the view that despite BT Mobile enjoying certain advantages, namely a fast 4G service from EE, a large fixed customer base to whom to cross-sell, ownership of spectrum, plans to develop a small cell network to offload costs and reduce wholesale costs, and an aggressive, well-funded approach, these factors would not provide BT with a unique competitive advantage that could not be replicated by others.[871]

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865 CMA, Final Findings Report, paragraph 14.183 [ID4112].
866 CMA, Final Findings Report, Annex H, paragraph 14 [ID4114].
867 […], [ID000065478]. […], Annex B5.8 to the Reply to the Statement of Objection, slide 6.
868 CMA, Final Findings Report, paragraph 14.146, [ID4112].
869 […] Annex B5.8 to the Reply to the Statement of Objection, slide 7.
870 […] Annex B5.8 to the Reply to the Statement of Objection, slide 6.
871 CMA, Final Findings Report, paragraphs 16-17 [ID4112].

(996) Finally, recent analysts' reports pointed out that the impact of the converged players on the MNOs remains limited. Enders Analysis remarked: "*Fixed line MVNOs continue to have a limited impact on the MNOs, with fixed line MVNO contract net adds instead drawing from the base of other MVNOs, as well as the prepay market*."[872]

(997) The Notifying Party also put forward the argument that gross adds shares and diversion ratios are proof of the non-MNOs competitive strength.

(998) The Notifying Party argues that the collective gross adds share of the non-MNOs (that is, the sum of the gross add shares of all non-MNOs) is higher than Three’s and O2's own gross adds share and consequently it constitutes prima facie evidence that non-MNOs have a greater influence on the competitive process than either of the Parties. Therefore, in the Notifying Party's view, any analysis of the post-Transaction market structure which discounts the non-MNOs will lead to erroneous conclusions.

(999) According to the data presented by the Notifying Party, non-MNOs collectively have a gross add share of [20-30%] while Three has a gross add share of only [10-20%] and O2 of [10-20%]. A similar picture emerges in the prepaid voice segment where non-MNOs have a gross add share of [20-30%] while Three has a gross add share of only [5-10%] and O2 of [20-30%]. In the postpaid private voice segment, non-MNOs have a gross add share of [20-30%] while Three has a gross add share of only [10-20%] and O2 of [20-30%]. According to the Notifying Party, even if Tesco Mobile’s share of gross adds is removed from the non-MNOs total, the remaining collective gross add share of the non-MNOs in each segment is still greater than Three’s gross add shares.[873]

(1000) First, and most importantly, the Notifying Party's concern regarding an analysis of the post-Transaction market structure which disregards the role of non-MNOs is fully addressed by the Commission's quantitative analysis in Section 8.2.4.1.b. The analysis is performed considering diversion ratios at the network level and diversion ratios at the provider level. The scenarios based on diversion ratios at the provider level treat all non-MNOs as fully independent (although this is hardly the case due to the non-MNO dependency on the wholesale contract with their host MNOs) and therefore fully accounts for the strength exerted by the non-MNOs in the market in terms of ability to compete and attract customers as indicated by the current gross adds. Moreover, such a provider level analysis can be considered an upper bound to the role of the non-MNOs in the market because it does not account for (i) the fact that non-MNOs will also likely have an incentive to increase their prices in response to a unilateral increase in price by Three after the Transaction and (ii) does not account for any potential post-Transaction degradation to the wholesale conditions to non-MNOs.

(1001) Second, the Commission notes that, in a differentiated product market, comparing the market share (or gross adds share) of one company with the collective share of a large number of other firms can be misleading. Such a comparison is what the Notifying Party suggests should be done in this case, when it compares the share of an MNO, Three, with the collective share of a heterogeneous group of non-MNOs, which are all very different among themselves due to their business strategies and customer focuses.

872 Enders Analysis, "UK mobile market Q3", 10 December 2015", page 7 [ID4172].

873 Reply to the Statement of Objections, paragraph 54.

(1002) The detailed market reconstruction undertaken by the Commission collecting data[874] consistently and directly from all MNOs and the main non-MNOs[875] allows unpicking the different components of the collective gross add share of non-MNOs.

(1003) In the first half of 2015 (the most recent data available), the collective gross add share of non-MNOs (excluding Tesco Mobile) is higher than the gross add share of Three in the prepaid segment but it is lower than Three in postpaid private segment.

(1004) However, a more detailed analysis of the non-MNOs' gross add share by segment shows that in the prepaid segment, the non-MNOs having by far the largest share in terms of gross adds (Lycamobile and Lebara, which account for most of the non-MNO gross adds) are niche players focused on low cost international calls and targeting ethnic minorities and, based on their business strategy followed to date in the United Kingdom, as well as in other EU countries, unlikely to appeal to the mass-market.[876] In addition, the Commission notes that these operators' market shares have been flat over 2014 and the first half of 2015, which suggests that their positive gross adds should be interpreted against a background of high customer churn and a possibly significant amount of free SIMs being distributed but not activated. As regards the postpaid segment, the market reconstruction shows that Three's share of gross adds is twice as large as the gross add share of each of the leading non-MNOs in the segment (Virgin Media and Talk Talk). In summary, the non-MNOs which are more likely to be able to directly compete with the MNOs, such as Virgin Media, have a gross adds share that is half that of Three's in the segment where they are present (postpaid private) and the non-MNOs that attract most gross adds in prepaid are niche players focused on specific customer groups and who are failing to increase their market share.

(1005) Finally, the Commission notes that according to a study prepared for Three, the forecasted collective market share of non-MNOs, including Tesco Mobile, is likely to grow by less than […] percentage points between 2015 and 2020 (Tesco Mobile being so far the most successful non-MNO, having doubled its share since 2008).[877] In addition, as shown in recital (984), non-MNOs collective share (excluding Tesco Mobile) has not materially changed between 2008 and today. Therefore, the evidence from both recent past and future forecasts suggests that non-MNOs will not be able to materially increase their collective subscriber share in the next few years.

(1006) The Notifying Party further argued that the significance of the non-MNOs is illustrated by the diversion ratios.

(1007) Diversion ratios based on Kantar Worldpanel data would show that in the postpaid segment non-MNOs exercise a greater competitive constraint on O2 than Three. As a destination for leavers, many more subscribers switch away from O2 to non-MNOs than switch to Three ([…] versus […]).

(1008) Similarly, non-MNOs would exert a significant constraint upon Three. The diversion ratios calculated based on Kantar Worldpanel data for the postpaid segment would show that Three loses 22% of its switchers to O2, and 15% of its switchers to Virgin Media and Tesco Mobile.

[874] Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.
[875] Tesco Mobile, Virgin Media, Lycamobile, Lebara and Talk Talk.
[876] See also Letter of Facts of 17 March 2016, paragraph 11.b.
[877] Annex 158 to the Form CO, sheet "Operating Model", row 37.

(1009) In addition, […].[878]

(1010) First, and most importantly, the Commission notes that independently of whether non-MNOs attract collectively more diversion from O2 than does Three (and equally whether non-MNOs attract more customers from Three than does O2), this evidence is fully accounted for in all the scenarios considered in the Commission's quantitative analysis (see Section 3.4 of Annex A). In particular, Annex A contains the result of a sensitivity scenario in which the Commission bases its estimates of the price effects on the Kantar Worldpanel diversion ratios proposed by the Notifying Party.[879] The resulting price effects are sizeable (see table 18 of Annex A).

(1011) Second, based on the Commission's Survey, while it is true that for the postpaid segment non-MNOs attract more customers of O2 than Three, it is not true that non-MNOs attract more customers of Three than O2 does. In any event, the Commission notes that the key driver of unilateral effects from the elimination of competition between Three and O2 is the magnitude of the diversion ratios between the Parties and not how the diversion ratios between the Parties compare to the diversions between each of the Parties and the non-MNOs. Therefore, the possibility that non-MNOs attract more customers from O2 than does Three is of only minor importance for the determination of the magnitude of non-coordinated effects.

(1012) Third, as regards the Notifying Party's claim that […], the Commission notes the following. Giffgaff and Tesco Mobile are either owned or half owned by O2 and including them amongst non-MNOs is misleading. Once these are excluded, […]. BT Mobile is now the same entity as EE and, if the diversions to BT Mobile are added to EE, […]. More importantly, the Commission notes that according to the Kantar Worldpanel data used by the Notifying Party as the preferred source for the diversion ratios calculations the diversion from Three to non-MNOs in the postpaid segment […].

(1013) Finally, as shown in Annex A, paragraph 278, MNP data for the first half of 2015, as well as […] show that the entry of BT Mobile did not significantly change the diversion ratios between Three and O2 during the first year from the entry of BT Mobile.

Limited ability of non-MNOs to compete in the present market conditions due to their reliance on the wholesale conditions

(1014) A factor that strongly affects non-MNOs' ability to exert the same competitive pressure as MNOs in the retail market in a significant and sustained way is their dependency on the wholesale access conditions granted by their respective host MNOs.

(1015) In its Phase II submission to the Commission, the CMA submitted that in the BT/EE investigation, while the CMA found evidence of non-MNOs providing some competitive constraint on MNOs, it noted that "*their reliance on MNOs for wholesale access limits the extent of the competitive constraint that they impose*."[880]

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[878] Reply to the Statement of Objections, paragraphs 57-58.

[879] Although the Commission disagrees with the methodology put forward by the Notifying Party as discussed in Section 3.1.3 of Annex A.

[880] CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraph 28 [ID4116].

(1016) Both during the phase I market investigation, as well as during the phase II market investigation, many non-MNOs pointed out this challenge that the non-MNOs have to face.

(1017) […].[881]

(1018) The […] added: "*Despite sometimes citing the existence of MVNOs as evidence of a competitive market, their actual behaviour strongly suggests that they regard MVNOs as business partners, helping secure volume and access to markets they would find it hard to reach, rather than as competitors in their main markets. Public statements by senior executives of European MNOs have also given strong hints that they select MVNO partners on this basis, and avoid supplying MVNOs that would pose a threat to them. Larger MVNOs are often run as joint-ventures, typically 50% owned by the MNO, raising serious questions about the extent of their independence*."[882]

(1019) In relation to this latter statement of [..] that the MNOs see non-MNOs more like business partners rather than competition, the Commission notes that during the in-depth market investigation, respondents indicated a number of restrictions included in their wholesale access contracts. For instance in its submission to the Commission, the […] pointed out that the MNOs impose restrictions as regards the customer groups that the non-MNOs they host can target. […][883]

(1020) This finding is corroborated by […] and third parties' internal documents on MNOs' strategy as regards hosting non-MNOs on their networks.

(1021) For instance, […],[884] […].

Figure 106: […]

[…]

Source: Three's internal documents

(1022) […][885] […]:

Figure 107: […]

[…]

Source: […]

(1023) […][886][…].

Figure 108: […]

[…]

Source:O2's internal documents

(1024) The market investigation also revealed that the challenge of the wholesale conditions that the non-MNOs face is twofold. First of all, non-MNOs are dependent on the wholesale price charged by the host MNO when designing their own tariff plans. In particular, as shown in recitals (1032) to (1079), the market investigation provided

881 […].

882 […].

883 […].

884 […] Annex 7.101 to the Form CO.

885 […].

886 […] Annex 133 to the Form CO.

strong indications that in a data-centric retail mobile market, non-MNOs already face and will continue to face significant difficulties to compete with the MNOs on larger data packages. Second, evidence presented in recitals (1080) to (1106) shows that the non-MNOs are reliant on the quality of their host network to provide services and therefore are not able to meaningfully differentiate their retail services from those of the host MNO as regards quality or technical innovation. In particular, non-MNOs are unable to compete on the latest technology.

(1025) In concrete terms, as shown in Section 6.2, the increase in smartphone and 4G take up in the United Kingdom has gone along with an exponential increase in data consumption.

(1026) Over the past two years, there has been a significant increase in consumers' adoption of 4G services.

(1027) These consumers have driven a significant growth in data usage as 4G services are increasingly used to stream, share, and perform a host of data-heavy activities, in particular, video streaming and social networking. As a result, mobile service providers have been responding to this by significantly increasing the data allowances offered to customers at particular price points.[887]

(1028) Consequently, competition in the retail market is now, to a large extent, based on data packages, with voice and SMS offered as unlimited services. However, the Commission's market investigation revealed that currently, non-MNOs are unable to effectively compete with the MNOs neither on 4G services, nor on large data packages.

(1029) In fact, although MNOs have started offering 4G already in 2012-2013, even today very few independent non-MNOs are able offer 4G services to their customers (independent non-MNOs who offer 4G are iD and Lycamobile).[888] This shows that the non-MNOs have a significant delay in offering their customers access to the same level of technology that the MNOs make available to their own customers and this puts them at significant competitive disadvantage. In its submission to the Commission, Ofcom underlined that the non-MNOs have had significant difficulties to negotiating access to 4G.[889] The result is that even today, mass-market non-MNOs such as Virgin Media only offer 3G services to their customers. Furthermore, this situation is very likely to continue as regards further technological advancements such as deployment of 5G or VoLTE. Taking into account the significance of the demand for 4G services,[890] operators which do not offer such services already face and will continue facing significant difficulties to compete in the retail market.

[887] […].

[888] In its Reply to the Statement of Objections, the Notifying Party submitted a list of non-MNOs which have already launched 4G services (paragraph 80, Table 5 of the Reply to the Statement of Objections). However, these non-MNOs are not mass-market non-MNOs and/or do not have any material market presence. Most act as re-sellers for O2. The list also included a number of non-MNOs which the Notifying Party expected to launch 4G services in the course of 2016, or which had just launched access to 4G cases. The Commission notes that these few non-MNOs that had recently launched these services or will soon launch them are able to do so several years after 4G was launched in the United Kingdom on the MNOs' networks.

[889] Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 3.7 [ID2069].

[890] Further, the respondents to market investigation pointed out that they expect demand for 4G services, to significantly increase in the next two to three years.

(1030) The second element that the market investigation brought forward is that non-MNOs cannot compete with the MNOs on large data packages. Due to the cost structure that the non-MNOs have to face, non-MNOs are generally able to compete on low data packages (below 2-3 GB), but not on the high data ones, where the high-end customers currently are. Taking into account the exponential growth of data demand, high data packages offers are likely to become the norm and the fact that non-MNOs are already unable to compete for them means that it is likely that in the future there is a high risk that their ability to compete would be even lower, and limited to the low-end level of the market.

(1031) These two issues are discussed in detail in the following recitals.

Difficulties related to designing attractive retail tariffs, in particular as regards data packages

(1032) With regard to retail pricing, the majority of respondents to the market investigation pointed out that, while the majority of non-MNOs are in principle free to design their own tariff plans, they are constrained by the wholesale pricing they receive from their host MNO.[891] This applies generally in relation to national and international voice calls, SMS, data, as well as to international roaming.

(1033) […] explained: "*A service provider has the ability to independently design their tariff plans. However, strictly limited to the profitability of these plans. This depends on the wholesale/network fees charged by the hosting MNO*."[892]

(1034) […].[893]

(1035) […] explained: "*MVNOs cannot generally compete directly with MNOs in the local wider customer market, although they do provide further competition to the MNOs and incentives to remain competitive. Any reduction in competition would likely flow through into wholesale rates and further effect a MVNO's ability to compete for customers.*"[894]

(1036) […] [895]

(1037) [….] [896]

(1038) Another respondent stated: "*In relation to roaming calls and data, UK data, and access to certain handsets, we are at significant competitive disadvantage*."[897]

(1039) The most common access model in the United Kingdom in terms of determining wholesale prices is the "Price-per-Unit" agreement, under which the prices to be paid by the MVNO/Service Provider are based on the number of units of services obtained (that is to say per minute, SMS or MB)**.** […] [898]

(1040) […] [899]

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891 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 43.
892 […]
893 […].
894 […]
895 […] Annex 7.119 to the Form CO.
896 […].
897 […].
898 […].
899 […].

(1041) A Berenberg analyst report considers the possibility that Three may provide wholesale access as a condition for the Commission's approval of the Transaction but states that they would *"expect 3 to use the least disruptive option"*[900] of wholesale access. This indicates that, even in the context of regulatory obligations, the host MNO has the ability to steer the wholesale non-MNO partner towards a certain strategy that may limit the competitive constraint exercised by the non-MNO and be ultimately beneficial to the host MNO.

(1042) Furthermore, while at least some non-MNOs may be able to compete on voice calls and SMS, it appears that the difficulties that the non-MNOs face in relation to designing competitive tariffs are most prominent when it comes to data plans. The non-MNO's inability to offer attractive data packages significantly reduces their competitive strength given the steadily increasing demand for data, in particular following the launch of 4G (as shown in Section 6.2) and which led tariff plans to become increasingly data centric.[901]

(1043) In its submission to the Commission, Ofcom pointed out that "*MVNOs tend to focus on voice rather than data services. This typically reflects their incentives caused by their different cost structure to MNOs with lower fixed costs and higher variable costs compared to their host MNOs, making it difficult for them to compete for consumers with high data use*."[902]

(1044) This is in line with the results of the market investigation. The majority of respondents to the market investigation consider that they are not able to compete with the MNOs in terms of data plans, in particular for larger data packages. One respondent explained that wholesale prices charged by the MNOs for data are too high.[903]

(1045) During the in-depth market investigation, the majority of non-MNOs indicated that they can currently compete on low data packages (under 2GB), attracting thus low tier data users, and therefore the lower value customers. Only a couple of non-MNOs replied that they are able to offer attractive 3GB and 4GB data packages and none of the respondents is able to offer competitive large data packages (between 5 and 10GB and above 10GB).[904] Respondents to the market investigation do not believe that non-MNOs will be able to compete on such data packages in the next 2-3 years, considering the demand forecast trend.[905]

(1046) […] [906]

(1047) […][907][…] [908]

(1048) […] [909]

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900 Berenberg, Thought Leadership, Telecommunications – BT Group plc, 12 March 2015, page 9, [ID2770].

901 Responses to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 2.

902 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 1.5 [ID2069].

903 […]

904 Responses to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 8, points (b) to (g).

905 Responses to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 8 bis, points (b) to (g).

906 […].

907 […].

908 […].

909 […].

(1049) […] [910]

(1050) […] [911] The Commission therefore takes the view that Sky is likely to encounter the same obstacles as the rest of the non-MNOs when competing with the MNOs, in particular as regards data tariffs.

(1051) In relation to data, […] [912] It also clarified that non-MNOs are able to be competitive in the low end tier of the market where the data usage is much lower. This is because most MVNOs pay a fixed wholesale cost per MB, so as a customer's usage increases, the associated wholesale cost to the MVNO increases proportionally (as does the price to the consumer). Conversely, MNOs' costs are largely fixed – that is to say the cost of operating the network is the same regardless of how much data a customer uses – which gives MNOs a cost advantage at higher data allowances.[913]

(1052) The Notifying Party […].[914]

(1053) Thus, the different cost structures that MNOs and non-MNOs face have put the non-MNOs at competitive disadvantage in particular as regards data. As Ofcom explains "*When MNOs consider whether to increase data capacity, they are likely to consider the marginal cost of providing that extra capacity. In contrast, MVNOs are likely to have contracts which have per usage terms that are above the marginal costs of adding capacity, being more reflective of average costs, and in some cases a significant premium to average cost*."[915] Therefore, due to these differences it is only the competition among MNOs that is critical to retail prices.

(1054) An analysis by Citi pointed out the risks for the non-MNOs as regards high data usage by customers. Citi indicated that mobile data has become a mass-market phenomenon; this is an issue for non-MNOs as they make better margins from increasing data penetration as opposed to increasing data usage[916]. Traditional non-MNOs contracts can become uneconomical as data usage per subscriber grows, as the cost per GB can move higher than retail prices from the MNO's. Thus, in the lower-end of the retail market, where data consumption is limited, non-MNOs are relatively competitive. This is due to the fact that a big part of the value of the tariff is still down to voice, but also due to the fact that retail pricing per MB is much higher (in general operators charge the customer the more to go from no data to say 500MB, than to go from 1GB to 2GB). Therefore data growth, driven by smartphone penetration is positive for non-MNOs, while growth that is driven by higher usage is not. [917]

(1055) This view is supported by the share of non-MNOs in each of the data segments (up to 250 MB, 500MB-1GB, 2-4 GB, 4-8GB and over 8GB). […],[918] […]. However, the Commission also notes that since December 2014, Virgin Media has withdrawn its larger data packages from the market (the unlimited 3G data offer and the 10GB data

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910 […].

911 […].

912 […].

913 […].

914 Reply to the Letter of Facts of 23 March 2016, paragraph 169.

915 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 3.8 [ID2069].

916 Data penetration refers to adoption of mobile internet in general, while data usage refers to the individual data use level of per subscriber.

917 Citi, European Mobile Markets, "MVNOs: nothing like the real thing", pages 5-6 [ID4037].

918 […][ID 024800227.00001].

offer). […]. As customer data usage grows exponentially, the situation of non-MNOs offers as regards data packages is likely to worsen.

Figure 109 – […]

[…]

Source: Three's internal documents

(1056) […] argued that: "*Above 3GB, non-MNOs increasingly struggle to remain competitive. This is due to the fact that, to cater increased data allowances, MNOs can afford to accept a lower effective rate per unit of data in order to ensure that their pricing is attractive for consumers. By contrast, non-MNOs are unable to do this as there is a price floor that each marginal unit of data needs to be priced above. As data allowances increase, non-MNOs become less and less able to compete.*"[919] […] also pointed out that: "*In the 5-10GB market there is very little competition from non-MNOs. A couple of the larger non-MNOs, Virgin Media and Tesco Mobile, offer up to 8GB of data as part of their SIM only and post pay plans, which is similarly priced to O2 and EE offerings. However, as consumer data needs grow there is a significant risk that it will become increasingly hard for non-MNOs to offer large data allowances at the same prices as MNOs.*"[920]

(1057) Analysts reports point out that "*Current MVNO contracts pre-date LTE and rapid data growth, and seemingly don't provide cost discounts proportionate to declining retail data prices. MNO's appear to have learnt their lesson and are being more cautious about offering generous wholesale contracts that stimulate strong price competition for high-end users.*"[921]

(1058) Finally, these findings are […]

Figure 110-[…]

[…]

Source: O2's internal documents

(1059) […],[922] […].

Figure 111 – […]

[…]

Source: Three's internal documents

(1060) The market investigation also revealed the limited competitive constraint exercised by the larger mass-market non-MNOs, Virgin Media and Talk Talk in relation to larger data packages.

(1061) […], explained in relation to large data packages: […] [923] Virgin Media appears to be more competitive on price in the low to medium SIMO offers than in the larger SIMO offers. As shown in Figure 52, its SIMO 4GB is at a slightly lower price than Three's own proposition.

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919 […].

920 […].

921 Citi, European Mobile Markets, "MVNOs: nothing like the real thing", page 1 [ID4037].

922 Three's internal documents, "Mini TAB", of 27 July 2015, slide 43, [ID000602129.00001].

923 […].

(1062) Nevertheless, as shown in Figure 109, its share in the medium data packages segments of 2-4GB and 4-8GB is insignificant ([0-5%] and [0-5%] respectively).

(1063) With respect to larger data packages, Virgin Media encounters the same issues as the rest of the non-MNOs.

(1064) First of all, Virgin Media does not offer any data package beyond 8GB. Then, most importantly, all its offers are 3G only. Obviously, for consumers aiming at higher data packages, not offering 4G services puts Virgin Media at high competitive disadvantage.

(1065) Moreover, as discussed above in Figure 56, the Commission has compared headlines prices of Three (the cheapest MNO) and Virgin Media for 1 month SIMO subscriptions for four data segments: between 0 and 1 GB (the latter not included), 1 and 4 GB (the latter not included), 4 and 10 GB (the latter not included) and above 10 GB.

(1066) First, as shown in Figure 52, in October 2015, Virgin Media's SIMO 8GB offer is more expensive than that of Three.

(1067) Second, the Commission notes that, as shown in Figure 56, while Virgin Media offers competitive prices for low data packages, this is not the case with respect to the larger data packages, its largest offer being an 8GB data package at GBP 23, while Three offers AYCE for only GBP 17 (but not with unlimited calls and sms). However, as explained, competition today takes place mainly on data bundles, with voice calls and SMS playing a much less important role.

(1068) Moreover, in relation to 10GB data packages, […] explained that: […] [924]

(1069) […].[925]

(1070) […]. [926]

Figure 112: […]

[…]

Source: […]

(1071) As regards Talk Talk, it currently does not offer any data package larger than 4GB, and its offers only comprise 3G services. Furthermore, all TalkTalk's mobile contracts require the customer to also subscribe to TalkTalk’s fixed line broadband package.

(1072) The Notifying Party pointed out in its Reply to the Statement of Objections that TalkTalk offers unlimited mobile data for GBP 12.

(1073) Indeed, in April 2015, Talk Talk launched an unlimited data SIM for GBP 12. However, this offer was only available for a couple of months, and, as the rest of its mobile products, was reserved to its fixed customers. A few months later, its price was raised to GBP 24 and since December 2015, Talk Talk does not offer unlimited data SIM anymore, […]. [927]

924 […].
925 […].
926 […].
927 […].

(1074) […] also explained that […].[928]

(1075) This process of Virgin Media and Talk Talk gradually withdrawing their unlimited and larger data packages from the market confirms the non-MNOs statements regarding their inability to compete on larger data packages as data consumption continues to grow, and being gradually pushed to the low-end of the market as regards data offerings.

(1076) In its Reply to the Statement of Objections, the Notifying Party argued that fixed line non-MNOs such as Virgin Media or Talk Talk are ideally placed to offload a proportion of their mobile customers' data traffic onto their fixed networks in a cost efficient manner. This allows them to manage their customers' growing demand for data and compete with the MNOs on the larger data packages despite their different cost structure. Furthermore, the Notifying Party is quoting Talk Talk's intention to build up an in-home /business 4G network using router based small cells, as well as Virgin Media's plan to offload approximately 80% of its data traffic volume onto its fixed network infrastructure.[929]

(1077) The Commission considers that the fact that these fixed players may be able to offload an important part of their traffic onto their fixed networks does not procure them any specific advantage compared to the MNOs and does not mean that they can compete better on data with the MNOs. […]"[930] […][931]). This means that both the MNOs and the non-MNOs are able to download a similar amount of traffic onto fixed networks via Wi-Fi. Furthermore, as regards the planned development of a small cell solution by Talk Talk, the Commission notes the significant inconsistency between the Notifying Party's argument that such femto/small cell solutions would help Talk Talk be competitive on large data packages, but cannot be used to provide additional capacity on Three's network. Three considers that femto cells/small cells solutions are "*designed principally to improve in-building coverage rather than act as a capacity relief mechanism, and that in any case the coverage area of these solutions is small. To a great extent, data traffic that will be covered by these solutions is currently offloaded to Wi-Fi and, as such, the impact of these solutions on congestion at a macro cell level will be minimal*."[932]

(1078) Finally, the difficulties encountered by the non-MNOs in relation to competing on data tariffs are supported by Ofcom's finding that while the proportion of voice minutes used by non-MNO customers over the total consumption of voice minutes has not changed in recent years and still represents 16% of total mobile voice minutes, the proportion of total mobile data used by non-MNOs' customers has fallen considerably. According to Ofcom data, the proportion of total mobile data used by non-MNO customers has fallen from 14% in 2011 to 7% in 2015. This is consistent with non-MNOs becoming less important as consumers become more data oriented.[933]

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928 […].

929 The Notifying Party's Reply to the Statement of Objections, of 26 February 2016, paragraphs 61-66.

930 Three's internal documents, "Wi-Fi Access Strategy", December 2012, page 5, [ID 024200523.00001].

931 The Notifying Party's Reply to the Statement of Objections, of 26 February 2016, Annex 1, paragraph 117 to 119.

932 Reply to the Statement of Objections, paragraph 191.

933 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 2.36 and 3.7., [ID2069].

(1079) Taking into account the points above, the Commission notes that the non-MNOs' ability to compete on the retail market, in particular as regards larger data packages, is severely constrained by the wholesale cost, and often prevents non-MNOs from competing for the high-end data users.

Limited ability to compete on product differentiation and innovation, and access to the latest technologies

(1080) One other aspect that the Commission has investigated is whether the non-MNOs are able to compete on the same level as the MNOs as regards innovation (additional services, innovative tariffs, technology upgrades) and whether they have the ability to differentiate their offers as compared to those of the other players in the retail market for mobile telecommunications.

(1081) The market investigation revealed that non-MNOs are not able to differentiate their retail services from those of the host MNO as regards quality or technical innovation, as their retail mobile services are hosted on the host MNO's mobile network and hence depend on that network's quality.[934] Three itself points out in the Form CO that light non-MNOs rely completely on the infrastructure of the MNO which hosts them.[935] This applies thus to the overwhelming majority of the non-MNOs currently active in the United Kingdom, including the largest non-MNO, Virgin Media. A number of non-MNOs like Talk Talk are in the process of becoming a full non-MNO (by building its own core network), which will allow them to control a number of things such as operating its own Home Location Register ("HLR"), so that the non-MNO can retrieve billing and can directly invoice its customers, and issuing its own SIM cards independently from the host MNO. However, the most important aspects as listed in recital (1087) remain within the remit of decision of the host MNO.

(1082) The market investigation pointed out these limitations. One market participant explained: "*We rely on the possibility that innovations are offered to us by our host MNO.*"[936] […] [937]

(1083) […].[938]

(1084) […] [939] The Notifying Party submitted that […]. Therefore, such concerns on the part of the non-MNOs are unfounded.[940] First, the Commission notes that […]. Third, O2 is only one of the current providers of wholesale services: the fact that O2 […] does not mean that the other MNOs will do the same.

(1085) In its "Strategic Review of Digital Communications",[941] Ofcom was of the opinion that while the non-MNOs can offer retail mobile services without owning the entire mobile infrastructure themselves and thus providing enhanced retail competition in the market, they do not have the same ability as the MNOs to differentiate their

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934 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 44 (a).
935 Form CO, Section 6, paragraph 92.
936 […].
937 […].
938 […].
939 […].
940 Reply to the Statement of Objections, paragraph 85.
941 Ofcom, Strategic Review of Digital Communications consultation document, paragraph 1.44 http://stakeholders.ofcom.org.uk/binaries/consultations/dcr_discussion/summary/digital-comms-review.pdf. [ID6166].

services. This ability, that comes with control of a network, is exclusive to the MNOs.

(1086) Some important aspects of service are determined at the retail level (e.g. customer service). Some non-MNOs can also determine some service features, like call waiting and voicemail, independent of the host MNO. However, many aspects of quality valued by consumers are determined at the MNO level.

(1087) As Ofcom pointed out, by designing, deploying, monitoring and controlling their radio access networks, MNOs' decisions greatly influence the performance of their mobile services and affect the user experience, including through providing different levels of network reliability, coverage and speed. In addition, as MNOs control decisions involving service development over their networks and often also control and configure the handset sold to their customers, they allow users to get access to innovative services and applications. The quality of their network and user experience can be affected by choices regarding for instance:

(a) Rate of adoption and deployment of new technologies;

(b) Coverage;

(c) Capacity in the radio access network;

(d) Capacity in the backhaul network;

(e) Traffic prioritisation and Radio Resource Management (RRM);

(f) Configuration, performance monitoring and fault management; and

(g) Innovative services and applications involving interoperability with Wi-Fi, Over-The-Top (OTT) services, roaming etc.

(1088) Irrespective of the type of non-MNO, non-MNOs cannot control the important aspects above, in particular the deployment of new technologies which remains in the hands of the host MNO. In addition to decisions regarding their radio access and backhaul networks and depending on the different MVNO models (e.g. full versus light MVNO), MNOs also control decisions concerning core networks, interconnection arrangements, IT systems to support network and customer services, etc. Compared to non-MNOs, MNOs have therefore the ability to keep control of their network investment decisions and actively compete for service quality.

(1089) In these ways, an MNO can significantly differentiate the service quality offered to its customers compared to the offerings of the other MNOs. Competition among MNOs is likely to remain key to many aspects of quality of services. As showed in Figure 14 network performance related parameters, and in particular network reliability and coverage, are respectively the second and third most important parameters of competition. Non-MNOs are simply unable to innovate in the ways that a national MNO can.[942]

(1090) As regards access to latest technologies, the Notifying Party argues that 4G technology is actually common among non-MNOs, and that non-MNOs have been actually offering 4G services. Moreover, in relation to Virgin Media not being able to

[942] Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraphs 6.15-6.16 [ID2069].

offer 4G services, the Notifying Party claims that […]. The Notifying Party explains that […]. […].[943]

(1091) As shown in recitals (1025) to (1031), the MNOs have launched 4G services already in 2012-2013. Moreover, as shown before in Section 6.2., 4G roll-out is now advanced and it is an established technology in the United Kingdom. However, that is not the case for the non-MNOs: none of the significant mass-market non-MNOs currently offers 4G services to their customers.

(1092) The in-depth market investigation showed that the non-MNOs cannot offer competitive tariffs and conditions, similar to those offered by the MNOs in respect to 4G offers.[944] Most independent non-MNOs do not offer 4G services at all. The non-MNOs consider that the situation is unlikely to change in the next 2-3 years in relation to 4G access either.[945]

(1093) […] explained that non-MNOs cannot offer competitive 4G offers, because access to 4G is largely dependent on the services non-MNOs have been able to negotiate. "*Some MVNOs (iD, Lyca, GiffGaff and Tesco Mobile) have been able to negotiate access to 4G with their host provider network. This is typically where O2 or H3G are the provider. A significant number of non-MNOs however still operate on 3G only, such as Virgin and Lebara. MVNOs have only really been able to gain access to 4G since 2015, therefore prior to 2015 4G was a key differentiator between MNOs and non-MNOs.*"[946] The Commission notes that both giffgaff and Tesco Mobile are not independent from their host MNOs.

(1094) Talk Talk indicated that it does not currently offer 4G services.[947] Talk Talk will start offering such services […], when it will launch as a full non-MNO on O2's network. The Commission thus notes that Talk Talk will have access to 4G technology almost […] years after the launch of 4G services in the United Kingdom and that moreover, TalkTalk will start offering these services after changing its host MNO.

(1095) […] [948]

(1096) In relation to the Notifying Party's argument that […][949], the Commission notes the following: […].[950] The Commission thus considers that the fact that the largest independent non-MNO is still unable offer 4G services now, when EE has already launched 4G in 2012, is proof that even the mass-market non-MNOs cannot compete with the MNOs on the latest technology.

(1097) Having late access to the new technologies puts the non-MNOs in a situation where their offers are not commercially attractive enough as compared to the offers of MNOs, which results in them being pushed to the low end of the market and significantly limits their ability to participate in the competition dynamics in the overall retail market. Indeed, as shown in recitals (1027) to (1089), there has been a significant increase in the consumer's adoption of 4G services and, in addition to

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943 Reply to the Statement of Objections, paragraphs 81-82.
944 Responses to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 8, point (a).
945 Responses to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 8 bis, point (a).
946 […].
947 TalkTalk's response to Questionnaire Q67 to non-MNOs, of 4 December 2015, question 8(a) [ID3197].
948 […].
949 As shown in recital (2054), […].
950 […].

price, network coverage, quality and speed are some of the most important factors in consumer's view when it comes to data usage (see Figure 13). […].[951]

(1098) […] [952]

(1099) Finally, the CMA, in its submission to the Commission, echoes the Commission's findings in previous cases that non-MNOs are unable to compete with MNOs on important parameters of competition, such as network coverage and/or quality. The CMA said that "*it has seen evidence that the market shares of MVNOs has been declining in both subscriber numbers and share of 4G usage, suggesting that individual MVNOs are unlikely to exert strong constraint.*"[953]

(1100) Furthermore, respondents to the market investigation were also sceptical in relation to future proofing of technology such as 5G. […][954]

(1101) […] also noted in relation to future proofing technology: "*As speeds advance further it is likely that non-MNOs will struggle to access improved services immediately. If 5G launches in the next few years, non-MNOs could again be impacted as immediate post launch access may well not be granted*."[955]

(1102) Finally, the Notifying Party also submitted that non-MNOs have a number of other methods to differentiate their products. First, the Notifying Party mentions a number of network "enablers" examples which allow an MVNO to gain the same capability as an MNO and thus control and differentiate its network. According to the Notifying Party, non-MNOs could deploy their own full mobile core, could deploy own spectrum to increase capacity, or they could deploy femto/small cells to offload traffic.[956]

(1103) Furthermore, the Notifying Party points out that other methods to differentiate their products are a specific business model (Lycamobile and Lebara offering cheap international calls/roaming rates), Tesco Mobile's use of its distribution network, multiplay offers (TalkTalk, Virgin Media), or offering access to content (music streaming for example).[957]

(1104) First, the Commission notes that most of the network "enablers" exemplified by the Notifying Party are purely hypothetical, as with little exceptions (Tesco Mobile, Lycamobile), non-MNOs competing in the market today are light non-MNOs, and do not have a core network or do not own spectrum that could be deployed. Furthermore, as shown in recitals (1087) and (1088), there are a number of choices that are exclusively in the remit of MNOs and which are crucial for designing, deploying, monitoring and controlling their radio access networks. MNOs' decisions greatly influence the performance of their mobile services and affect the user experience, including through providing different levels of network reliability, coverage, speed, and importantly, the adoption of new technologies.

(1105) Furthermore, the Commission considers that while non-MNOs may have adopted certain business models allowing them to gain a niche part of the market such as ethnic minorities or customers interested in acquiring a bundled product (TalkTalk),

951 […].
952 […].
953 CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraph 27, [ID4116].
954 […].
955 […]
956 Notifying Party's Reply to the Statement of Objections, paragraph 77, Table 3.
957 Notifying Party's Reply to the Statement of Objections, paragraph 78, Table 4.

this is not the type of differentiation which would allow them to compete effectively with the MNOs for the same customers. This is demonstrated by the Parties' internal documents. […].[958] In relation to O2, […] argued that […].[959] Therefore, in general, MNOs rely on the factors shown in recital (1087) to control the level of services quality offered to their customers and to promote innovation; these factors remain completely outside the remit of non-MNOs.

Conclusion

(1106) Given the aspects described above, the Commission considers that non-MNOs, irrespective of the type of non-MNO, cannot differentiate their product offers in the same way as the MNOs do, as they heavily rely on the innovations to which their host MNOs give access to. In particular, non-MNOs have had significant difficulties in accessing 4G technology. Late access to these technologies means that non-MNOs are unable to compete as well as the MNOs on the retail market.

ii. Competitive position absent the Transaction

Notifying Party's view

(1107) The Notifying Party submits that non-MNOs, in particular fixed-mobile non MNOs, would continue to compete vigorously on the retail mobile market, including on latest technology, as many non-MNOs wholesale agreements include specific carve-outs for the deployment of future technologies, or the acquisition of spectrum which would enable non-MNOs to develop such technologies unilaterally. In sum, non-MNOs will not necessarily be dependent upon their host MNOs in order to access future technologies, especially 5G (which is expected to be developed through small cell networks that non-MNOs can develop independently from their network host).

(1108) Moreover, the Notifying Party submits that new entrant Sky is expected to be a disruptive player in mobile. This view […].[960] The Notifying Party submitted in its response to the Letter of Facts of 29 March 2016 that Sky could […], other factors should be taken into account in measuring Sky's competitive force, as Sky has a strong brand, a large fixed customer base to cross-sell mobile services to, and offers premium content.[961]

Commission's assessment

(1109) The Commission considers that, absent the Transaction, non-MNOs would continue to constrain MNOs only to a limited and insufficient extent. Like today, non-MNOs would continue to be reliant on the wholesale conditions granted by their host MNO and continue to compete only to a limited extent on data packages and technology with the MNOs. Some of the non-MNOs such as Talk Talk will finally start offering 4G services, however, the issue of having access to the future technologies will remain. Furthermore, the Commission considers that such players will be facing the same difficulties in competing on large data packages with the MNOs in a world which will be increasingly data-centric, and, as shown in recital (1060), will not have any specific advantage in respect of traffic offload as compared to the MNOs.

(1110) As regards Sky's entry, […]. The Commission has looked into Sky's forecasts in relation to its future mobile customer base, as well as in the Parties' internal

958 […] [ID000602129.00001].
959 […].
960 See for instance, […], Annex 133 to the Form CO.
961 Reply to the Letter of facts of 17 March 2016, paragraph 26.

documents, in order to determine what its likely competitive position would be on the mobile market.

(1111) In response to Commission's RFI 57, on 27 November 2015, O2 provided information on the projected size of Sky's number of mobile subscribers in the following two-three years after its launch on the retail mobile market.[962]

(1112) According to these forecasts, […].

(1113) On 29 March 2016, in response to the Commission's Letter of Facts of 17 March 2016, O2 submitted an updated forecast, which shows that by […].

(1114) Strictly on the basis of the figures submitted, the Commission notes first that Sky's predicted customer base growth in the following few years after its entry on the market, even if taken for granted, and in the best case scenario, could amount to a level slightly above […] of Virgin Media's current mobile customer base by the end of 2018. Taking into account the updated forecast submitted by O2, Sky expects to grow its customer base to about […] of Virgin Media's customer base by the end of 2019 and its growth to […] beyond 2019.

(1115) The Commission considers that the Notifying Party's claims that Sky would be a much stronger competitor than Virgin Media and would, in just a few years, equal the customer base of Tesco Mobile ([…]) are incorrect.

(1116) First, the Commission notes that there are a number of strong similarities between Virgin Media and Sky. Just like Sky, Virgin Media has a strong brand, a fixed-line customer base, and is able to offer quadplay services.

(1117) Second, the Commission notes that Tesco Mobile has a number of specific advantages over the rest of the non-MNOs in the United Kingdom market which have allowed it to compete strongly, grow and acquire a customer base of around […] customers (since its entry on the market in 2003). These advantages include a […], being a full non-MNO for many years, having a strong brand and a similarly strong distribution through Tesco.

(1118) These factors show that Sky is more similar to Virgin Media, rather than to Tesco Mobile. Moreover, as shown before, […], with an Enders Analysts survey showing that only 3% of Sky's customers would be willing to take mobile services from Sky as well.[963] […].[964]

(1119) For these reasons, and taking into account Sky's own customer base forecast, and the limitations under its own wholesale contract pointed out by Sky during the market investigation, the Commission takes the view that Sky is likely to become one of the top non-MNOs in the United Kingdom; even so, however, it is quite unlikely that Sky will be able to grow as fast as the Notifying Party claims. The Commission therefore considers that Sky is likely to gain a position closer to that of Virgin Media beyond 2020 rather than that of Tesco Mobile.

(1120) Finally, as regards non-MNOs being able to compete with the MNOs on the latest technologies and in particular on 5G, the Commission notes that, at this stage, 5G technology is still under development and the extent to which non-MNOs' ability to compete will be impacted is highly uncertain. Standardisation process has just begun,

962 O2's response to RFI 57, Annex 1.
963 […], Annex B5.8 to the Reply to the Statement of Objection, slide 7.
964 […] Annex B5.8 to the Reply to the Statement of Objection, slides 5 and 8.

and 5G standards and associated technology and equipment should be available at the earliest as of 2020, with mobile operators being in a position to start rolling out 5G services from that point in time on.[965] Therefore, it cannot be established at this stage whether fixed-mobile players would actually have an advantage as compared to mobile only players.

(1121) For the reasons outlined above, the Commission takes the view that, absent the Transaction, non-MNOs will most likely continue to exercise only a limited and, from the competition point of view, insufficient constraint in the retail mobile market.

iii. Likely reaction post-Transaction

Notifying Party's view

(1122) The Notifying Party submits that the Transaction will not bring about any material changes to the wholesale market inhibiting competition from the non-MNOs post-Transaction. This is because (a) given the […], the merged entity will be incentivised to continue to offer wholesale access services to non-MNOs; and (b) BT/EE and Vodafone will continue to compete aggressively for wholesale contracts. Furthermore, with the Notifying Party submits that the presence in the market in the future of several full non-MNOs would increase the competitive discipline they can impose on the wholesalers through the threat of timely and cost-effective switching.

(1123) Furthermore, on 7 April 2016, the Notifying Party submitted that it had signed a Letter of Intent setting out the intention of Three and UKB to enter into a reciprocal 4G Multi-Operator Core Network ("MOCN") network access agreement in respect of 4G (and future technologies). Under the agreement, […]. In the Notifying Party's view, this agreement, which is conditional on approval of the Transaction, will result in a further major structural entry into the United Kingdom's mobile market […].

(1124) Thus, the Notifying Party concludes that non-MNOs, including UKB, will continue to exercise a significant competitive constraint on the merged entity.

Commission's assessment

(1125) The Commission considers that there are already a number of difficulties for non-MNOs to effectively compete with MNOs at the retail level. Importantly, this competitive pressure of the non-MNOs may be further reduced to the extent the competitive conditions at the wholesale level would deteriorate post-Transaction.

(1126) Due to their dependency on wholesale conditions, the ability of non-MNOs to compete on the retail market strongly depends on competition between MNOs on the wholesale market. In reply to the market investigation, most non-MNOs considered that they will be able to compete (even if to a limited extent as it currently is the case) with the MNOs post-Transaction only if the rates on the wholesale market do not increase and remain affordable.[966]

(1127) Ofcom indicated that the non-MNOs currently in the market would not have sufficient buyer power to be able to compensate for this loss of competition at the wholesale level post-Transaction. Ofcom considers that: "*the difficulty that some*

[965] See https://ec.europa.eu/digital-single-market/news/more-smartphones-white-paper-shows-how-5g-will-transform-eu-manufacturing-health-energy, [ID6165].

[966] Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 46.

MVNOs have had in negotiating the supply of 4G seems to indicate that their buyer power is limited."[967]

(1128) Finally, as shown in recital (1870), the Commission considers that, irrespective of the type of non-MNO, there are significant barriers to switching host MNO. Non-MNOs would incur substantial costs of a commercial, contractual and technical nature in order to change hosts. While in the case of full non-MNOs a SIM swap may not be necessary, switching is not something that they can timely and easily achieve. This situation will be further aggravated by the reduction in the number of hosts from four to three. As […], which is currently one of the few non-MNOs in the market, attests to this: "*[...]'s ability to switch to alternative MNO network will be more limited, given that there will only be two alternative MNOs post-Transaction*".[968]

(1129) As further detailed in Section 8.3.1., the Commission finds that the Transaction would remove the competition between Three and O2 on the wholesale market and thus lead to a significant impediment to effective competition on this market.

(1130) As a result, the Commission considers that the already limited competitive pressure exerted at the retail level by non-MNOs would likely be further reduced due to lower competition among MNO on the wholesale market and the consequent worse wholesale conditions that would be available post-Transaction.

(1131) The Commission also assessed the Notifying Party's claim that the Letter of Intent signed with UKB would result in a further major structural change into the mobile market in the United Kingdom.

(1132) As shown in recital (207), Commission first notes that UKB is already present in the United Kingdom's market, where it offers wireless telecommunication services and wireless data networks and services to consumers and businesses. UKB has built a 4G LTE fixed wireless broadband data network in central London using 3.5 and 3.6 GHz licensed spectrum. This type of spectrum is only just becoming internationally harmonised for use in mobile networks.[969]

(1133) UKB submitted that it offers high speed fixed wireless broadband to businesses and consumers over this network through the "Relish" consumer brand. UKB submitted that the Relish offering is designed to be attractive to segments of the fast broadband market that do not want or require a landline. In addition to the fixed wireless service for home and business broadband, Relish also offers a mobile data service via a personal Wi-Fi hotspot device.[970]

(1134) UKB also submitted that it is […].

(1135) […].[971] Therefore, currently UKB does not operate as a national operator, but rather focuses on London and a few other cities in the United Kingdom.

(1136) As explained above, a Letter of Intent was signed by Three and UKB setting out their intention to enter into a reciprocal 4G MOCN network access agreement in respect of 4G (and future technologies') capacity. MOCN is a form of network sharing that enables mobile network operators to share the cost of deploying and operating RANs

967 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 3.7 [ID2069].

968 […].

969 UKB's Response to Questionnaire Q27 to non-MNOs of 11 September 2015, page 1 [ID4729].

970 UKB's Response to Questionnaire Q27 to non-MNOs of 11 September 2015, page 1 [ID4729].

971 UKB's Response to Questionnaire Q27 to non-MNOs of 11 September 2015, page 2, [ID4729].

while allowing each operator to operate their own Core Network ("CN"). […]. This is based on the assumption and the aim that the volume of capacity in absolute terms used by each party pursuant to the reciprocal 4G MOCN arrangements would be balanced. […].

(1137) […].

(1138) First, the Commission notes that there is a great deal of uncertainty in relation to this agreement. The Letter of Intent submitted by the Notifying Party does not have a binding nature. […]. The Commission cannot therefore take at face value that the provisions […].

(1139) […]Second, the Commission considers […].

(1140) The Commission also notes that the […].[972] In that case, the Commission notes that […].

(1141) Furthermore, the Commission notes that […].[973]

(1142) In addition, the Commission notes that the launch of the reciprocal 4G MOCN agreement is subject to a number of conditions, […]. In the Commission's view, these conditions could be potentially used by the merged entity, UKB, or both, to delay or prevent the actual launch of the reciprocal 4G MOCN arrangement. Therefore, the Commission believes that these conditions could potentially compromise the actual launch of the 4G MOCN arrangement.

(1143) Generally, a MOCN sharing agreement allows for more independence for the sharing partners than a traditional non-MNO wholesale arrangement, as an MOCN arrangement allows dynamic sharing of capacity.[974] Nevertheless, the limitations described above, stemming from the Letter of Intent are likely to hamper UKB's ability to compete on the retail mobile market, and its situation will be similar to that of the rest of the non-MNOs in the United Kingdom.

(1144) Third, the Commission considers that […] will not allow UKB to become a meaningful nation-wide mobile operator in the United Kingdom. The Commission notes that […]. […].[975] The Commission is of the view that […]. Therefore, the Commission considers that UKB will exercise a limited competitive constraint on the merged entity even in 2025, as it […].

(1145) Fourth, the Commission considers that […][976] […].

(1146) Fifth, the Commission has doubts about UKB's prospects of becoming an effective competitor in the United Kingdom, especially considering that UKB is only a niche player today, with presence among corporate customers, and with little presence and expertise in the residential segment. These factors raise considerable doubts as to UKB's likelihood of becoming a successful competitor in the United Kingdom's retail mobile market.

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972 […].

973 […].

974 Ofcom's "Initial assessment of possible remedies for Three/O2 merger. Submission to the European Commission", December 2015, paragraphs 29 to 33 [ID3121].

975 Reply to the Statement of Objections, Annex 1, paragraph 169 and Table 4. The cell range is smaller for higher frequency bands. The cell area for the 3.5 GHz frequency will therefore be even smaller than for the 2.6 GHz band.

976 […] [ID5711].

(1147) Finally, the Commission notes that UKB is owned by PCCW, a telecoms company listed in Hong Kong, whose executive chairman and director is Richard Li, son of Li Ka-Shing and brother of Victor Li (Chairman and Deputy Chairman of CKHH respectively). While UKB has submitted that […], the question whether UKB can be considered independent from Three remains.

iv. Conclusion on non-MNOs

(1148) In summary, the Commission concludes, in light of the above that there are already pre-Transaction a number of serious factors that prevent non-MNOs from effectively competing with MNOs at the retail level. On this basis, the Commission considers that non-MNOs taken either individually or as an aggregate cannot, for the reasons mentioned above, compensate the significant loss of competition deriving from the Transaction on the retail market. In addition, it is important to note that this already limited competitive pressure of the non-MNOs would be further reduced due to the deterioration of the competitive conditions at the wholesale level. As set out in Section 7.2.2.3., the Transaction is likely to reduce the merged entity's, as well as the remaining MNOs' incentive to grant wholesale access to their networks. Therefore, wholesale prices are likely to increase and the wholesale access terms may deteriorate as a result of the Transaction. These wholesale price increases would be likely passed through by non-MNOs, thereby additionally deteriorating their competitive pressure at the retail level and generally compounding the negative impact of the Transaction on the retail market.

c) Independent specialist retailers

i. Competitive position pre-Transaction

(1149) As shown in Figure 31, indirect distribution accounts for a large part of the retail market. Within the indirect distribution channels, independent specialist retailers play a very significant role.

(1150) In particular, as mentioned Section 6.8., today Dixons is the last independent specialist retailer remaining in the market and it accounts for the largest part of the indirect distribution channel. According to data collected by Enders Analysis before the exit of Phones 4U, in 2014 Dixons accounted for 41% and 29% of the indirect distribution channel, respectively by subscribers and revenues, with respect to the sale of handset postpaid contracts, as shown in the below Figure 113:

Figure 113: Indirect distribution channel the United Kingdom (2014)

Handset postpaid private	Subscriber (gross adds) share	Revenue share
Dixons	41%	29%
Phones 4U	22%	14%
Other indirect retailers	36%	57%

Source: Enders Analysis, UK mobile market Q3 2014, page 7 [ID4171].[977]

[977] The Notifying Party was not able to provide data for this segmentation at market level (see Notifying Party's response to RFI 60). Enders Analysis, UK mobile market Q3 2014, only provide retailer share of contract handset sales and contract gross adds but not absolute figures and not data for SIMO. The Commission's analysis of data on sales of MNOs' subscriptions though different distribution channels in

(1151) In a recent report on Carphone Warehouse plc, the investment bank Nomura estimated that in June 2014 Carphone Warehouse plc and Phones 4U together constituted the retail channel responsible for sales of approximately 27% of postpaid mobile contracts in the United Kingdom (with Carphone Warehouse plc accounting for approximately 15% of this). Having taken some of Phones 4U's business after its exit, Nomura estimates that today Dixons' share of sales of postpaid contracts is approximately 20%.[978]

(1152) As explained in recital (53), retail prices of mobile telecommunications services in the United Kingdom have been characterised by a downward trend. An important role in driving prices down has been played by the indirect distribution channel and, in particular, by independent specialist retailers.

(1153) Indeed, as explained in Section 6.8., independent specialist retailers receive a commission for each mobile operator whose contracts they sell. This commission is the margin of the independent specialist retailers and they are free to dispose of it. Often independent specialist retailers pass-on part of this margin to their customers, for example through discounts, cheaper handsets etc. In this way independent specialist retailers can offer highly competitive offers and undercut the prices offered by the MNOs' in the direct distribution channels.[979]

(1154) The impact of independent specialist retailers on retail prices is therefore limited to the commission fees received by the MNOs and it is constrained by the prices offered by the same MNOs. Within these boundaries, prices in the indirect retail channel are autonomously determined by independent specialist retailer and are the results of their decision on whether and how much margin to pass-on to customers.[980]

(1155) In this respect the Commission notes that Figure 31 above shows that, while the revenue share of direct distribution channel is greater than that of indirect distribution channel for handset postpaid contracts, their gross adds share is lower: this is indicative of overall higher prices in the direct distribution channel compared to the indirect distribution channel. Looking more closely to that data it also appears that within the indirect distribution channel Dixons' prices are even lower: indeed, while Dixons has a 41% subscriber share within the indirect distribution channel, it holds only 29% of the revenue share, as shown in the above Figure 113. This is in line with the results of the pricing analysis undertaken in recitals (580) and following above.

(1156) Further, the market investigation confirmed the important role that large independent retailers such as Dixons played in the market.

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generally in line with the market shares by gross adds illustrated in Figure 80 above (see responses to RFIs 60, 61, 65 and 66 provided in the data room).

978 Nomura, "Dixons Carphone report", 1 September 2015, Figure 27, referred to in Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 5.13 [ID2069].

979 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, page 34 [ID2069]. See also O2's internal documents, […] [ID 000075407.00001].

980 See O2's internal documents, […] [ID 000075407.00001]; […] [ID000097888.00001]. Contracts between indirect distributors and mobile providers set minimum volumes of subscriptions that indirect distributors have to achieve but not the sale price.

(1157) First, Dixons is identified among competitors […], which stresses Dixons' price aggressiveness and its effects on retail prices.[981] In particular […][982]

(1158) Respondents to the market investigation pointed out that independent specialist retailers have fuelled and continue to fuel price competition by discounting subscriptions of MNO/non-MNOs retail mobile services and offering a large variety of subscriptions from different MNOs and non-MNOs at the point of sale.[983]

(1159) […] indicated that: "*They are important in keeping prices down. In order to compete with MNOs they compete on service and price.*"[984]

(1160) […] said: "*We believe they are a driver to reduce the price level to a certain extent, as they facilitate comparison among different MNO propositions (and as such, stimulate competition). They are also able to occasionally offer exclusive deals (either via discount, cashback or exclusive handsets) stimulating competitors to reduce tariff.*"[985]

(1161) […] added that "*Non-tied specialist retailers have contributed to the competitive retail market in the UK providing consumers with a credible alternative retailer from whom they can purchase mobile subscriptions from a range of mobile providers at competitive prices. […]notes that non-tied specialist retailers have contributed to a reduction in the price of handset subscriptions, less so in relation to SIMO propositions*."[986]

(1162) The CMA has submitted that "[*t]he role of independent distributors such as Dixons Carphone is important for the intensity of retail competition and any impact of the Notified Concentration on these distributors may also lead to increased prices in the retail mobile market. Independent distributors currently have negotiating strength against MNOs due to their large volumes of sales and the ability to influence end customers, for example by providing information to consumers on different mobile packages*."[987]

(1163) In addition to their importance with respect to price competition at the retail level, independent specialist retailers have also other important effects on competition. Indeed, independent specialist retailers offer customers a large selection of mobile subscriptions and help them choosing the best possible package including their choice of smartphones, tablets and networks. By allowing consumers to compare the offering from a range of suppliers in a single location, independent specialist retailers and Dixons in particular reduce search costs for consumers and increase price transparency. Moreover, by allowing consumers to compare different offers, independent specialist retailers facilitate switching.[988]

(1164) Independent specialist retailers can exert this role of facilitating transparency and switching only to the extent that they are able to offer subscriptions of a large number of mobile providers. In turn, the fact that independent specialist retailers

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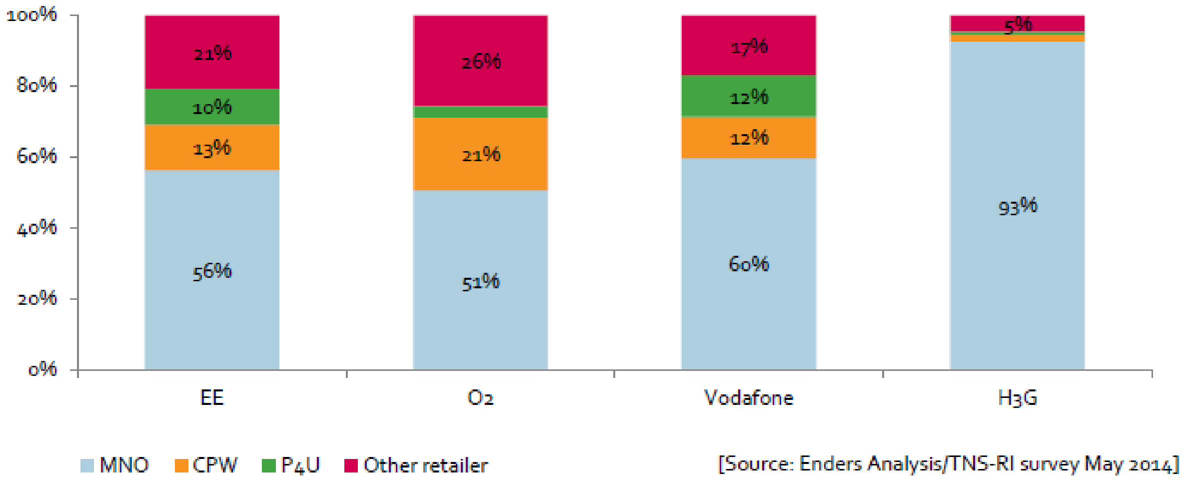
981 […].
982 […].
983 […], and responses to Questionnaire Q67 to non-MNOs of 4 December 2015, question 18.
984 […].
985 […].
986 […].
987 CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraph 29 [ID4116].
988 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, page 38 [ID2069].

offer subscriptions of a large number of mobile providers and are able to drive customer switching gives them buyer power in the negotiation of the agreements with mobile providers and in the determination of their commission fee.[989] Indeed, as if an MNO were to offer less favourable terms to Dixons, Dixons, in exercising its freedom in determining retail prices, could increase the retail price of that MNO's services in its shops and/or through its advice to encourage customers to choose an alternative MNO.[990]

(1165) Today, all MNOs, with the exception of Three, heavily rely on Dixons for the distribution of their subscriptions.

(1166) Figure 114 below shows the result of a survey by Enders Analysis carried out in May 2014 (that is before the bankruptcy of Phones 4U). Carphone Warehouse plc ("CPW" in the figure) constituted the retail channel responsible for sales of 12-21% of private contracts for EE, O2 and Vodafone.

Figure 114: Share of postpaid contract sales for each MNO by channel



Source: Enders Analysis, UK mobile user survey 2014, January 2015, page 34 [ID4175].

(1167) Following the exit of Phones 4U, the importance of Dixons within each of the MNOs, with the exception of Three has increased.[991]

ii. Competitive position absent the Transaction

(1168) The Commission has not found any evidence suggesting that the role of independent specialist retailers is likely to change absent the Transaction.

iii. Likely reaction post-Transaction

(1169) The Commission considers that post-Transaction independent specialist retailers would be able to continue to play in the retail market their current role with respect to price, search costs and switching.[992]

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989 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, pages 39-40 [ID2069].

990 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 5.18 [ID2069].

991 See responses to RFIs 60, 61, 65 and 66 provided in the data room.

992 This consideration is predicated on the assumption that the distribution strategy with respect to O2 subscriptions would remain the same pre- and post-Transaction. In the Statement of Objections, Section

(1170) Nonetheless the Commission considers that independent specialist retailers would not have the ability to compensate the loss of competition and mitigate any possible price increases deriving from the Transaction.

(1171) Indeed, as above in recital (1154), the impact of independent specialist retailers on retail prices is limited to the commission fees they received by the MNOs and it is constrained by the prices offered by the same MNOs.

(1172) Therefore, if prices were to rise as a result of the Transaction, independent specialist retailers could continue play their role and undercut the prices of mobile operators but at a higher price level, so that ultimately post-Transaction prices would still be higher than pre-Transaction.

(1173) The inability of independent specialist retailers to countervail price effects arising from the Transaction is evidenced by the price effects estimated in the quantitative analysis (see Section 8.2.1.4.b. and Annex A) which uses as input MNOs' average margins across all distribution channels, including independent specialist retailers.

iv. Conclusion on independent specialist retailers

(1174) In summary the Commission considers that post-Transaction independent specialist retailers would not be able to countervail the likely price effects arising from the Transaction.

8.2.1.4. Commission's assessment of the likely impact of the Transaction

a) Qualitative assessment

(1175) As illustrated in Section 6, the retail mobile telecommunications market in the United Kingdom is well functioning and very competitive at present. The United Kingdom is one of the most advanced countries in the European Union in terms of 4G technology roll-out and 4G services take-up. The network sharing arrangements in place between O2 and Vodafone, on the one hand, and Three and BT/EE, on the other hand, contribute to the competitiveness of the market.

(1176) The Transaction would combine the operations of O2 and Three, respectively the first and the fourth players by subscribers (the second and the fourth by revenues) in the retail market for the provision of mobile telecommunications services in the United Kingdom, creating a market leader by number of subscribers and revenues and significantly increasing the level of market concentration as illustrated in Section 8.2.1.2.a(i).

(1177) As set out in Section 8.2.1.2.b(i), Three is the most recent network operator to have entered the market and has been the driver of competition since its entry, for example by changing the industry trend of restricting data usage and data price increases. Its recent and current market behaviour shows that it is the most aggressive and innovative player. Namely it offers the most competitive prices in the direct channel, and offered 4G at no extra cost, forcing the industry to abandon strategies to sell 4G at a premium. It also offered such popular propositions as free international roaming and was the first to launch a VoLTE service. As shown in Section 8.2.1.2.b(i), despite being the most recent entrant Three managed to build out an excellent network as shown by independent surveys, network tests carried out by independent

8.2.2.4.d), the Commission noted that there were uncertainties as regards the distribution strategy of the merged entity. […].

network performance firms, and data by the national regulator Ofcom. In particular its network was rated as the most reliable of the networks in the United Kingdom.

(1178) Absent the Transaction, Three is likely to continue to compete strongly. Based on the available evidence in its file (Section 8.2.1.2.b(ii)), the Commission considers it unlikely that Three's ability to compete would materially deteriorate in the next two to three years. In particular, as explained in Annex C, Three is unlikely to experience significant capacity constraints and has several options to handle capacity challenges. Further, Three is financially sound with a healthy EBITDA and cash flow margins and an ability to invest. […] external analyses forecast a dynamically expanding business.

(1179) Therefore, pre-Transaction the Commission considers that Three constitutes an important competitive force pursuant to paragraph 37 of the Horizontal Merger Guidelines, or in any event it exerts an important competitive constraint on that market within the meaning of paragraphs 24 and 25 of the Horizontal Merger Guidelines, and that it is likely to continue exerting such a constraint absent the Transaction.

(1180) As set out in Section 8.2.1.2. c(i), O2 has the strongest brand in the market and in the past seven years it has consistently achieved the highest customer satisfaction scores. Its success is due to its customer centric propositions such as its transparent and flexible Refresh tariff, its popular loyalty programme, its customer friendly technology experts and its excellent customer service. It has also launched popular non-MNOs such as giffgaff and it owns 50% of Tesco Mobile. Its popularity with customers and its brand image is a strong asset that exerts significant pressure on other competitors.

(1181) As set out in Section 8.2.1.2.c(ii) and Annex C, absent the Transaction, the Commission considers it unlikely that O2's ability to compete would materially deteriorate in the next two to three years, […]. Further it also has healthy finances and thus retains the ability to invest and grow.

(1182) The Commission therefore considers that pre-Transaction O2 exerts an important competitive constraint on the market within the meaning of paragraphs 24 and 25 of the Horizontal Merger Guidelines and that it is likely to continue exerting such a constraint absent the Transaction.

(1183) The Commission also notes that Three and O2 are the only mobile network operators in the United Kingdom whose market shares have been constantly growing over the last years (see Sections 8.2.1.2. b(i) and c(i)) and that they compete closely between each other and the other MNOs (see Section 8.2.1.2.a(ii)).

(1184) For these reasons, the Commission considers that the elimination of the competitive constraints exerted by the Parties pre-Transaction – both on each other and on other competitors – is likely to significantly weaken competition, strengthen the market power of the merged entity and induce it to increase prices. It would be the largest MNO with little, if any incentive to be price aggressive (see Section 8.2.1.2.d)).

(1185) In addition, as illustrated in Section 8.2.1.3.a), the Commission finds that the Transaction is likely to have a negative impact on the ability to compete of one or both of the remaining MNOs, BT/EE and Vodafone, which in turn would likely reduce those players' ability to compete on price and other parameters (innovation, network quality). Indeed, the Transaction would disrupt the existing well-functioning network sharing arrangements in the mobile market in the United Kingdom.

(1186) Today, the four network operators have entered into two network sharing agreements: Vodafone and O2 in the CTIL/Beacon agreements and Three and BT/EE in the MBNL agreements. The partners of each network sharing arrangements have an incentive to jointly develop the shared elements of their networks with a view to achieving a better network than the other MNOs and in particular than the MNOs in the other network sharing arrangement.

(1187) Post-Transaction, this healthy competitive dynamic would be lost. The merged entity would be part of both network sharing agreements and each of Vodafone and BT/EE would no longer have a fully committed network sharing partner in, respectively, CTIL/Beacon and MBNL. This situation is likely to lead not only to a weakening of the competitive position of one or both of BT/EE and Vodafone, but also, depending on the network consolidation plan, to an industry-wide reduction of network investments to the detriment of consumers in the United Kingdom in the long-run, as further discussed in Section 8.2.2.

(1188) In Section 8.2.1.3.a) the Commission also finds that, given their history and current strategy and positioning, should BT/EE's and Vodafone's ability to compete be fully preserved post-Transaction, it is likely that they would not have a strong incentive to compete vigorously.

(1189) Finally, for the reasons set out in Sections 8.2.1.3.b), the Commission further considers that, given their limited ability to compete, in particular on data, and to innovate due to their dependence on MNOs, non-MNOs would not be able to counterbalance the loss of competitive pressure resulting from the Transaction. Likewise, as set out in Sections 8.2.1.3.c), independent specialist retailers (and in particular Dixons), while generally able to improve on MNOs' offers, do not have the ability to compensate for the loss of competition among MNOs.

(1190) The Commission considers that the elements presented in recitals (1185) to (1189) would further strengthen the anticompetitive effects arising from the elimination of competition between the Parties.

b) Quantitative analysis of the likely price effects of the Transaction

i. Introduction

(1191) The Commission has undertaken an in-depth quantitative assessment of the likely price effects of the elimination of horizontal competition on the United Kingdom's market for mobile telecommunications services to private consumers resulting from the Transaction.

(1192) The analysis performed is a calibrated merger simulation and consists of an extension of the standard UPP framework presented in the Article 6(1)(c) Decision.[993] This estimation of the likely price effect of the Transaction takes into account the most direct unilateral effects as indicated in the Horizontal Merger Guidelines.[994] These are the likely price effects resulting from the elimination of competition between Three and O2. The analysis also accounts for price reactions of the remaining competitors in the market. Therefore, the analysis allows obtaining an

[993] See Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus* section 6.3.1.7, and Commission decision of 28 May 2014 case No. M.6992 – *Hutchison 3G UK/Telefónica Ireland* section 7.5.7.

[994] Horizontal Merger Guidelines, paragraph 24.

approximation of the price effect that the Transaction would have across all operators, in each of the segments analysed.

(1193) The merging parties do not need to be each other's closest competitor for a unilateral price increase to be profitable for the merged entity. However, the closer the competition between the merging parties, that is, the higher the diversion ratios between them, the stronger will the merged entity's incentive be to raise prices post-merger. Moreover, the higher the observed margins are, the higher will the incentives be to increase prices. Similarly, the price reactions by rivals will depend on their closeness of competition with the merging firms as well as rivals' margins.

(1194) The Commission notes that the possibility of deterioration of competition post-Transaction may also take the form of the merged entity offering a lower quality of service compared to what would have occurred in the absence of the Transaction. A reduction of handset subsidies may be an additional way of achieving a de facto price increase. In the Commission's analysis, the finding that the Transaction would generate significant incentive to raise price is understood to encompass all mechanisms by which the merged entity could increase its margins relative to the situation absent the Transaction.

(1195) The analysis performed necessarily abstracts from a number of additional factors affecting the Parties pricing incentives (such as product repositioning or the existence of barriers to entry). Nevertheless, the applied framework captures, in the Commission's view, the most important factors (such as the closeness of competition between the Parties) determining how the Transaction will likely affect the mobile operators' pricing incentives. The Commission considers that the market features and dynamics outside the scope of this analysis are unlikely to significantly bias the results in a particular direction. In any event, the results should not be interpreted as providing a precise quantification of the exact increase in prices expected following the Transaction but only as an approximation of the change in pricing incentives post-Transaction.

(1196) A high level summary of the approach to the quantitative analysis of the horizontal non-coordinated effects is discussed in the following section. A more comprehensive and technical discussion of this quantitative analysis is presented in Annex A, where the Commission also presents its assessment of the arguments raised by the Notifying Party in its Reply to the 6(1)(c) Decision and in the Reply to the Statement of Objections.[995,996]

(1197) The efficiency claims raised by the Notifying Party[997] are discussed in Section 8.6 and Annex C. The Commission is of the view that these efficiency claims are not substantiated to an extent that would allow accounting for their effect in this quantitative analysis.

ii Outline of the analysis

(1198) The main inputs for the calibrated merger simulation are a measure of the diversion ratios across operators, a measure of prices and margins and a measure of quantities.

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995 Reply to the Article 6(1)(c) Decision, November 2015; Reply to the Statement of Objections, February 2016.

996 The Notifying Party also raised or reiterated critiques to the Commission's quantitative analysis at the Oral Hearing and in the Reply to the Letter of Facts of 17 March 2016. These comments are also addressed in Annex A.

997 See Frontier Efficiencies Paper; and Reply to the Statement of Objections, February 2016.

(1199) In its baseline scenario, the Commission has computed diversion rations for Three, O2 and Tesco Mobile based on all responses to the Survey.[998] The diversion ratios from EE and Vodafone to the other operators are based on MNP data.

(1200) The Commission has also carried out sensitivity analyses using (i) diversion ratios based on MNP data; (ii) diversion ratios based on the Survey responses to the intensive question only; and (iii) the diversion ratios put forward by Three which combine Kantar data with MNP data.

(1201) The analysis has been carried out at network level and at the provider level.[999] For the former, switching is considered across the four networks only and each non-MNO is aggregated under its host network. The only exception is Tesco Mobile, for which it is assumed that O2 holds a 50% ownership and control. For the switching at the provider level, each non-MNO is considered as independent from its host network (with the exception of Tesco Mobile, for which it is again assumed that O2 retains a 50% ownership and control).

(1202) As regards the margins, for its baseline scenarios the Commission uses the short run incremental network margins. These consist of the contribution margins minus the short run incremental network costs. As a sensitivity scenario, the Commission has also used the contribution margins and full short run incremental margins, which also account for additional short run incremental costs in areas such as customers operations and sales and distribution.[1000]

(1203) Prices have been proxied by using the ARPU and gross adds have been used as the measure of pre-Transaction quantities in the prepaid and postpaid segments.

(1204) More details on the construction of diversion ratios, margins, ARPU and quantities are presented in Sections 3.2-3.4 of Annex A, which forms an integral part of this Decision.

iii. *Results*

(1205) The Commission has considered the effects of the Transaction on the prepaid and postpaid private segments, as well as in the overall private segment.

(1206) The price effects resulting from the Commission's baseline scenario based on the 2014 short run incremental network margins and on the overall Survey data are presented in Figure 115. The left hand side of Figure 115 (part (a)) presents the price effects based on diversion ratios aggregated at the network level, while the right hand

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998 More specifically, in the baseline scenario the Commission has used the diversion ratios calculated based on the overall answers to the intensive and extensive questions of the Survey ("the overall survey data"). A more detailed discussion is presented in Section 8.2.2.2.a) and in Annex A.

999 In terms of precedent cases in the mobile telecommunications sector, in *Telefónica Deutschland/E-Plus*, the Commission has used diversion ratios at the network level in its baseline scenarios analysis (Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus).* In *Hutchison 3G UK/Telefónica Ireland,* the Commission has used diversion ratios at the provider level (with diversions to and from Tesco Mobile disaggregated from O2 but modelling, as in the present Decision, a 50% stake and control by O2 in Tesco Mobile) in its baseline scenarios analysis but de facto non-MNOs other than Tesco Mobile accounted for circa 2.4% of the market –the network level analysis was hence equivalent to the provider level analysis (Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*).

1000 These additional incremental costs other than the short run incremental network costs are not considered in the Commission's baseline scenario because, as explained in Annex A, there is no evidence that such costs are accounted for by mobile operators when setting their retail prices.

side of Figure 115 (part (b)) presents the price effects based on diversion ratios at the provider level.

(1207) The Commission notes that the analysis at the provider level examines the effect at the retail level holding wholesale conditions for non-MNOs fixed and treating non-MNOs as fully independent at the retail level (with the exception of Tesco Mobile which is jointly owned and controlled by O2 and Tesco). The analysis at the provider level does therefore not account for the effects on the retail market of any reduction of competition at the wholesale level which would undermine the effectiveness of the non-MNOs (see Section 8.3.). Furthermore, the analysis at provider level assumes no price reaction from the market participants not included in the analysis (that is to say all the non-MNOs except Tesco Mobile), and hence, in this respect, it is a conservative measure of the likely price effects post-Transaction. These price effects are also likely to be compounded by the effects of harm in relation to the network sharing (see Section 8.2.3.).[1001]

(1208) The analysis at the network level assumes that the effect of the elimination of competition between the Parties is captured by their positions at the network level rather than the pure retail level interaction between their respective brands. The Commission considers that the network level analysis proxies to a certain extent the wider anti-competitive effects of the Transaction, in particular in relation to possible detrimental effects on the wholesale competition, as it assumes that MNOs fully control non-MNOs on their network both pre- and post-Transaction (again, for Tesco Mobile only partial control and ownership is assumed). This partly accounts for the identified harm relating to reductions in competition at the wholesale level. Nevertheless, this proxy is still likely to be compounded by the effects of harm in relation to the network sharing (see Section 8.2.3.).

Figure 115: Calibrated Merger Simulation Results based on short run incremental network margins and overall Survey data, 2014[1002]

(a) Network Level				**(b) Provider Level**			
Segment	**Prepaid**	**Postpaid private**	**Overall Private**	**Segment**	**Prepaid**	**Postpaid private**	**Overall Private**
Three	40.5%	12.6%	15.4%	**Three**	32.1%	10.8%	12.9%
O2	17.8%	8.2%	10.7%	**O2**	16.7%	6.8%	9.0%
EE	10.9%	3.5%	4.4%	**EE**	6.4%	2.9%	3.3%
VF	7.5%	3.3%	4.0%	**VF**	5.7%	3.4%	3.7%
Tesco Mobile	12.4%	7.0%	8.5%	**Tesco Mobile**	9.3%	6.0%	6.9%
Segment Effect*	14.9%	5.7%	7.3%	**Segment Effect***	10.3%	4.8%	5.7%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

[1001] On 29 March 2016 the Commission was informed that the Notifying Party and Dixons reached an agreement whereby H3GI committed to Dixons' existing O2 contract for the remainder of its term to 2020. The Commission takes note of this agreement and considers that on this basis any additional anticompetitive effects deriving from a change in O2's distribution strategy by the merged entity (as described in Section 8.2.1.3.c) are unlikely to arise over the period covered by the agreement.

[1002] Vodafone is indicated as "VF".

(1209) Figure 115 part (a) shows that in the baseline scenario at network level the segment-wide effects are approximately 14.9% and 5.7% in the prepaid and postpaid private segments, respectively, with an overall private average of 7.3%. The model estimates that Three would increase prices by 40.5% in the prepaid segment, by 12.6% in the postpaid private segment and by 15.4% in the overall private segment. For O2, the model predicts price increases of 17.8% in the prepaid segment, 8.2% in the postpaid private segment and 10.7% in the overall private segment.

(1210) As regards the baseline scenario at the provider level, which is reported in part (b) of Figure 115, the segment-wide effects are 10.3% in prepaid and 4.8% in postpaid private, with an average of 5.7% in the overall private segment. The predicted price effects for Three are 32.1% in the prepaid segment, 10.8% in the postpaid private segment and 12.9% in overall private. For O2, the model predicts a price increase of 16.7% in prepaid, 6.8% in postpaid private and 9.0% in overall private.[1003]

(1211) The results of the baseline scenarios indicate that the Transaction is likely to generate a sizeable incentive to increase prices on average in each of the prepaid, postpaid segments, as well as in the overall private segment. The Commission also notes that the […] customers of Three and O2 are expected to face price increases that are significantly higher than the average price increases.

(1212) In order to verify the robustness of the baseline results, the Commission performed an extensive set of sensitivity analyses. These are presented in Annex A to this Decision.

(1213) In particular, the Commission has assessed the magnitude of the estimated price increases in case diversion ratios based on MNP data are used.[1004] The results (see Figure 116) show that significant price increases would arise in the prepaid and postpaid private segments, as well as in the overall private segment.

1003 There are a number of reasons that explain the differences in the predicted price effects of the Commission's baseline scenarios and the price effects presented by the Notifying Party. Most notably, (i) the methodology of the Notifying Party (GUPPI divided by two) does not account for feedback effects between the Parties' and among market participants, (ii) the diversion ratios used are different, (iii) the Notifying Party methodology does not account for O2's partial ownership of Tesco Mobile.

1004 In a number of previous cases concerning the mobile telecommunications sector, the Commission has used MNP data at the network level as the main data source for the calculation of diversion ratios (Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*). The Commission has also used MNP data to inform the quantitative analysis presented in the 6(1)(c) Decision in this case.

Figure 116: Calibrated Merger Simulation Results based on short run incremental network margins and MNP data, 2014[1005]

(a) Network Level				(b) Provider Level			
Segment	**Prepaid**	**Postpaid private**	**Overall Private**	**Segment**	**Prepaid**	**Postpaid private**	**Overall Private**
Three	31.2%	9.1%	11.3%	**Three**	16.5%	8.5%	9.3%
O2	15.0%	6.9%	9.0%	**O2**	10.8%	6.3%	7.3%
EE	12.9%	3.8%	4.9%	**EE**	4.9%	3.5%	3.6%
VF	6.0%	2.3%	2.9%	**VF**	3.0%	2.5%	2.5%
Tesco Mobile	16.3%	10.7%	12.3%	**Tesco Mobile**	10.4%	10.1%	10.1%
Segment Effect*	13.6%	5.0%	6.5%	**Segment Effect***	6.7%	4.5%	4.9%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(1214) This sensitivity analysis using the MNP data as the basis for the calculation of diversion ratios predicts segment-wide price effects in the overall private segment in the range of 4.9-6.5% (provider level and network level).

(1215) The Commission notes that the […] customers of Three and O2 are expected to face price increases significantly higher than average. The price effects in the overall private segment are in the range of 9.3-11.3% for Three and 7.3-9.0% for O2 using diversion ratios based on MNP data.

(1216) The remaining sensitivity analyses focus on the following aspects.

(1217) First, a number of sensitivities analyse the effect of using different measures of diversion ratios. These are (i) the diversion ratios calculated from the responses to the Survey but focusing only on the responses to the intensive question and (ii) the diversion ratios calculated by the Notifying Party combining Kantar data with MNP data.

(1218) Second, the Commission has tested the sensitivity of its baseline results to the use of different margin measures. These are (i) the contribution margins and (ii) estimates of the short-run incremental margins.

(1219) Third, to account for the possibility that the price increases affect usage, the Commission has assumed a very conservative and hypothetical diversion ratio of 10% and 20% to an outside good. The literal interpretation of diversion to an outside good in the analysis would be that a significant number of consumers stop using mobile phones. While this is unlikely, the Commission considers this approach to be a conservative proxy for the effect of a possible reduction in usage in response to market wide price increases.

(1220) Finally, the Commission has assessed the magnitude of the estimated price increases in case margin and ARPU data relating to the first half of 2015 is used as opposed to data relating to 2014.

(1221) The results of these sensitivity analyses show that the conclusion of likely significant price increases from the Commission's baseline quantitative analysis are robust to changes in the main assumptions. A number of sensitivities produce higher predicted

1005 Vodafone is indicated as "VF".

price increases (sensitivities based on contribution margins, Kantar diversion ratios, data on the first half of 2015, intensive survey question only) while other sensitivities produce lower price increases (using full short run incremental margins, MNP diversion ratios, assuming a degree of aggregate elasticity). Under each of these scenarios the Commission considers that significant price effects would materialise on average across all mobile operators and even higher price effects would affect the Parties' […] mobile customers.

(1222) As a complementary element to the estimated price increases from the calibrated merger simulation, the Commission has also computed the so called Compensating Marginal Cost Reductions ("CMCRs"), that is, the marginal cost reductions that are required to offset the merged entity's incentive to raise prices post-Transaction. The results (presented in Annex A) show that for the Transaction to generate no or negligible price increases, it would need to generate large efficiencies in the form of reductions in marginal cost.

(1223) As mentioned in recital (1197), the efficiency claims raised by the Notifying Party[1006] are discussed in Section 8.6 and Annex C. The Commission is of the view that these efficiency claims are not substantiated to an extent that would allow accounting for their effect in this quantitative analysis.

(1224) In any event, as mentioned in paragraph (2538), even if the Transaction generated an incremental network cost reduction amounting to the entire incremental network cost of the Parties absent the Transaction, such reduction would still leave incentives to increase prices by respectively 9.3-11.5% and 5.9-7.5% in the overall private segment (based on provider level and network level diversions, respectively) and the average price increase across all operators would be 4-5.4% in the overall private segment.

(1225) Overall, the quantitative analysis performed by the Commission suggests that the Transaction is likely to generate an incentive for the merged entity to significantly increase prices. This would also lead to significant price increases at the segment level and in the market overall.

8.2.1.5. Overall conclusion on horizontal non-coordinated effects arising from the elimination of important competitive constraints

(1226) On this basis, the Commission concludes that the Transaction is likely to give rise to non-coordinated anti-competitive effects on the retail market for mobile telecommunications services in the United Kingdom. The anti-competitive effects would arise from a reduction of the number of MNOs from four to three and the elimination of the important competitive constraints that the Parties previously exercised upon each other and a reduction of competitive pressure on the remaining players on the market. In addition, competing MNOs, non-MNOs and independent specialist retailers would either not have the ability, or the incentives to counter the anticompetitive non-coordinated effects of the Transaction.

(1227) Since such likely effects cannot be offset by buyer power (as discussed in Section 8.2.3.1), entry (as discussed in Section 8.2.3.2) or efficiencies (as discussed in Section 8.4), the Transaction would significantly impede effective competition in the retail market for mobile telecommunications services in the United Kingdom.

[1006] See Frontier Efficiencies Paper; and Reply to the Statement of Objections, Section D.

8.2.2. Horizontal non-coordinated effects arising from network sharing

8.2.2.1. Introduction

(1228) The following Section will first describe the harms that could be caused by the network sharing situation resulting from the Transaction (Section 8.2.2.2). Then, the likely development of the two network sharing arrangements absent the Transaction will be discussed (Section 8.2.2.3). Such development will then be compared to the situation following the Transaction (Section 8.2.2.4). First, two plans presented by the Notifying Party to the Commission will be assessed. This Section will conclude by highlighting concerns in potential other network consolidation scenarios.

8.2.2.2. Theories of harm related to network sharing

(1229) In general, the Commission considers that network sharing can have pro-competitive effects by achieving cost synergies in the deployment and operation of mobile networks which in turn can enable MNOs to achieve better coverage and higher network quality, promoting effective competition and thereby benefiting consumers and society as a whole.

(1230) To the extent these goals have been achieved through network sharing agreements concluded by a party merging with another operator, the Commission will assess to what extent the Transaction influences the continued achievement of effective competition benefiting consumers. An important element to keep in mind in this regard is that network sharing arrangements require a certain degree of alignment of interests between the network sharing partners to function properly. By reducing the number of competing MNOs and creating a merged entity which is party to two different network sharing agreements, and therefore can rely on two different networks, the Transaction can affect the alignment of interests between network sharing partners previously existing in the United Kingdom.

(1231) In this context, a first area of concern related to network sharing consists of a weakening of the competitive position of the other network sharing partner. Mobile networks are crucial infrastructure for their operators in order to provide mobile telecommunication services to customers. As explained in recital (1246), the quality of these networks is a key factor of competition. To maintain a competitive network, MNOs constantly invest in their networks. For instance, […]% of the capital expenditures of Three and […]% of the capital expenditures of O2 in 2014 were used to improve the respective networks. Overall, O2 spent more than GBP […] and Three more than GBP […] for operating and improving their networks in 2014.[1007] Disruptions concerning this infrastructure could therefore have a severe impact on the ability of MNOs to compete effectively.

(1232) Therefore, one theory of harm concerns reduced competition from either one or both of the other MNOs that are partners of the Parties in the network sharing arrangements, which could lead to a significant impediment of effective competition in an oligopolistic market featuring a limited number of players and high barriers to entry.

[1007] Based on data in the Notifying Party's responses to RFIs 3, 15 and 47 and in O2's responses to RFIs 4, 16 and 48.

(1233) A potential further harm would be caused if the network sharing situation resulting from the Transaction would lead to less industry-wide investments into network infrastructure. In fact, the Transaction might lead to a loss of synergies affecting the network sharing partners and allow opportunistic investment behaviour of the merged entity, thereby reducing industry-wide investments and, as a consequence, the level of effective competition which would have prevailed in the absence of the Transaction. Also for this reason, the Transaction could lead to a significant impediment of effective competition in an oligopolistic market featuring a limited number of players and high barriers to entry.

(1234) These two theories of harm will be examined below, after explaining in detail the importance of an alignment of interests between network sharing partners.

a) Importance of an alignment of interests between network sharing partners

(1235) Operating a nationwide mobile network is a highly complex task. Even though the network sharing arrangements are based upon very detailed agreements, these agreements are unable to cover all issues relevant for the overall development as well as the day-to-day business of a shared, nationwide mobile network.[1008] Furthermore, network technology and customer demand evolve over time and require network adjustments that cannot be predicted. Therefore, network sharing arrangements require partners that are willing to cooperate and compromise.[1009]

(1236) Cooperation and compromise are facilitated by a comparable situation both partners are in and by mutual co-dependence. If both partners depend upon the functioning of the network sharing arrangements to provide mobile services to their customers, they will be incentivised to find practical solutions in case of disagreements.[1010] Therefore, mutual co-dependence not only facilitates cooperation and compromise, it is a fundamental design principle of network sharing arrangements.[1011]

(1237) Such mutual co-dependence can take different forms. It can be safeguarded by rigid exclusivity provisions that are protected by severe consequences like an extraordinary termination right. This is the case for […]. But it can also be ensured by the set-up of the governance procedures within the network sharing joint venture. If these procedures provide for mutual opportunities to harm each other, such arrangements will have a disciplinary effect on the partners. This can be found in […].

(1238) Both current network sharing arrangements in the United Kingdom have been based upon a certain degree of alignment of interests. Most notably, both arrangements combine partners with certain shared characteristics in term of available spectrum. For all MNOs in the United Kingdom, their current network sharing agreement is the only way to benefit from sharing certain cost with a partner while deploying and maintaining a network capable to supply high quality mobile network services to their customers.

(1239) This alignment of interests and mutual dependence is likely to be disrupted in both network sharing arrangements following the Transaction. While the merged entity will need both networks to continue providing mobile services to the customers of

1008 See also […].
1009 See also […].
1010 See also […] and […].
1011 See also […].

Three and O2, it will be incentivised not to continue operating two different networks in the long-term.[1012] This will inevitably disrupt the alignment of interests with at least one of the two network sharing partners.

(1240) Having access to two separate networks will also provide the merged entity with options that are neither available to BT/EE nor to Vodafone. These unilateral options are also likely to cause a misalignment of interests. In addition, the merged entity will be able to employ a unique threat towards its network sharing partners: it could de-prioritise the shared network without inflicting its own services in the same way as the ones of its network sharing partner. […][1013] […].[1014]

(1241) Both network sharing arrangements provide for sanctions in case one network sharing partner does not fulfil its obligations under the respective agreements. However, given the complexity of operating mobile networks on the one hand and of the detailed, but general terms of network sharing agreements on the other hand, there is inevitably considerable leeway in judging what exactly these obligations consist of. In addition, the proper functioning of a network sharing arrangements requires more than the simple application of contractual terms. It also needs practical solutions to questions and situations that have not been foreseen in the contracts. Therefore, contractual protections by themselves are insufficient to ensure a proper functioning of a network sharing arrangement.[1015]

(1242) The importance of an alignment of interests between network sharing partners has been underlined by the Notifying Party itself in the case M.5650 T-Mobile/ Orange. When its former network sharing partner T-Mobile merged with Orange to become EE, Three submitted to the Commission:

"The success of a joint venture in the mobile industry (like all fast paced industries) relies upon the efficiency of the decision making process. […] *and accordingly there is great scope for a Company, which is not committed, to delay or disrupt the joint venture. […]*

T-Mobile would have the ability to delay the consolidation process (including […]*) and block further Enhancements to and developments of the Shared Network. At described at paragraphs 4.13 and 4.14 above, there are many decisions relating to the Shared Network that need to be made on a constant basis to ensure that the it supports the Companies' ability to innovate and remain competitive. As the industry develops, further capacity requirements become vital in order to remain able to compete effectively […].*

Whilst […]*, of necessity the requirements of the Shared Network have evolved and will continue to evolve over time. This requires the agreement of both Companies (e.g.* […]*). The Companies could also interpret provisions in different ways (e.g.* […]*). T-Mobile's full cooperation will be needed going forward to ensure that the Shared Network maintains the capacity and coverage levels to ensure that 3 can*

[1012] The Commission notes that operating two separate, nationwide networks for a long period of time seems highly unlikely for several reasons. First, both network consolidation plans presented by the Notifying Party as the only realistic scenarios foresee the creation of a consolidated network. Second, it seems economically imprudent to operate two separate networks after the transaction in the same way as if on a stand-alone basis in particular regarding future investments. The merged entity would have to duplicate investments to offer them to its' entire customer base.

[1013] […].

[1014] […].

[1015] See also […].

compete effectively going forward. Decision will need to be taken on an ongoing basis in relation to key investment decisions and key external service providers, including […].

Whilst T-Mobile has the ability to delay and/or block such decisions today, both parties are currently committed to reaching agreement and seeking solutions to any differences in opinion in order to ensure that they have an optimal Shared Network. However, following the Proposed Transaction (by […]*) T-Mobile could be highly disruptive, ensuring that it keeps its investment in the Shared Network to the absolute minimum required whilst concentrating its efforts and funding on a shared Orange/T-Mobile network. Any detrimental impact on coverage (or capacity) would significantly damage 3's business and ability to compete."*[1016]

(1243) Most notably, these explanations refer exactly to one of the two agreements that the Commission is reviewing in the present case. The commitments in T-Mobile/ Orange did not materially change this agreement: they […] to ensure that the network consolidation between T-Mobile and Orange would not harm MBNL or Three. The second network sharing agreement in the United Kingdom, the Beacon arrangements, provide for […] and are therefore likely to require an even higher level of alignment to function properly.

b) Reduced competition from Vodafone and/ or BT/EE

(1244) According to the plans of the Notifying Party, the merged entity will not continue maintaining two separate networks in the long run.[1017] This will require the merged entity to focus on one of the two network sharing agreements. Depending on which network the merged entity will chose to (mainly) rely upon, the consolidation of the Parties' networks is likely to disrupt in particular the current level of alignment of interests with the MNO that is part of the other network sharing arrangement. But also a misalignment of interests within the "preferred" network sharing arrangement could take place. In both cases, significant harm could occur to the ability of the respective network sharing partner to compete compared to the situation absent the Transaction.

(1245) There are different ways the Transaction could impede the effective functioning of one or two of the network sharing arrangements. These are outlined below. They are based on submission by BT/EE and Vodafone. As the Notifying Party did not disclose its network consolidation plans to BT/EE and Vodafone[1018], BT/EE and Vodafone assumed several scenarios how the merged entity could consolidate the two networks in general, similar to the scenarios discussed under Section 8.2.2.4 d), and reasoned in their submissions the potential harm in each such scenario. Based on these submissions, the Commission developed the below categories as a framework for its assessment of the plans presented by the Notifying Party. The submissions of the Notifying Party, however, were based on the two network consolidation plans. The view of the Notifying Party is therefore presented and the arguments are discussed in the assessment of the respective plan.

1016 Annex 54.2 to response to RFI 81, "RAN Share Ability Paper" 24 December 2009, paragraphs 4.31 to 4.34.

1017 On the network consolidation plans of the Notifying Party see Section 8.2.2.4 a.

1018 The Commission understands that Vodafone has been provided with a description of the [Plan A] for the purposes of negotiating a waiver of Vodafone's contractual rights under […] but that the [Plan B] has not been shared with BT/EE and that the [Plan A] has not been shared with either Vodafone or BT/EE.

(1246) A lasting disruption of the proper functioning of a network sharing arrangement is likely to impede effective competition from the respective network sharing partner. […] MNOs seem to concur that network quality is very important to consumers.[1019] This is also in line with the result of the Survey, according to which network reliability and network performance are rated second and third highest by customers of the Parties.[1020] Similarly, the market investigation provided that network reliability and coverage are the second and third most important parameters of competition.[1021] Therefore, a degradation of network quality is particularly likely to lead to a reduction of competition from Vodafone and/ or BT/EE.

(1247) But also increasing the costs of maintaining and expanding the current network or of achieving a future network standard could significantly impede the competitive position of Vodafone and BT/EE. Increases in incremental costs are likely to result in higher prices and in harm to consumers. Increases in fixed costs are likely to result in lower investments because higher fixed costs will turn investments unprofitable that would be profitable if the fixed costs were lower. Less investments in network quality are thus likely to reduce the network quality compared to the situation absent the Transaction.

(1248) Furthermore, the delay or frustration of network investments would also degrade the network quality compared to the situation absent the Transaction. The transfer of the customers of the merged entity from one shared network to the other one could also decrease network quality by congesting a network or any components thereof.

i. Increasing costs of maintaining the current network

(1249) A potential effect of having to choose one network sharing arrangement over the other as a basis for the future network of the merged entity is that the costs of the network sharing partner in the other network might increase in the long-run as the merged entity will not be incentivised to contribute to maintaining the network in the same way as either Three or O2 absent the Transaction.

<u>MBNL</u>

(1250) […].[1022] […].

(1251) Absent a mutual agreement, BT/EE claims that […].[1023] […].[1024] […].[1025]

(1252) BT/EE further explains that […]. According to BT/EE, […].[1026]

(1253) […]. As set out below, BT/EE argues that […].[1027] […].[1028]

1019 Form CO, Section 6, paragraph 84, fourth bullet and paragraphs 169, 196-211; […]; Vodafone's Initial Submission to the European Commission, Proposed Acquisition by Hutchison Whampoa of O2, 18 September 2015 ("Vodafone's Initial Submission"), paragraph 2.7 [ID1800]; Vodafone's response to RFI 59, paragraph 5.8 [ID3147].

1020 See recital (220), Figure 12.

1021 See recital (225).

1022 EE's response to RFI 58, paragraph 14 (a)(ii) [ID4148].

1023 EE's response to RFI 58, paragraph 14 (a)(iv) [ID4148].

1024 EE's response to RFI 58, paragraph 14 (a)(iv) [ID4148].

1025 EE's response to RFI 58, paragraph 209 [ID4148].

1026 […].

1027 See recital (1266).

1028 […].

Beacon

(1254) As the Beacon network is still being rolled-out, any reduction of the roll-out by the merged entity compared to the development absent the Transaction would require Vodafone to either incur higher cost to achieve the same network quality or to settle for a lower quality level in terms of coverage and/ or capacity. The merged entity might, however, have the incentive not to invest in new Beacon sites if it has access to a nearby MBNL site. This could in particular occur in the East of the United Kingdom where the merged entity would be responsible for rolling-out the Beacon network.

(1255) […].[1029] […].[1030] […].[1031]

(1256) If the merged entity were to roll-out only a reduced number of Beacon sites in the East, Vodafone would not only incur higher cost by deploying unilateral sites in addition to the Beacon network, it would also incur higher cost to maintain its network as the maintenance of the additional sites […].[1032]

(1257) Furthermore, […]. According to Vodafone, the existing Beacon agreement was premised on the fact that […].[1033] Following the Transaction, Vodafone and the merged entity would have […]. If the Beacon arrangements were to stay unchanged, […].[1034]

ii. Increasing costs of network improvements

(1258) Another way that could lead to a reduction of competition from BT/EE and/ or Vodafone consists in increased costs of network improvements. This affects costs of future network improvements that, absent the Transaction, would have been shared with the respective Party.

(1259) As long as both network sharing partners are fully dependent on the network sharing arrangement to deliver up-to-date mobile services, they will have an interest to share new or additional costs for updating their networks to new standards or new technologies. Therefore, as long as additional costs would be incurred by both MNOs and can be reduced by joint investments, it seems likely that the partners would have shared such costs, whereas following the Transaction the merged entity will have a significantly reduced incentive to share additional costs of improving a network, as it does not need such upgrades to serve its customers.

MBNL

(1260) […].[1035] […].[1036]

(1261) Other examples of investments that might have been shared in the future include new sites to reach 90% geographic coverage[1037], the deployment of small cells[1038] as well as preparing the shared network assets for 5G.[1039]

1029 Annex 15 to the Form CO, page 15.
1030 Annex 15 to the Form CO, page 14.
1031 Annex 15 to the Form CO, page 15.
1032 Vodafone's response to RFI 59, paragraph 6.7 [ID3147].
1033 Vodafone's response to RFI 59, paragraph 2.6 (iii) [ID3147].
1034 Vodafone's response to RFI 59, paragraph 2.6 (iii) [ID3147].
1035 As to the difficulties in enforcing such standard, see recitals (1447) et seq.
1036 […].
1037 […].
1038 […].

(1262) […].[1040]

Beacon

(1263) Given the significantly higher degree of network sharing under the Beacon arrangements as compared to MBNL, it seems even more likely that Vodafone and O2 would have shared costs of new investments in network technology. Given that neither party may use sites outside of the Beacon grid, they would have to procure additional sites through Beacon.

(1264) Some degree of cost sharing even for unilateral demands of one of the network sharing partners is already inherent in the Beacon arrangements. Whereas the operating expenditures of CTIL for unilateral demands are to be borne by the party making such demand, the capital expenditures, meaning the cost of acquiring the respective improvement, is funded by both network sharing partners: 75% by the demanding party and 25% by the other party.[1041] Therefore, if there would be a change to the Beacon arrangements, the cost of network improvements for Vodafone could increase significantly.

iii. Degradation of network quality

(1265) A third way to decrease the competitive position of one of its network sharing partners would be to degrade the quality of one or both network sharing arrangements. This seems particular relevant for the partner in the network sharing arrangement that will not become the basis of the merged entity's consolidated network.

MBNL

(1266) BT/EE submits that […].[1042] […].[1043] […].[1044] […]. Such disruption would impair the network quality and thus reduce the competitive pressure of mobile services offered on the MBNL network.

(1267) More generally, BT/EE claims that […].[1045] […].[1046]

(1268) As to the incentives of the merged entity to degrade the network quality of MBNL, BT/EE points out that[…].[1047] According to BT/EE, […].[1048] […].[1049] BT/EE argues that […].[1050]

(1269) […].[1051] […].

Beacon

(1270) The Beacon network seems particularly vulnerable to a degradation of network quality as it is still being rolled-out. Should the merged entity decide not to rely on

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1039 […].
1040 […].
1041 Annex 15 to the Form CO, page 9.
1042 […].
1043 […].
1044 […].
1045 […].
1046 […].
1047 […].
1048 […].
1049 […].
1050 […].
1051 […].

Beacon as its core network, it could be incentivised to discontinue its roll-out. Given that […], contractual measures might be insufficient for Vodafone to enforce compliance with the terms of the Beacon agreement.

(1271) Generally, Vodafone submits that […].[1052] […].[1053] […].[1054]

(1272) According to Vodafone, the merged entity could […].[1055] […].[1056] […].[1057]

(1273) Vodafone further points out that […].[1058] […].[1059] […].[1060]

(1274) Moreover, Vodafone states […].[1061] […].[1062]

iv. Delay or frustration of investments

(1275) Another way to decrease the competitive pressure of a network sharing partner would be to degrade the network quality by blocking or frustrating network investments of the network sharing partner.

<u>MBNL</u>

(1276) […].[1063]

(1277) BT/EE further submits that […].[1064] […].[1065]

(1278) With regard to unilateral activities under the MBNL arrangements, BT/EE points out that […].[1066] However, […].[1067]

(1279) BT/EE claims that […].[1068] […] BT/EE states that […].[1069] BT/EE states that […]. It would therefore be difficult for BT/EE to counter such.[1070]

(1280) As an example, BT/EE explains that […].[1071] […].[1072] […].[1073] […].[1074] […].[1075]

(1281) In this context, BT/EE points out that […].[1076] […].

(1282) In a submission to the Commission, BT highlights […].[1077] […].[1078]

1052 Vodafone's Initial Submission, paragraph 4.7 [ID1800]; Vodafone's response to RFI 59, paragraph 5.6 (ii)(b) [ID3147].
1053 Vodafone's response to RFI 59, paragraph 5.6 (ii)(c) [ID3147].
1054 Vodafone's response to RFI 59, paragraph 1.12 [ID3147].
1055 Vodafone's Initial Submission, paragraph 4.9 (i) [ID1800].
1056 Vodafone's Initial Submission, paragraph 4.9 (iii) [ID1800].
1057 Vodafone's Initial Submission, paragraph 4.9 (iv) [ID1800].
1058 Vodafone's response to RFI 59, paragraph 5.6 (iii) [ID3147].
1059 Vodafone's response to RFI 59, paragraph 5.8 [ID3147].
1060 Vodafone's response to RFI 59, paragraph 5.8 [ID3147].
1061 Vodafone's Initial Submission, paragraph 4.9 (ii) [ID1800].
1062 Vodafone's Initial Submission, paragraph 4.9 (iii) [ID1800].
1063 […].
1064 […].
1065 […].
1066 […].
1067 […].
1068 […].
1069 […].
1070 […].
1071 […].
1072 […].
1073 […].
1074 […].
1075 […].
1076 […].

Beacon

(1283) According to Vodafone, […].[1079] […].[1080]

v. Network congestion

(1284) In addition to the above factors, one of the network sharing arrangements could be negatively affected by the migration of customers to this network, if such migration would result in a congestion of the target network. Even though the merged entity is unlikely to have an incentive to cause congestion for a prolonged period of time in a network used by its own customers, it cannot be excluded that due to other considerations like achieving a swift network integration, the merged entity might be willing to accept some congestion that would not occur absent the Transaction.

(1285) BT/EE submits, for example, that the migration of the O2 customer base to the MBNL network […].[1081] […].[1082] […].[1083]

c) Reduced industry-wide investments

(1286) The Transaction would also have a significant impact on effective competition if it were likely to affect the overall investments in network infrastructure. A decrease in the industry-wide investments could be caused directly by the merged entity by blocking investments in both network sharing arrangements or indirectly as a result of the Transaction by reducing the incentives of the merged entity or even all MNOs to invest. In each case, such lower investments could delay industry-wide network improvements (in terms of capacity, speed or features) or the deployment of new technology (e.g., 5G).

i. Blocking investments in both network sharing arrangements

(1287) In recitals (1275) et seq. the Commission discussed how the merged entity could delay or frustrate investments by BT/EE and Vodafone. Instead of delaying the development of either MBNL or Beacon, the merged entity could also pursue a strategy of reducing investments in both networks. This way, the merged entity could delay new innovative technologies until such time it considers most beneficial.[1084] The merged entity could, for example, be incentivised to delay the roll-out of significant new network technologies until it finished consolidating its networks.

ii. Reduced incentives of Vodafone and BT/EE to invest

(1288) Even if the merged entity would not actively delay or frustrate network investments by BT/EE and Vodafone, the Transaction could disincentivise BT/EE and Vodafone from investing in the same way as absent the Transaction. Such disincentives could be caused by the same reasons as outlined above in Section 8.2.2.2.b) when discussing a potential reduction of competition from BT/EE and Vodafone. In particular increased costs of improving the network as well as a risk of the merged entity delaying or frustrating investments could deter BT/EE and Vodafone from undertaking such investments.

1077 BT's Submission on Network Sharing, paragraph 3.25 (b) [ID3771].
1078 BT's Submission on Network Sharing, paragraph 3.25 (c) [ID3771].
1079 Vodafone's response to RFI 59, paragraph 5.6 (ii)(a) [ID3147].
1080 Vodafone's response to RFI 59, paragraph 6.1 et seq. [ID3147].
1081 […].
1082 […].
1083 […].
1084 See […].

(1289) As to the increased costs, there might be investments that are only economically viable if they are undertaken jointly by the respective network sharing partners. These synergies of sharing certain elements of the network will be lost for the network sharing party to the extent that the merged entity will decrease the level of network sharing compared to the likely situation absent the Transaction.

(1290) Furthermore, following the Transaction, there will be no MNO that can economically make investments that are only economically viable when undertaken jointly without the merged entity. If this were to be the case, the merged entity, however, might not have an incentive to make such investment, knowing that the other MNOs will not be able to invest without the merged entity either.

(1291) […].[1085] […].[1086]

(1292) Uncertainty as to the future outcome of the network sharing situation could be another reason for BT/EE and Vodafone to delay investments. […].[1087]

iii. Increasing transparency of investments

(1293) The merged entity could have fewer incentives to invest following the Transaction because of its position in both network sharing arrangements and the other MNOs could be de-incentivised from investing by drawing conclusions from the behaviour of the merged entity.

(1294) As shown above, partners in network sharing arrangements are being made aware of investments in new technologies. […].[1088] […].

(1295) Currently, each MNO only becomes aware of investments of its network sharing partner. Each MNO strives to achieve a competitive network quality within its respective network sharing arrangements. The MBNL partners agreed, for example, to achieve […] within MBNL. […].

(1296) The preamble of all Beacon agreements sets out that O2 and Vodafone are […]. Paragraph […] of the […] regarding the active sharing between O2 and Vodafone states that […].[1089] Schedule […] to this agreement sets out […]. According to clause […], […]. According to clause […] of this Schedule, […].[1090]

(1297) These competitive dynamics between the two network sharing arrangements could be disrupted following the Transaction. Given its position in both network sharing arrangements, the merged entity will have a significant amount of visibility as to the network upgrades and/or launch of new technologies planned by BT/EE and Vodafone. With this knowledge, the merged entity could decide how to time and target its investments by reference to the investment decisions of the other MNOs, of which it would be aware through its presence in both network sharing agreements. This, in turn, would likely reduce or postpone the investments on the part of the merged entity compared to the scenario absent the Transaction, and, in turn, have a similar impact on the investment decisions of the other MNOs.

1085 […].
1086 […].
1087 BT's Submission on Network Sharing, paragraph 3.16 [ID3771].
1088 […].
1089 […].
1090 […].

8.2.2.3. Future development of network sharing absent the Transaction

(1298) In order to assess in particular potential detrimental effects of the Transaction to the costs of future network improvements, the likely development of each network sharing arrangement absent the Transaction will be examined.

a) MBNL

i. Notifying Party's view

(1299) According to the Notifying Party, the significance of the actively shared 3G equipment in MBNL will rapidly decrease. The Notifying Party points out that Three and BT/EE have already deployed separate 3G equipment in high traffic areas and that only […]% of the total Three customer traffic is carried on shared RAN equipment.[1091] According to information provided in the Form CO, […]% of all MBNL sites actively share 3G whereas […]% of all 3G sites are passively shared.[1092] The Notifying Party argues that the growth of data traffic in the United Kingdom will see the need for additional equipment. Once two base stations and antennae are needed to handle the traffic, the benefits of active sharing would be reduced materially. Therefore, only in rural areas there would be real benefits arising from active network sharing.[1093]

(1300) According to the Notifying Party, future technology investments are likely to be made on a unilateral basis absent the Transaction.[1094] Neither […], nor would BT/EE have the incentive to make future network developments jointly with Three absent the Transaction.[1095] The Notifying Party argues that EE did not discuss actively sharing 4G technology with Three and that due to […], BT/EE will not have an incentive to invest jointly with Three in the future.[1096]

(1301) In particular, Three argues that […].[1097] Furthermore, the Notifying Party points out that […]. In addition, the different spectrum holding of BT/EE and Three will require the use of different antennae and other active assets. Moreover, according to Three, […].

(1302) However, according to the Notifying Party, Three agreed to […].[1098] Under this agreement, […].

(1303) Specifically on potential joint future developments mentioned in the Statement of Objections, the Notifying Party argues in its Reply to the Statement of Objections, that none of these developments are sufficiently certain to be taken into account under the Commission's guidelines as they are completely unrealistic.[1099]

(1304) Regarding new equipment to support additional spectrum, the Notifying Party claims that […]. Because the upcoming auctions would only include spectrum in different bands than the current spectrum holding of BT/EE, […]. According to the Notifying

1091 Reply to the Article 6(1)(c) Decision, paragraph 436 [ID2323].
1092 Form CO, Section 6, table 9 on page 41.
1093 Reply to the Article 6(1)(c) Decision, paragraph 429 [ID2323].
1094 Reply to the Article 6(1)(c) Decision, paragraph 448 [ID2323].
1095 Reply to the Article 6(1)(c) Decision, paragraph 449 [ID2323].
1096 Reply to the Article 6(1)(c) Decision, paragraph 449 [ID2323].
1097 Form CO, Section 6, paragraph 134.
1098 Form CO, Section 6, paragraph 91.
1099 Reply to the Statement of Objections, paragraph 619.

Party, the existing antennae deployed by BT/EE would only support […]. If Three were […], it would not be able to use the antennae installed by BT/EE for […].[1100]

(1305) On the issue of sites, the Notifying Party argues that BT/EE would not need additional sites to the same extent as the merged entity due to its larger spectrum holdings, its existing sites outside of MBNL and its access to potential other sites like street furniture. […].[1101]

(1306) With regard to the deployment of 4G, the Notifying Party underlines that it would be […] for Three and BT/EE to share 4G […] because of […]. The Notifying Party further argues that there will be no opportunity for sharing of passive 4G equipment because BT/EE would have completed the roll-out of 4G by the end of 2016.[1102]

(1307) On 5G, the Notifying Party states that […] will require both network sharing partners to […]. The sharing of cost for passive 5G infrastructure would be unlikely. Due to the rather long term until 5G will actually be implemented, the Notifying Party argues that passive sharing does not meet the threshold of being reasonably predictable under paragraph 9 of the Horizontal Merger Guidelines. Furthermore, 5G might be deployed outside of existing macro networks. According to the Notifying Party, it is moreover likely, that BT/EE and Three will try to differentiate on 5G and thus deploy the required small cells unilaterally. For such deployment, BT/EE would have access to BT's street furniture and therefore BT/EE would have fewer incentives to share sites with Three. In addition, […].[1103]

(1308) Regarding small cells, the Notifying Party submits that BT/EE and Three have different spectrum holdings available to be deployed in small cells. Whereas Three would have to deploy the same spectrum as used on macro sites, BT/EE would be able to reserve spectrum for the exclusive use on small cells. The risk of interference would limited the number of small cells Three will be able to deploy. Furthermore, […]. In addition, […]. Finally, […].[1104]

ii. Commission's assessment

(1309) The Commission notes that Three's network sharing partner BT/EE judges the future sharing within the MBNL agreement differently. According to BT/EE, […].[1105] The network sharing partners would have […].[1106]

(1310) […].[1107] In particular, BT/EE expects […].[1108]

(1311) As to new shared sites, BT/EE points out that […]. According to BT/EE, […].[1109] According to public records, Dave Dyson, the CEO of Three, stated that Three plans to increase mast numbers to 17 000 by 2017.[1110] BT/EE expects that […].[1111]

1100 Reply to the Statement of Objections, paragraph 620.
1101 Reply to the Statement of Objections, paragraph 621.
1102 Reply to the Statement of Objections, paragraph 622.
1103 Reply to the Statement of Objections, paragraph 623.
1104 Reply to the Statement of Objections, paragraph 624.
1105 […].
1106 […].
1107 […].
1108 […].
1109 […].
1110 Article in mobile news dated 17 February 2015 "Three CEO reveals his big masterplan" [ID3761].
1111 […].

(1312) Furthermore, BT/EE would have expected that […].[1112] […] points to a public quote in which the CEO of Three states that both parties would look into sharing small cells if there is a sensible, pragmatic solution for doing so.[1113]

(1313) Concerning future 5G rollout, BT/EE submits that […].[1114]

(1314) The Commission considers that BT/EE and Three would both have an interest in continuing the network sharing arrangements absent the Transaction. The term of this arrangements ends […]. EE considers MBNL as […].[1115] Dave Dyson, the CEO of Three, stated publicly in February 2015 that Three's *"relationship with EE is pretty good and we've entered into a long-term relationship with them that works for both of us"* and that *"[f]rom a standalone perspective, we're happy with the way it works and we're both incentivized to minimize the cost within that network which is why if there was a sensible, pragmatic solution to sharing small cells then we would both look at that"*.[1116]

(1315) Taking into account that 4G is currently mainly deployed in urban areas, that Three and BT/EE currently still maintain an actively shared 3G network in […] and that the Notifying Party itself stated that […][1117], it seems not implausible to assume that Three and BT/EE might agree to share also 4G in rural areas.[1118]

(1316) Looking into the past of the MBNL agreement, the Commission considers that a nationwide active sharing of 4G under the MBNL agreement does not seem to be the most likely future scenario absent the Transaction. Indeed, as pointed out by the Notifying Party, the so-far separate roll-out of 4G rather facilitates the assumption that the network sharing partners would not have shared a nationwide 4G network. However, on the other hand, there are several indications that passive sharing elements of the MBNL agreement would have further developed to adapt to future technologies and to allow for additional cost savings.

(1317) The Notifying Party itself mentions an example for this: […].[1119] The Commission understands from the submission of BT/EE, that this description by the Notifying Party[…]. According to BT/EE […].[1120] According to BT/EE, […].[1121] […].

(1318) Continuing such behaviour into the future, it can be assumed that BT/EE and Three would continue to share additional costs that would be incurred by developing and amending the joint passive grid. Assuming that both network sharing partners are dependent upon continually improving and evolving MBNL as their only available network, there is no reason to assume that costs not directly incurred by the active network elements would not be shared as soon as both MNOs utilise the respective technology improvement. The Commission considers that this agreement exemplifies that a network sharing agreement to which both partners are fully committed develops over time as it would be adjusted to new technologies and challenges.

1112 […].

1113 Article in mobile news dated 17 February 2015 "Three CEO reveals his big masterplan" [ID3761].

1114 […].

1115 […].

1116 Article in mobile news dated 17 February 2015 "Three CEO reveals his big masterplan" [ID3761].

1117 Reply to the Article 6(1)(c) Decision, paragraph 429 [ID2323].

1118 However, as mentioned in recital (1320), the Commission considers it more likely than not that the MBNL parties will […].

1119 Form CO, Section 6, footnote 91.

1120 […].

1121 […].

(1319) The Commission further considers that the acquisition of EE by BT will not have a disrupting effect on the MBNL arrangements. After the acquisition of EE, BT will still have to rely on MBNL for providing mobile services just as EE did. Furthermore, the submissions of BT in the context of the Commission's investigation of the Transaction show that BT wants to continue the MBNL arrangements.[1122] Moreover, while reviewing potential harm of the BT/EE transaction, the CMA found no impact on MBNL in its Final Findings Report.[1123]

(1320) For these reasons, the Commission concludes that the MBNL agreement would continue to develop in the future absent the Transaction. While BT/EE and Three are not expected to […], they are highly likely to share additional costs relating to […].

b) Beacon

i. Notifying Party's view

(1321) The Beacon agreements entered into force in 2012 replacing a previous […] network sharing agreement that was entered into in 2008/ 2009. One rationale of the network sharing arrangements for the parties was to achieve […].[1124]

(1322) Vodafone and O2 are currently rolling-out the Beacon network. […].[1125] The final grid is envisaged to consist of […] actively shared sites at the end of […].[1126] According to Vodafone, such grid would provide […]% nationwide population coverage.[1127]

(1323) The Notifying Party submits that the active sharing under the Beacon arrangements […]. The larger spectrum holding of Vodafone would […] whereas O2 […]. The Notifying Party claims that therefore […].[1128] […].[1129]

(1324) The Notifying Party argues that for this reason there is no plausible scenario under which […], thereby suggesting that O2 would […].[1130]

(1325) […]. In terms of spectrum, the Notifying Party explains that […] after Vodafone acquired 1400 MHz and 2600 MHz spectrum in the 4G auction in 2013 and the Qualcomm auction in 2015 whereas O2 did not. The different spectrum holding would […].[1131]

(1326) […].

(1327) […].

(1328) The Notifying Party submits that […].[1132] In addition, […] for different solutions to increase capacity by either deploying 2600 MHz spectrum or by deploying a 6-sector

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1122 BT's presentation, 9 July 2015, slide 6 [ID4203], BT's Submission on Network Sharing, in particular paragraph 4.6 (c) [ID3771].

1123 The final report of the CMA does not discuss an impact on MBNL. Instead, the CMA discusses whether Telefónica or Vodafone might be harmed in case the other Beacon partner may "wish to switch from CTIL to MBNL due to improvements in MBNL", CMA, Final Findings Report, paragraph 12.20 [ID4112].

1124 Annex 15 to Form CO, paragraph 2.1 (a) and (b).

1125 Annex 15 to Form CO, paragraphs 4.1 et seq.

1126 Annex 15 to Form CO, paragraph 3.23.

1127 Vodafone's response to RFI 59, paragraph 6.10 [ID3147].

1128 Reply to the Article 6(1)(c) Decision, paragraph 426.

1129 Reply to the Article 6(1)(c) Decision, paragraph 427.

1130 Reply to the Article 6(1)(c) Decision, paragraph 451.

1131 Reply to the Statement of Objections, paragraph 683.

1132 Reply to the Statement of Objections, paragraph 684.

site. Because the space on a site is often limited, these solutions would be mutually exclusive.[1133] In the Notifying Party's view, these issues make it highly likely that absent the Transaction, O2 and Vodafone would […].[1134]

(1329) The Notifying Party explains that […].[1135] […].[1136] […].[1137]

(1330) […].[1138] […].[1139]

(1331) The Notifying Party concludes that for these reasons, […]. Either the Beacon parties would […], or they would […].[1140]

(1332) In its Reply to the Letter of Facts of 23 March 2016, the Notifying Party disputes that Vodafone and O2 have shared characteristics in terms of spectrum and points out that there are differences in their high-frequency spectrum holdings.[1141] The Notifying Party argues that alignment on low-frequency spectrum is […] because having a 4G network with little capacity would make no sense.[1142] […]was important for achieving the coverage element of Beacon but, according to the Notifying Party, the market has been transformed since 2012 due to the result of the 4G spectrum auction and rising demand for data services.[1143] Similar low frequency spectrum would be immaterial for capacity and the higher frequency holdings of Vodafone in high-frequency bands would cause Vodafone to have a much lower need to densify the joint grid.[1144] […].[1145]

(1333) Furthermore, the Notifying Party submits that […]. The Notifying Party argues that the Beacon parties […][1146] and claims that Vodafone […].[1147]

(1334) The Notifying Party refers to […]. According to the Notifying Party, […].[1148] The Notifying Party assumes that […].[1149] […].[1150] The Notifying Party claims that […].[1151] In the Notifying Party's view, […].[1152]

(1335) Moreover, the Notifying Party restated that absent the Transaction, O2 would […]. The Notifying Party claims in particular, that […]. According to the Notifying Party, there is no logical reason why […].[1153] The Notifying Party states that O2 and

1133 Reply to the Statement of Objections, paragraph 685.
1134 Reply to the Statement of Objections, paragraph 686.
1135 Reply to the Statement of Objections, paragraph 687.
1136 Reply to the Statement of Objections, paragraph 688.
1137 Reply to the Statement of Objections, paragraph 689.
1138 Reply to the Statement of Objections, paragraph 690.
1139 Reply to the Statement of Objections, paragraph 691.
1140 Reply to the Statement of Objections, paragraph 693.
1141 Reply to the Letter of Facts of 23 March 2016, paragraph 143.
1142 Reply to the Letter of Facts of 23 March 2016, paragraph 144.
1143 Reply to the Letter of Facts of 23 March 2016, paragraphs 145-147.
1144 Reply to the Letter of Facts of 23 March 2016, paragraphs 147-148.
1145 Reply to the Letter of Facts of 23 March 2016, paragraph 149.
1146 Reply to the Letter of Facts of 23 March 2016, paragraph 151.
1147 Reply to the Letter of Facts of 23 March 2016, paragraph 152.
1148 Reply to the Letter of Facts of 23 March 2016, paragraph 158.
1149 Reply to the Letter of Facts of 23 March 2016, paragraph 160.
1150 Reply to the Letter of Facts of 23 March 2016, paragraph 161.
1151 Reply to the Letter of Facts of 23 March 2016, paragraph 163.
1152 Reply to the Letter of Facts of 23 March 2016, paragraph 163.
1153 Reply to the Letter of Facts of 23 March 2016, paragraph 172.

Vodafone have been discussing […] and points out that also Ofcom stated that both parties have at some point suggested […].[1154] […].[1155]

(1336) Regarding a potential […] by O2 […] absent the Transaction, the Notifying Party underlines that it stated already in its Reply to the Statement of Objections that O2 would consider […].[1156] The Notifying Party adds that such […] could also be used to trigger […].[1157]

(1337) The Notifying Party criticises the submissions of Vodafone to this topic as highly simplistic and wrong. The Notifying Party points to several benefits that […].[1158]

(1338) The Notifying Party submits that in O2's internal documents, […]. […]. The Notifying Party states that […] and underlines again that Beacon has been agreed between two sophisticated and experienced commercial operators.[1159] With reference to the upcoming spectrum auction of 700 MHz, the Notifying Party explains that […].[1160]

(1339) Finally, the Notifying Party argues that […]. While the Notifying Party admits that […], it underlines that it would be in both parties' interests to […]. The submissions of Vodafone would […] whereas both parties would […].[1161]

ii. Commission's assessment

(1340) To assess the claims and arguments of the Notifying Party, the Commission takes account of the submissions by Vodafone and Ofcom on the same topic before forming its own view on the likely future development of Beacon absent the Transaction.

<u>Submissions by Vodafone on the future development of Beacon</u>

(1341) Absent the Transaction, Vodafone expects that the parties […].[1162] […].[1163]

(1342) Vodafone argues that […].[1164] According to Vodafone, this is evidenced in the joint submission Vodafone and O2 made to Ofcom explaining the Beacon arrangements. In this submission, Vodafone and O2 explained that […].[1165]

(1343) […].[1166] According to Vodafone, […].[1167]

(1344) […].[1168] […].[1169] According to Vodafone, […].

1154 Reply to the Letter of Facts of 23 March 2016, paragraphs 174-175.
1155 Reply to the Letter of Facts of 23 March 2016, paragraphs 177-178.
1156 Reply to the Letter of Facts of 23 March 2016, paragraph 183.
1157 Reply to the Letter of Facts of 23 March 2016, paragraph 185.
1158 Reply to the Letter of Facts of 23 March 2016, paragraph 186.
1159 Reply to the Letter of Facts of 23 March 2016, paragraph 187.
1160 Reply to the Letter of Facts of 23 March 2016, paragraph 188.
1161 Reply to the Letter of Facts of 23 March 2016, paragraph 189.
1162 Vodafone's letter on Network Sharing, 18 December 2015, page 2 [ID4205].
1163 Vodafone's letter on Network Sharing, 18 December 2015, pages 2 and 3 [ID4205].
1164 Vodafone's response to RFI 97, paragraph 1.3 (B) [ID5535].
1165 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 2.3 [ID5536] with reference to the joint submission of Vodafone and O2 to Ofcom on Project Beacon.
1166 Vodafone's response to RFI 97, paragraph 4.1 [ID5535].
1167 Vodafone's response to RFI 97, paragraph 4.2 [ID5535].
1168 Vodafone's response to RFI 97, paragraph 4.4 [ID5535].
1169 Vodafone's response to RFI 97, paragraph 4.5 [ID5535].

(1345) As regards the alleged exclusivity of either deploying additional spectrum or 6-sector antennas, Vodafone claims that […]. In Vodafone's view, […].[1170]

(1346) As to the future deployment of 5G, Vodafone notes that […]. However, […].[1171]

(1347) […].[1172]

(1348) Therefore, Vodafone considers it as likely that, absent the Transaction, there would be […]. Vodafone underlines that […].[1173]

(1349) Absent the Transaction, Vodafone considers it as highly unlikely that […].[1174] According to Vodafone, […].[1175] […][1176] […].[1177]

(1350) Furthermore, Vodafone points out that […].[1178] […].[1179] […].[1180] […].

(1351) Moreover, Vodafone estimates that […].[1181] Furthermore, Vodafone points out that […].[1182]

(1352) Vodafone further argues that […] absent the Transaction would be even less likely because of the upcoming spectrum auction that is currently scheduled for 2019. During this auction, Ofcom is expected to make available 700 MHz spectrum. Any resources Vodafone and O2 were to invest in […] would not be available to them for the auction. Vodafone points out that this auction would be […].[1183]

<u>Submissions by Ofcom on the future of Beacon</u>

(1353) Ofcom states that it does not expect Vodafone and O2 to […] absent the Transaction.[1184] Ofcom sets-out that it considers the interests of Vodafone and O2 to be aligned on low frequency spectrum as both operators have the same (high) amount of low-frequency spectrum. The importance for such alignment on low-frequency spectrum is further evidenced in Ofcom's view by […] and by the fact that […].[1185]

1170 Vodafone's response to RFI 97, paragraph 6.1 [ID5535].

1171 Vodafone's response to RFI 97, paragraphs 7.1 to 7.3 [ID5535].

1172 Vodafone's response to RFI 97, paragraphs 8.1 and 8.2 [ID5535].

1173 Vodafone's response to RFI 97, paragraphs 9.1 and 9.2 [ID5535]; Vodafone's letter to the Commission, 14 March 2016, pages 3 and 4 [ID5534].

1174 Vodafone's response to RFI 97, paragraph 10.1 [ID5535]; Vodafone's letter to the Commission, 14 March 2016, page 3 [ID5534]; Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 1.2 (B) [ID5536].

1175 Vodafone's letter to the Commission, 14 March 2016, page 4 [ID5534].

1176 See recital (2371).

1177 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 1.2 (B) and 3.2 [ID5536].

1178 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.2 (B) [ID5536].

1179 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.3 (A)(i) [ID5536].

1180 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.3 (A)(ii) [ID5536].

1181 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.4 [ID5536].

1182 Vodafone's letter to the Commission, 14 March 2016, page 7 [ID5534].

1183 Vodafone's letter to the Commission, 14 March 2016, page 4, footnote 10 [ID5534].

1184 Ofcom's further submission on network sharing, 20 March 2016, paragraph 1.7 (provided with the Letter of Facts of 23 March 2016).

1185 Ofcom's further submission on network sharing, 20 March 2016, paragraphs 1.8 and following (provided with the Letter of Facts of 23 March 2016).

(1354) Ofcom further expects that the contractual commitment to […] would incentivize both partners […] as it seems unlikely that there would be a compelling cost saving case for […].[1186]

Commission's assessment of the likely future development of Beacon

(1355) The Commission considers that, absent the Transaction, O2 and Vodafone […]. According to the submissions of the Notifying Party and Vodafone, […].[1187] Furthermore, O2 made it clear that it wants to achieve […].[1188] However, the Commission takes the view that […] as indicated by the Notifying Party […].

(1356) If O2 were to […], it would be required to […]. Taking into account the considerable efforts of both network sharing partners to achieve the network structure envisaged under the Beacon arrangements, the Commission considers that both parties would be incentivised to […].

(1357) In this context, the Commission notes that according to the Reply to the Letter of Facts of 23 March 2016, […].[1189] O2 assumed that […].[1190] In the Commission's view, this process […] might indeed show, as claimed by the Notifying Party, that […]. However, at the same time, it also shows that both partners ultimately have a joint interest in developing the Beacon grid to their mutual benefit.

(1358) As long as Vodafone holds more spectrum than O2, a fact that is not necessarily static over the next few years due to upcoming spectrum auctions, Vodafone might […]. […].

(1359) […]. Sites procured through Beacon have the benefit that cost for such sites are […]. The more sites O2 needs, […]. Therefore, as long as O2 is in principle able to address its need for additional sites through the Beacon procedures, it will have an incentive to […].

(1360) Regarding the […] that O2 claims to be insufficient[1191], the parties could also agree to other mechanisms to […]. They could envisage […] or […]. It also needs to be considered that the current situation, in which the acquisition of one of the network sharing partners is pending, might […]. Absent the external disruption that a pending acquisition of one network sharing partner constitutes, the parties might both be more incentivised to constructively negotiate solutions for […].

(1361) The Commission understands that […]. […]. The Commission notes that such a solution has already been discussed between O2 and Vodafone in 2014.[1192]

(1362) After having reviewed the documents based on which the Notifying Party claims that […], the Commission finds that they do not provide sufficient evidence to assume that […] because they only document that […]. Documents suggesting […] are documents of O2.

(1363) […].[1193] […].[1194] […].[1195] […]. As the Notifying Party states itself in its Reply to the Letter of Facts of 23 March 2016, […].[1196]

1186 Ofcom's further submission on network sharing, 20 March 2016, paragraph 1.15 (provided with the Letter of Facts of 23 March 2016).

1187 See recitals (1329) and (1347).

1188 See recital (1331).

1189 See recital (1334) and Reply to the Letter of Facts of 23 March 2016, paragraph 161.

1190 Reply to the Letter of Facts of 23 March 2016, paragraph 160.

1191 See recital (1333).

1192 Reply to the Article 6(1)(c) Decision, paragraph 473.

(1364) In the Commission's view, this is evidence that it is not likely that the parties would […]. Regarding the claim of the Notifying Party that there would be no logical reason for […], the Commission notes that […].[1197]

(1365) For these reasons, the Commission considers that, as of the current point in time, […].

(1366) The Commission notes that […]. However, Vodafone points out that given the dependency of both parties on each other, they will have incentives to also assist each other with the deployment of new technologies like 5G.[1198] Taking into account that at the time MNOs will start preparing to roll-out 5G, […] and Vodafone and O2 will each operate a network only in their respective half of the country, the Commission considers it very likely that the Beacon network sharing partners would also have considered sharing a 5G network.

(1367) The Commission further notes that the CTIL arrangements, […], are most likely to continue absent the Transaction […].[1199]

8.2.2.4. Future development of network sharing following the Transaction

(1368) The future development of the network sharing arrangements following the Transaction is not yet clear. The Parties have presented two scenarios to the Commission that set out two different ways to consolidate the networks of the Parties and will result in two different network structures. According to the Notifying Party, there are no other plausible scenarios for implementing the Transaction.[1200] The Commission notes, however, that in theory other consolidation scenarios would also be possible.

a) Network consolidation plans of the Notifying Party

(1369) The Notifying Party submits that a plan under which the consolidated network will be based upon the Beacon network sharing arrangement is the preferred scenario (the so-called "[Plan A]") but requires the consent of Vodafone. In case such consent could not be achieved, the Notifying Party also presented a second plan which, according to the Notifying Party, can be implemented without the consent of Vodafone (the "[Plan B]").

(1370) The Notifying Party explained to the Commission that the discussions with Vodafone […]. The Commission understands from the Notifying Party that the positions of Three and Vodafone […]. Therefore, the Notifying Party stated that the [Plan B] would be the most likely scenario for the purposes of the Commission's assessment but that it would […] and to switch to the [Plan A] at a later point in time.

(1371) The Commission notes that while assessing the acquisition of O2, Three had […]. Given […], the stated intent of Three to potentially switch from implementing the

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1193 Correspondence with Vodafone, submitted by O2 on 20 November 2015, page 7.

1194 Correspondence with Vodafone, submitted by O2 on 20 November 2015, page 16.

1195 Correspondence with Vodafone, submitted by O2 on 20 November 2015, page 15.

1196 Reply to the Letter of Facts of 23 March 2016, paragraph 170, Correspondence with Vodafone, submitted by O2 on 20 November 2015, pages 20-29.

1197 Correspondence with Vodafone, submitted by O2 on 20 November 2015, page 7.

1198 Vodafone's Initial Submission, page 12 [ID1800].

1199 […].

1200 Three's response to RFI 64, paragraph 2 [ID2336]; Reply to the Article 6(1)(c) Decision, paragraph 428 [ID2323].

[Plan B] to implementing the [Plan A] at a later point in time and the broader internal deliberations of Three on how to consolidate the two networks, the Commission considers the future network sharing situation to be very uncertain.

(1372) Given these considerable uncertainties, the Commission will also assess general scenarios which broadly present the options of the merged entity to consolidate its networks in the long run. These scenarios consist of uncertainty as to the final network sharing situation, a network build only upon the MBNL grid, a network build only upon the CTIL grid, a network based upon the MBNL grid and supplemented by CTIL sites and a network based upon the CTIL grid and supplemented by MBNL sites. In addition, the Commission will discuss a scenario in which the long-term outcome of the network situation is unclear.

i. [Plan A]

(1373) Under the [Plan A], the Notifying Party plans to stay in both network sharing arrangements and to agree with Vodafone […]. The Notifying Party aims to […].[1201] The Notifying Party plans to […].

(1374) […]. In total, the Notifying Party submits that it would use approximately […]% of all MBNL sites. […].

(1375) To implement this plan, the Notifying Party plans to […]. According to the Notifying Party, […].

(1376) The Notifying Party plans to […].

(1377) On the MBNL side, the Notifying Party would […].

(1378) The Notifying Party states that the [Plan A] will […]. […].[1202]

(1379) The merged entity would […]. Therefore, the Notifying Party submits that the [Plan A] will be pro-competitive by […].[1203]

(1380) Vodafone would benefit from […].[1204] BT/EE would enjoy […][1205] and will be able to […].[1206]

(1381) The Notifying Party further submits that Vodafone and BT/EE will have higher incentives to compete following the Transaction due to the stronger competitive threat by the merged entity.[1207]

ii. [Plan B]

(1382) The second plan presented to the Commission by the Notifying Party is the [Plan B].[1208] According to this plan, the merged entity would […].

(1383) The Notifying Party envisages under the [Plan B] to structure its network differently in the [Area 1] and the [Area 2] of the United Kingdom. In the [Area 1], […], the

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1201 The following description of the [Plan A] is based on the description of the Notifying Party in Annex 1 to its response to RFI 64 [ID2337].

1202 Notifying Party's response to RFI 64, Annex 1, paragraph 5 [ID2337].

1203 Notifying Party's response to RFI 64, Annex 1, paragraph 6 [ID2337].

1204 Notifying Party's response to RFI 64, Annex 1, paragraph 36 [ID2337].

1205 Notifying Party's response to RFI 64, Annex 1, paragraph 37 [ID2337].

1206 Reply to the Article 6(1)(c) Decision, paragraph 494 [ID2323].

1207 Reply to the Article 6(1)(c) Decision, paragraph 456 [ID2323].

1208 The following description of the [Plan B] is based on the description of the Notifying Party in Annex 2 to its response to RFI 64 [ID2338].

Notifying Party plans to […]. In the [Area 2], […], the merged entity would […]. According to the Notifying Party, this will result in […] sharing approximately […]% of the CTIL sites with Vodafone and approximately […]% of the MBNL sites with BT/EE.

(1384) To implement this structure, the merged entity would […] in the [Area 1] as foreseen under the [Plan A]. On […] in the [Area 2], the merged entity would deploy […]. […]

(1385) The Notifying Party submits that it will continue to […], including the […]% of all sites that will be used exclusively by Vodafone, as well as of […], including the […]% of sites that will be used exclusively by BT/EE. […]. Vodafone would own the base stations, antennae and transmissions in the [Area 2] and all necessary rights to deploy its own equipment in the [Area 1] during […].

iii. Other consolidation scenarios considered by the Notifying Party while assessing the Transaction

(1386) The Commission notes that the Notifying Party initially considered and evaluated several different network consolidation scenarios.

(1387) In one document discussing potential network scenarios following the Transaction, Three mentions […] broad categories of potential future network scenarios.[1209] Under these categories, Three considered to […].

Figure 117

[…]

Source: Three's internal documents, 20141217 Scenario Analysis [ID028600303].

(1388) Another document also dealing with different network integration scenarios discusses […] scenarios.[1210] These scenarios are: […].

Figure 118: Risk Matrix

[…]

Source: Three's internal documents, Copy of Synergy Financial Summary 7 Jan 2015 [ID014000065.00001].

(1389) Irrespective of whether or not any of these scenarios corresponds to the [Plan A] or the [Plan B], the Commission notes that Three considered many different network consolidation scenarios. While most of them seem to have been discarded, the Commission further notes that the reasons for doing so might be subject to change. The […] according to which the merged entity would […], was discarded because it was […]. However, if the Notifying Party were to […], it might view such scenario as a viable option. Similarly, obstacles based on one of the network sharing arrangements could be overcome if the respective network sharing partner were to agree to an amendment of these agreements.

iv. General categories of possible consolidation scenarios

(1390) Because of the uncertainty of the future network sharing situation following the Transaction, the Commission also reviewed more general categories of potential network consolidation scenarios. In the view of the Commission, any network

1209 Three's internal documents, 20141217 Scenario Analysis [ID028600303].

1210 Three's internal documents, Copy of Synergy Financial Summary 7 Jan 2015 [ID014000065.00001].

consolidation scenario would either have to rely only on MBNL, rely only on Beacon or continue both network sharing arrangements. In case of the latter, short of relying exclusively on one network, the merged entity could also remain mainly on MBNL or mainly on Beacon and supplement these respective networks with sites of the other network.

b) Assessment of the [Plan A]

i. Effects of the [Plan A] on competition by BT/EE

(1391) The Commission notes that the Notifying Party regarded the description of the [Plan A] as confidential towards BT/EE. Therefore, BT/EE has not been able to comment on the effects of the [Plan A] on the basis of a detailed understanding of such plan. Instead, BT/EE provided the Commission with different scenarios that, in the view of BT/EE, describe different possible network consolidation options of the merged entity.

(1392) Considering a scenario roughly in line with the [Plan A] BT/EE submits mainly two concerns. The first potential harm described by BT/EE relates to the long-term presence of the merged entity in both network sharing arrangements. BT/EE submits that […].[1211]

(1393) Furthermore, BT/EE advances concerns relating to […]. Of these concerns, one concern could apply to the […].[1212]

(1394) Considering a scenario in which the merged entity would mainly use CTIL supplemented with MBNL sites, BT submits that […].[1213] […].

(1395) Ofcom submits that the merged entity would have the ability and the incentive to disadvantage BT/EE in particular under the [Plan A].[1214] It argues that Three will not have the same incentive to support roll-out of further MBNL sites to extend coverage and capacity of MBNL or to upgrade sites in areas where Beacon sites are available. Therefore, BT/EE would need to undertake more unilateral investment in these areas and might not find it commercially worthwhile to make the investments.

(1396) Ofcom further argues that Three may not agree to share new investments that it would have agreed to share absent the Transaction or to join unilateral investments undertaken by BT/EE.[1215] Ultimately, Ofcom sees the risk that the Transaction will not only increase costs for BT/EE but will also cause the quality of BT/EE's network to become worse.[1216]

(1397) Ofcom also states that the merged entity would have the ability and incentive to frustrate unilateral investments by BT/EE.[1217] As to the incentives of Three to do so, Ofcom points out that […].[1218]

(1398) In addition, Ofcom describes the risk that the merged entity could force renegotiations of MBNL before the current termination date in […] to engineer an

1211 […].
1212 […].
1213 BT's Submission on Network Sharing, paragraph 4.6 (d) [ID3771].
1214 Ofcom's submission on network sharing theories of harm, December 2015, paragraph 6.1 [ID3929].
1215 Ofcom's submission on network sharing theories of harm, December 2015, paragraph 6.10 [ID3929].
1216 Ofcom's submission on network sharing theories of harm, December 2015, paragraph 6.12 [ID3929].
1217 Ofcom's submission on network sharing theories of harm, December 2015, paragraphs 6.13 and following [ID3929].
1218 Ofcom's submission on network sharing theories of harm, December 2015, paragraph 6.26 [ID3929].

early exit from MBNL or to achieve at least substantial contract changes. Either could result, according to Ofcom, in a substantial increase in BT/EE's costs and/ or in a decrease in BT/EE's network quality.[1219]

(1399) Before discussing the factors relevant to how the merged entity could reduce competition from BT/EE under the [Plan A], the Commission considers it important to review the degree of alignment between the interests of BT/EE and of the merged entity under the [Plan A]. The factors relevant to how BT/EE could be harmed that will be discussed below will be influenced by whether or not the current degree of alignment of interests between the parties to MBNL would decrease significantly. This might ultimately determine whether or not potential frictions within the contractual framework are likely to become important conflicts or not.

Misalignment of interests between BT/EE and the merged entity

Notifying Party's view

(1400) In its Reply to the Statement of Objections, the Notifying Party claims that MBNL does not require the interests of BT/EE and Three to be aligned and that the interests of the MBNL shareholders are already not aligned before the Transaction. The Notifying Party argues that MBNL is structured in a way that provides for flexibility and a wide scope for unilateral actions with the effect that it functions well in spite of an alleged misalignment of interests between BT/EE and Three.[1220]

(1401) The Notifying Party submits that currently there is a significant level of misalignment between the parties to the MBNL agreements. The Notifying Party explains that due to the growth of data consumption and the subsequent decision of Three and BT/EE to deploy separate 3G equipment in high traffic areas, the MBNL arrangements changed to a mainly passive sharing arrangement in which only […]% of Three's total customer traffic is carried on shared active RAN equipment.[1221] The Notifying Party expects this ratio to […] in 2020 because of the shift from 3G to 4G, which is […].[1222]

(1402) The Notifying Party further submits that the alignment of interests between the MBNL shareholders was limited from the beginning and that any alignment further decreased since the creation of EE, the completion of the shared 3G network and the merger between BT and EE. According to the Notifying Party, Three and BT/EE have misaligned interests in terms of strategy, spectrum, site preparation, available sites, network equipment, small cells and transmission.

(1403) As regards the interests relating to strategy, the Notifying Party points to […]. The Notifying Party argues that […].[1223]

(1404) In terms of spectrum, the Notifying Party submits that T-Mobile and Three had similar amounts of 3G spectrum when MBNL has been established. However, after Ofcom allowed EE to re-farm 1800 MHz spectrum for 4G while Three had no 4G spectrum, the spectrum holdings became misaligned to a degree not compensated by the acquisition of 1800 MHz spectrum by Three following the T-Mobile/ Orange

1219 Ofcom's submission on network sharing theories of harm, December 2015, paragraph 6.33 [ID3929].

1220 Reply to the Statement of Objections, paragraphs 626 and following.

1221 According to the Form CO, […]% of all MBNL sites actively share 3G whereas […]% of all 3G sites are passively shared. According to information provided in the Form CO, […]% of all MBNL sites actively share 3G whereas […]% of all 3G sites are passively shared.

1222 Reply to the Statement of Objections, paragraph 607.

1223 Reply to the Statement of Objections, paragraph 609.

merger. After the merger with BT, EE holds 255 MHz spectrum whereas Three only holds 89.5 MHz. According to the Notifying Party, […].[1224]

(1405) Furthermore, the Notifying Party claims that Three and BT/EE have misaligned incentives when it comes to site requirements. While BT/EE has still access to around […] sites that have been used by Orange, BT/EE has, according to the Notifying Party, […]. In addition, BT/EE would have access to BT's large network of street cabinets, telegraph poles and telephone kiosks which Three may not use.[1225]

(1406) Also in terms of site preparation for 4G, the Notifying Party claims a misalignment of interests. Because EE was able to use 4G spectrum earlier than all other MNOs, EE has prepared sites unilaterally and Three had to […]. In the Notifying Party's view, […]. So far, […] sites have been jointly prepared and GBP […] have been shared. While Three had so far prepared more than […] sites under the […], […] of these have been shared by BT/EE according to the Notifying Party.[1226]

(1407) Furthermore, the Notifying Party states that the interests of Three and BT/EE are misaligned on network equipment. For 3G, the parties rolled-out […]. For 4G, […]. Moreover, […].[1227]

(1408) Finally, the Notifying Party argues that Three and BT/EE are misaligned on the development of transmission solutions. Whereas BT/EE would have a clear incentive to use […], the BT/EE merger would incentivise Three to pursue […].[1228]

(1409) Regarding the commitments in the T-Mobile/ Orange merger, the Notifying Party states that the commitments towards Three addressed the concerns by Three at that time by […] and by […]. Therefore, the Notifying Party concludes that the remedies in 2009 fixed any concern about misalignment. Furthermore, at that time, Three was the smallest operator and did not have a fully rolled-out 3G network whereas at the time of the current decision, the need for alignment between the parties is considerably reduced because the roll-out of the 3G network has been completed.[1229]

(1410) Furthermore, the Notifying Party submits that the merged entity will […]. It would need MBNL to […] and BT/EE for […].[1230] The MBNL sites would be needed to address […]. The [Plan A] and the [Plan B] would rely on a large number of MBNL sites. Congestion would not become an issue as […] and BT/EE would be […].[1231]

(1411) The Notiying Party considers that even if Three had the ability to attempt foreclosing BT/EE, BT/EE could delay the deployment of backhaul upgrades or degrade backhaul quality and thereby counter any such strategy. The Notifying Party points out that the CMA concluded in its investigation of the BT/EE merger, that BT/EE would have the ability, but not the incentive, to either refuse to supply or to increase cost or reduce the quality of managed backhaul services. According to the Notifying Party, BT/EE therefore has significant leverage if Three were trying to block unilateral investments by BT/EE within MBNL.[1232]

1224 Reply to the Statement of Objections, paragraph 610.
1225 Reply to the Statement of Objections, paragraph 611.
1226 Reply to the Statement of Objections, paragraph 612.
1227 Reply to the Statement of Objections, paragraph 613.
1228 Reply to the Statement of Objections, paragraph 614.
1229 Reply to the Statement of Objections, paragraph 628.
1230 Reply to the Statement of Objections, paragraph 655.
1231 Reply to the Statement of Objections, paragraph 656.
1232 Reply to the Statement of Objections, paragraphs 657 and 658.

(1412) In its Reply to the Letter of Facts of 23 March 2016, the Notifying Party reiterates its argument that MBNL functions well in spite of a significant misalignment between the parties in terms of their strategy, spectrum, sites, 4G network deployments, network equipment and transmission of 4G data. The Notifying Party rejects claims made by submission in BT/EE that "*the alignment of interests between network sharing partners is vital*", and that "*BT/EE and H3G have strongly aligned incentives with regards to the MBNL network sharing arrangements, irrespective of their respective network and commercial strategies*".[1233]

(1413) Regarding the current level of cost sharing, the Notifying Party submits that the cost of 4G site preparation under […] for […] sites have been shared which achieved a cost saving of […] GBP […].[1234] Under […], the Notifying Party submits that BT/EE participates in […] sites which resulted in cost savings of […] GBP […].[1235]

(1414) On the potential use of antennae installed by BT/EE, the Notifying Party submits that sharing would only be possible if Three were to […] and that the cost savings achievable for the deployment of […] MHz spectrum on these antennae would be […].[1236]

(1415) With regard to the likely future development of MBNL funding by the network sharing partners, the Notifying Party points out that the total funding has […] over the past five years. The Notifying Party further explains that […].[1237]

(1416) Furthermore, the Notifying Party supplements its argument in the Reply to the Statement of Objections that it depends on BT/EE for backhaul services. The Notifying Party claims that […].[1238]

Commission's assessment

(1417) The Commission considers that under the implementation of the [Plan A], the alignment of interests between the merged entity and BT/EE would significantly decrease. In the Commission's view, this situation following the implementation of the [Plan A] is very different from the present situation. Even though the interests of BT/EE and Three are currently not completely aligned, they are aligned in maintaining MBNL operational and effective because for both parties MBNL is the basis for delivering mobile services to their customers. Without the MBNL sites, both parties would be unable to deliver mobile services in most areas of the United Kingdom. Therefore, while the Commission acknowledges that the interests of BT/EE and Three are not completely aligned, they are aligned in their mutual dependence on MBNL. This would change following the Transaction and the implementation of the [Plan A].

(1418) The merged entity would operate a base grid of sites that consists […]. According to the description of the [Plan A] by the Notifying Party, Beacon sites will be used […] and […], whereas MBNL sites will be […].[1239] The merged entity will thus be much less dependent on MBNL sites than Three absent the Transaction. The base coverage

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1233 Reply to the Letter of Facts of 23 March 2016, paragraphs 88 and 89.
1234 Reply to the Letter of Facts of 23 March 2016, paragraph 115.
1235 Reply to the Letter of Facts of 23 March 2016, paragraph 116.
1236 Reply to the Letter of Facts of 23 March 2016, paragraphs 118 and 119.
1237 Reply to the Letter of Facts of 23 March 2016, paragraph 122.
1238 Reply to the Letter of Facts of 23 March 2016, paragraphs 129 to 131.
1239 Annex 1 to the Notifying Party's response to RFI 64, paragraph 3 [ID2337].

grid as well as the base capacity grid will be […]. Only for […], the merged entity will have to rely on […].

(1419) […], BT/EE would have to rely on all MBNL sites for providing mobile services to its customers. In order to keep up with other MNOs, with technological evolution and with growing customer demands, BT/EE would be required to constantly update and amend its network on the MBNL sites. Any major delay or disruption of this process would impede BT/EE's competitive position. Even in the long term, BT/EE has no realistic alternative to its reliance on MBNL sites. With the merged entity and Vodafone as partners in CTIL, there is no other network of sites that BT/EE could turn to in case of disruptions in MBNL.

(1420) This radical difference in reliance on MBNL will significantly disrupt the level of current alignment between the MBNL network sharing partners. The merged entity will not only use much less MBNL sites than Three, it will only be much less depend on these sites for providing mobile services to its customers. Delays or failures to increase the capacity on MBNL sites could to some degree be compensated by measures to increase capacity on Beacon sites. If service from MBNL sites would be disrupted, the merged entity would still be in a position to provide nationwide mobile services. […].

(1421) BT/EE, however, would be unable to focus on other sites if investments in MBNL sites would be delayed or blocked. The approximately […] sites that BT/EE has access to outside of MBNL could only serve as substitutes for MBNL sites in a limited number of locations.

(1422) Regarding the current level of alignment, the Commission notes the submission of BT/EE that […].[1240] […].[1241] Furthermore, BT/EE states that […].[1242]

(1423) The Commission also notes that the Notifying Party claims in its Reply to the Letter of Facts of 23 March 2016 that these numbers are incorrect and mentions […] sites under […] and […] sites under […] for which BT/EE and Three actually […]. This is in increase compared to the statement of the Notifying Party in its reply to the Statement of Objections, where it claimed that only […] for […] sites have been […] under […] and for […] under […].

(1424) As regards the antennae deployed by BT/EE for using its 2.6 GHz spectrum, BT/EE submits […].[1243] BT/EE submits that […].[1244]

(1425) In the view of the Commission, these examples show the degree of current cost sharing that is achieved by two network sharing partners outside the scope of their network sharing arrangements. The […] provide an example of likely future cost sharing for […] and for […] between the MBNL network sharing partners.

(1426) Regarding the argument of the Notifying Party that BT/EE would have different incentives based on its access to the street furniture of BT, the Commission notes that […].[1245] […][1246] […].[1247]

1240 […].
1241 […].
1242 […]
1243 […].
1244 […].
1245 […].
1246 […].

(1427) The Commission further notes that regarding potential future cooperation between BT/EE and Three for the deployment of small cells, BT/EE submits that […].[1248] […].[1249] […].[1250]

(1428) On future funding of MBNL absent the Transaction, BT/EE submits that […].[1251] BT/EE argues that […].[1252]

(1429) In the view of the Commission, going forward, BT/EE will be incentivised to invest in and to amend MBNL sites. Even taking into account that BT/EE has access to roughly […] additional sites[1253], […].[1254] In case of disputes, BT/EE will have a strong incentive to settle disputes with the merged entity to avoid any detrimental effects to its customers.

(1430) The situation of the merged entity, however, would be very different. Under the [Plan A], the merged entity would […]. Even though it plans to use up to […]% of MBNL sites for […], any disruptions or disputes concerning these sites would not affect the consolidated network of the merged entity in the same way as BT/EE's network.

(1431) The merged entity would not use […]% of all MBNL sites. The merged entity may be […], but this would only increase its incentive to reduce such costs. If there is a dispute with BT/EE on certain matters, the merged entity would not be incentivised to find the most efficient and practical solution as its network does not depend on MBNL sites for […] since the [Plan A] provides that […]. Rather, any deterioration of MBNL would disproportionally affect BT/EE.

(1432) The Commission notes that the situation under the [Plan A] will be similar to the one discussed by Three in its submissions concerning the T-Mobile/ Orange merger in 2010. There, Three was in a network sharing agreement with T-Mobile and was concerned that T-Mobile could prioritise a consolidated Orange/ T-Mobile network over MBNL. Three stated that "*[t]he success of a joint venture in the mobile industry (like all fast paced industries) relies upon the efficiency of the decision making process*"[1255], that "*there is great scope for a Company, which is not committed, to delay or disrupt the joint venture*"[1256] and that "*following the Proposed Transaction (by* […]*) T-Mobile could be highly disruptive, ensuring that it keeps its investment in the Shared Network to the absolute minimum required whilst concentrating its efforts and funding on a shared Orange/T-Mobile network.*"[1257]

(1433) The Commission understands that at the time of the T-Mobile/ Orange merger the shared MBNL network was not fully rolled out which increased the dependency of Three on the roll-out by T-Mobile compared to the current situation where MBNL is fully deployed. However, […].[1258] Furthermore, in the view of the Commission, the

1247 […].
1248 […].
1249 […].
1250 […].
1251 […].
1252 […].
1253 […].
1254 […].
1255 Annex 54.2 to response to RFI 81, "RAN Share Ability Paper" 24 December 2009, paragraph 4.32.
1256 Annex 54.2 to response to RFI 81, "RAN Share Ability Paper" 24 December 2009, paragraph 4.32.
1257 Annex 54.2 to response to RFI 81, "RAN Share Ability Paper" 24 December 2009, paragraph 4.34.
1258 Form CO, Section 6, paragraph 133.

core concerns of Three still hold true as […].[1259] Still, the success of MBNL would rely upon the efficiency of the decision making process. Still, and as discussed below, a network sharing partner that is not committed will be able to significantly delay or disrupt the joint venture. Still, a network sharing partner could be highly disruptive if it aims to keep its investment in MBNL to the absolute minimum required while concentrating on another network. For these reasons, the remedies in the T-Mobile/ Orange case did not "fix" any concerns about misalignments for all potential future developments. Instead, the remedies addressed the competition concerns relating to the position of Three following the merger of T-Mobile with Orange. These concerns are not the same as the ones relating to the position of BT/EE following the Transaction .

(1434) The incentives of the merged entity and BT/EE are therefore not only misaligned but even contradict each other. The merged entity has an interest to reduce its costs under MBNL because it will not use all MBNL sites and will have considerably lower incentives than absent the Transaction to settle disputes with BT/EE quickly and effectively because it will not be as dependent on MBNL sites as BT/EE. Instead, deadlocks that frustrate investments in MBNL might even be for the benefit of the merged entity as they disproportionally harm BT/EE because the merged entity will […].

(1435) The decrease in misalignment following the Transaction is not substituted by the need of MBNL or Three to procure backhaul services provided by BT/EE as claimed by the Notifying Party in its Reply to the Statement of Objections. In reviewing the merger between BT and EE, the CMA reviewed a potential foreclosure of backhaul services in detail. The CMA concluded that foreclosure of other MNOs would be unlikely due to, amongst other reasons, the constraints imposed by the regulatory control by Ofcom.[1260] On potential quality discrimination, the CMA concluded that alleged circumvention of the regulation overseen by Ofcom and designed to prevent such discrimination would have an impact large enough to significantly reduce the competitiveness of rival MNOs.[1261]

(1436) On a total foreclosure strategy, which could only be pursued at the time the […], the CMA found that foreclosing Three while BT/EE would at the same time procure backhaul services unilaterally instead of jointly with Three would almost double the cost of backhaul for Three.[1262] However, the CMA also concluded that switching to alternative backhaul suppliers would not lead to significantly or permanently lower quality of mobile retail services and therefore not to additional customer churn.[1263] According to the final report by the CMA, Three described the consequences of having to switch the backhaul supplier as *"not ideal"*.[1264] Overall, the CMA concluded that a total foreclosure of Three might cause harm to Three, but that BT/EE would not find it profitable to do so.[1265]

(1437) Based on the above, the Commission concludes that BT/EE's position as provider of backhaul services for MBNL is no substitute for the loss of alignment caused by the

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[1259] The commitments in T-Mobile/ Orange in particular […].
[1260] CMA, Final Findings Report, Summary, paragraph 42 [ID4112].
[1261] CMA, Final Findings Report, Summary, paragraph 43 [ID4112].
[1262] CMA, Final Findings Report, paragraph 16.123 [ID4112].
[1263] CMA, Final Findings Report, paragraph 16.137 [ID4112].
[1264] CMA, Final Findings Report, paragraph 16.136 [ID4112].
[1265] CMA, Final Findings Report, paragraph 16.134 and 16.137 [ID4112].

Transaction. The merged entity will not have the same incentives to cooperate with BT/EE in MBNL following the Transaction. If BT/EE would threaten the merged entity to stop procuring backhaul jointly for MBNL and to foreclose the merged entity on such services, the merged entity would face an increase in backhaul costs. However, the risk of such increase is unlikely to have the same disciplinary effect on the merged entity as the interest of Three to maintain MBNL effective absent the Transaction. Furthermore, a total foreclosure strategy on backhaul could only be pursued at the end of the respective service agreement. At other times, BT/EE would have no additional leverage over the merged entity.

(1438) Finally, the Commission takes into account that the assessment of CMA was based on the pre-Transaction situation in which Three operates on MBNL sites. However, […]. The Commission notes that […].[1266] […]. In addition, […].

(1439) Based on these considerations, the Commission concludes that following the Transaction there will be a significant increase in misalignment between the interests of the two MBNL network sharing partners.

Increased costs of maintaining the current network

Notifying Party's view

(1440) The Notifying Party submits that the [Plan A] would not alter the MBNL arrangements. The merged entity would continue to fund and support the passive site sharing as well as the 3G RAN sharing as specified under the MBNL agreements until […]. The Notifying Party notes that it plans to use MBNL sites as […] and that it will therefore have no incentive to frustrate the successful operation of MBNL.

(1441) The Notifying Party points out that […].[1267] […].[1268]

(1442) In its Reply to the Statement of Objections, the Notifying Party submits that […]. Therefore, according to the Notifying Party […].[1269] In addition, the Notifying Party argues that the misaligned incentives of BT/EE and Three will limit the incentives of BT/EE to jointly invest with Three.[1270] For these reasons, […].[1271]

(1443) Furthermore, the Notifying Party states that the MBNL arrangements would contain effective legal and technical protections preventing Three from undermining BT/EE's ability to compete. These protections would include […].[1272] Furthermore, the shareholders would have […].[1273]

(1444) The Notifying Party further submits that it would be unable to […]. Regarding the latter, the Notifying Party states that […]. Therefore, the Notifying Party regards it as highly unlikely that […].[1274] Finally, the Notifying Party puts forward that the terms of the MBNL agreements are sufficiently detailed in order to ensure, together with

1266 […].
1267 Reply to the Article 6(1)(c) Decision, paragraphs 438 and 464.
1268 Reply to the Article 6(1)(c) Decision, paragraph 464.
1269 Reply to the Statement of Objections, paragraphs 638 and 639.
1270 Reply to the Statement of Objections, paragraph 640.
1271 Reply to the Statement of Objections, paragraph 641.
1272 Reply to the Statement of Objections, paragraphs 644 to 648.
1273 Reply to the Statement of Objections, paragraph 649.
1274 Reply to the Statement of Objections, paragraph 652.

the consequences of a breach and the wide scope for unilateral deployments, that both parties are protected.[1275]

Commission's assessment

(1445) Considering how the merged entity could reduce competition from BT/EE, the first factor already discussed in recitals (1250) et seq. is the ability to increase the costs of maintaining the current network. The Commission notes that […]. The Notifying Party claims that […].

(1446) […], however, has described ways in which the merged entity could reduce its costs in MBNL without breaching the agreements. […].

(1447) Under the MBNL agreements, any revised business plan has to […].[1276] According to […], […] are defined by references to […] and to […].[1277] The shared network is required to […] and […].

(1448) As to […], the network must […], deliver […] and must […].[1278] As to […], the shared network must […], deliver […] and shall […].[1279] On […], the shared network must […], provide for […] and meet or exceed […].[1280] […] must be implemented […] or […] in each case if […].[1281] Finally, the agreement lists […] and of which at least […] have to meet or exceed […] and […].[1282]

(1449) The Commission considers that […]. First, the Commission notes that […]. […].

(1450) Furthermore, […].

(1451) In any case, […].

(1452) Furthermore, […]. In addition, the Commission notes that […]. […]. Finally, the Commission takes note that […].[1283]

(1453) Given that the merged entity plans to use […] of MBNL sites, a "forced exit" […] seems unlikely. However, the Commission considers that the merged entity would have an incentive to re-negotiate its commitments under the MBNL arrangements by leveraging the fact that it is less dependent on MBNL than BT/EE. In such scenario, BT/EE might be forced to accept an overall reduction of cost sharing in exchange for amendments that reduce the ability of the merged entity to disturb the operation of MBNL.

(1454) Therefore, even though the Notifying Party claims that […], the Commission considers it likely that the merged entity would be able to reduce the level of shared costs. The costs would have to be borne by BT/EE unless BT/EE is willing to avoid such costs by reducing the quality of its network.

(1455) While the amount of such likely higher costs is, however, difficult to evaluate, the Commission notes that the merged entity itself estimated in an internal document the savings under […] to amount to roughly GBP […] in […].[1284]

1275 Reply to the Statement of Objections, paragraph 653.
1276 […].
1277 […].
1278 […].
1279 […].
1280 […].
1281 […].
1282 […].
1283 […].

Increased costs of network improvements

(1456) Whereas the merged entity will be […] to share certain costs of the existing network, there are […] to fund future network improvements. The Notifying Party describes future investment requirements under MBNL as […].[1285]

(1457) The Commission considers that, taking into account the likely development of the MBNL network sharing as discussed in Section 8.2.2.3 a), Three and BT/EE would have shared additional costs absent the Transaction that significantly exceed their current obligations under the terms of the MBNL agreements.

(1458) At the moment, both parties upgrade MBNL sites for deploying 4G. […].[1286] In addition, both parties are deploying LTE […]. […].[1287] In total, BT/EE expects […]. This evidences that even absent active sharing of 4G, there are significant cost savings to be achieved when deploying new technologies […].

(1459) Similarly, preparation of the MBNL network to include new technologies like 5G would likely have involved some element of cost sharing. Even though the deployment of 5G will not occur in the near future, it can be assumed that the MBNL agreement will continue until at least […].[1288] It seems implausible to assume that two MNOs sharing their passive infrastructure would not look into ways to share a certain amount of costs when rolling-out a new network technology. The mutual interests in doing so is evidenced by the fact that […].

(1460) The majority of these savings will not occur following the Transaction as the merged entity will […].[1289] This will increase costs of future network improvements for BT/EE.

(1461) Similarly, the Commission considers it likely that Three would have significantly increased its number of sites as already made public by its CEO.[1290] It seems implausible to assume that Three would have developed all of these sites on its own. Given the advantages of passive sharing, a significant proportion of the new sites are likely to be made available either from BT/EE as part of the […] sites that […], or be jointly developed together with BT/EE as new sites within the MBNL net.

(1462) Following the Transaction, the merged entity would have access to all MBNL and all CTIL sites. It is not reasonable to expect that the merged entity will invest in new sites for a significant period of time and even if it were to do so, it seems plausible to assume that […].

(1463) Therefore and absent other plausible ways to share the costs of deploying new sites, BT/EE is likely to incur higher costs for additional sites it aims to roll-out[1291] and to lose […] that […] absent the Transaction.

(1464) Overall, the Commission concludes that the MBNL partners would most likely have shared significant costs in the future absent the Transaction. Under the [Plan A],

1284 See recital (1532).
1285 Reply to the Article 6(1)(c) Decision, paragraph 435.
1286 […].
1287 […].
1288 See Section 8.2.2.3 a).
1289 See Section 8.2.2.4 a) i.
1290 See recital (1311) and footnote 1110.
1291 […].

however, the merged entity is likely to […] and have very limited incentives in sharing any of these costs with BT/EE.

Degradation of network quality

(1465) The Commission considers that the merged entity would have an incentive to degrade the network quality of MBNL over time. As set out above when discussing the misalignment of incentives between BT/EE and the merged entity under the [Plan A], the merged entity would be less exposed to detrimental effects of such degradation than BT/EE. By pursuing a strategy to degrade the MBNL network, the merged entity would be able to harm its largest competitor.

(1466) In particular after […], the merged entity would […] whereas BT/EE is dependent on MBNL for all aspects of providing mobile services to its customers. If a significant amount of customers were to leave MNOs operating on MBNL following a potential degradation of their networks and assuming that these customers would choose other MNOs operating on Beacon sites proportionally to their respective market shares, the merged entity is likely to profit disproportionally compared to Vodafone due to its higher market share.[1292]

(1467) As to the ability of the merged entity to degrade the network quality of MBNL, the previous recitals already discussed a number of ways to achieve such aim. Each time the merged entity finds a way to reduce its costs under the MBNL arrangements, BT/EE will have to make a choice whether to also pay the share of costs that has previously been paid by Three or to abandon the respective infrastructure and to allow the quality of its network to decrease.

(1468) A practical example of such degradation would be a reduction in the number of sites. As discussed above, […]. […], the Commission considers that Three could reduce the number of sites of the shared MBNL network. BT/EE would then either accept that MBNL will have fewer sites or enter into lease agreements with the respective landlords bearing all costs that have previously been shared.

(1469) As to the argument of BT/EE that […].

(1470) However, as stated in recital (1241), contractual damage claims are no substitute for constructive cooperation within the MBNL procedures and will not prevent Three from pursuing a strategy of frustrating MBNL – in particular since the merged entity would be able degrade the governance of MBNL without breaching any contractual obligations. Given the availability of a separate network for the merged entity, BT/EE would stand to lose much more from long-term judicial disputes while the MBNL network would deteriorate. Taking the incentives of the merged entity into account, the Commission considers that it cannot be excluded that Three would pursue such aggressive strategy.

(1471) In any case, there would be other ways to slowly decrease the network quality. BT/EE pointed out that […]. The merged entity could also consistently escalate minor disputes. Given the considerable misalignment of interests, in the Commission's view, this could even occur absent an explicit strategy to harm BT/EE by deteriorating MBNL. The simple fact that the merged entity will be a 50:50 joint venture partner in a joint venture that operates a network for […], already delineates numerous conflicts […] that could, taking together, considerably impede the effective operation of MBNL.

[1292] See recital (1268).

(1472) Therefore, the Commission considers that there are many ways in which the merged entity could cause a deterioration of MBNL. In this context, the Commission notes that Three submitted in the context of the T-Mobile/ Orange merger that "*T-Mobile's full cooperation will be needed going forward to ensure that the Shared Network maintains the capacity and coverage levels to ensure that 3 can compete effectively going forward.*"[1293]

Delaying or frustrating unilateral investments in MBNL

Notifying Party's view

(1473) The Notifying Party argues that it could not control BT/EE's ability to make network investments. It claims that, as MBNL is […], BT/EE's […] and thus the majority of its network is technically independent of Three.[1294] The broad rights of BT/EE to […] are, in the view of the Notifying Party, evidenced by […].[1295] The Notifying Party admits that there are […] but states that these are essentially limited to ensuring that […].[1296]

(1474) In addition, the Notifying Party points to the fact that […][1297] and that the management of MBNL is responsible for […]. As this management acts independently of Three and BT/EE, Three would be unable to […] to operationally frustrate BT/EE's plan.[1298]

(1475) Furthermore, […]. Therefore, according to the Notifying Party, […].[1299] […].[1300] The Notifying Party argues that BT/EE would have no incentives to invest jointly with Three in the future.[1301] In this regard, the Notifying Party points out that […].[1302]

(1476) In the Reply to the Statement of Objections, the Notifying Party claims that concerns about delaying or frustrating unilateral deployments are heavily based on a misunderstanding and misreading of the MBNL agreements. The Notifying Party points out that under these agreements, a unilateral deployment is only required […] and […]. In order to claim that a unilateral deployment is not in line with these provisions, the other shareholder would have to […] or the Technical Committee of MBNL would have to […]. As BT/EE has […], there would be […]. […].[1303]

(1477) In addition, the Notifying Party argues that the merged entity would not be in a position to block innovations such as […]. In particular regarding the latter, the Notifying Party claims that […].[1304] In addition, the Notifying Party submits that […] would not undermine BT/EE's ability to invest. Three would not have the incentive to […] or […] and even if it would decide to […], BT/EE could enter into […] unilaterally.[1305]

[1293] Annex 54.2 to response to RFI 81, "RAN Share Ability Paper" 24 December 2009, paragraphs 4.33.
[1294] Reply to the Article 6(1)(c) Decision, paragraph 444.
[1295] Reply to the Article 6(1)(c) Decision, paragraph 444.
[1296] Reply to the Article 6(1)(c) Decision, paragraph 444, footnote 381.
[1297] Reply to the Article 6(1)(c) Decision, paragraph 445.
[1298] Reply to the Article 6(1)(c) Decision, paragraph 446.
[1299] Reply to the Article 6(1)(c) Decision, paragraph 447.
[1300] Reply to the Article 6(1)(c) Decision, paragraph 448.
[1301] Reply to the Article 6(1)(c) Decision, paragraph 449.
[1302] Reply to the Article 6(1)(c) Decision, paragraph 449, footnote 387.
[1303] Reply to the Statement of Objections, paragraph 630.
[1304] Reply to the Statement of Objections, paragraph 650.
[1305] Reply to the Statement of Objections, paragraph 651.

(1478) In its Reply to the Letter of Facts of 23 March 2016, the Notifying Party submits that […]. The Notifying Party points out that […].[1306] In addition, the Notifying Party argues that […].[1307]

(1479) Furthermore, the Notifying Party reiterates in its Reply to the Letter of Facts of 23 March 2016 that BT/EE is protected by the process for unilateral deployments under the MBNL agreements. According to the Notifying Party, any conclusion to the contrary would mean that two well-advised and sophisticated competitors would have knowingly agreed an unworkable process for unilateral deployments, despite this being a key means of competitive differentiation.[1308] The Notifying Party points out that the maximum waiting period before implementing a unilateral deployment is […] after […].[1309]

(1480) The Notifying Party also claims that […].[1310]

(1481) In addition, the Notifying Party argues that unilateral deployments need no approval from […]. The Notifying Party points out that according to the MBNL agreements, any shareholder is not restrained from […] and that only […] could […].[1311] The Notifying Party further submits that not all unilateral deployments require […] and thus to […] and that […].[1312]

(1482) Regarding MBNL and third party suppliers, the Notifying Party claims that […].[1313]

(1483) The Notifying Party argues the managing director of MBNL is legally obliged to exercise […] objectively and […] English barrister.[1314] The Notifying Party submits that the exercise of […] would not favour non-deployment of unilateral deployments and that the Commission's conclusions on the consequences of […] are incorrect. With regard to the latter, the Notifying Party reiterates that […] and that neither MBNL nor the other party are able to […].[1315]

(1484) In addition, the Notifying Party claims that Three could not block unilateral deployments by […][1316], that Three has neither delayed or frustrated […][1317] nor […][1318] nor has it obstructed […].[1319] Finally, the Notifying Party states that […].[1320]

Commission's assessment

(1485) To assess the claims and arguments of the Notifying Party, the Commission takes account of the submissions of BT/EE on the same topic before forming its own view on the likelihood that unilateral deployments by BT/EE will be delayed or frustrated following the Transaction.

1306 Reply to the Letter of Facts of 23 March 2016, paragraph 19.
1307 Reply to the Letter of Facts of 23 March 2016, paragraph 20.
1308 Reply to the Letter of Facts of 23 March 2016, paragraph 22.
1309 Reply to the Letter of Facts of 23 March 2016, paragraph 23.
1310 Reply to the Letter of Facts of 23 March 2016, paragraphs 29 to 31.
1311 Reply to the Letter of Facts of 23 March 2016, paragraphs 32 to 36
1312 Reply to the Letter of Facts of 23 March 2016, paragraphs 39 to 41.
1313 Reply to the Letter of Facts of 23 March 2016, paragraphs 44 to 48.
1314 Reply to the Letter of Facts of 23 March 2016, paragraphs 49 and 50 and Annex 1.2.
1315 Reply to the Letter of Facts of 23 March 2016, paragraphs 54 to 56.
1316 Reply to the Letter of Facts of 23 March 2016, paragraphs 57 to 60.
1317 Reply to the Letter of Facts of 23 March 2016, paragraphs 63 to 65.
1318 Reply to the Letter of Facts of 23 March 2016, paragraphs 66 to 69.
1319 Reply to the Letter of Facts of 23 March 2016, paragraphs 70 to 83.
1320 Reply to the Letter of Facts of 23 March 2016, paragraphs 85 and 86.

(1486) The Commission notes that BT/EE described different strategies how […]. These strategies would include […].

(1487) According to BT/EE, all unilateral deployments could be easily delayed […].

(1488) EE submits that, […].[1321] […].[1322] […].[1323]

(1489) EE argues that unilateral deployments could be significantly delayed […].[1324] […].[1325]

(1490) Also with regard to other elements of the process of approving unilateral deployments, BT/EE argues that[…].[1326]

(1491) EE argues that […].[1327]

(1492) […].[1328] BT/EE points out that […].[1329] For example, BT/EE argues that […].[1330]

(1493) Similarly, BT/EE points out […].[1331]

(1494) EE submits that […].[1332]

(1495) EE further claims that […].[1333]

(1496) According to BT/EE, […].[1334]

(1497) Another strategy that would cause the frustration of unilateral deployments is, […], to block co-operation by MBNL or by third parties. Regarding MBNL, BT/EE claims that […].

(1498) EE claims that in case of disputes between the shareholders, […]. Therefore, […].[1335]

(1499) EE further argues that […].[1336] […].[1337]

(1500) According to BT/EE, […][1338] […].[1339]

(1501) These submissions by BT/EE show, in the Commission's view, that the Notifying Party oversimplified the situation as to unilateral investment when suggesting that the entire BT/EE network other than […] would be technically independent of Three.[1340] While […] as well as […] are networks operated by BT/EE independently, they depend on the shared infrastructure of MBNL and are thereby subject to the MBNL agreements.

1321 […].
1322 […].
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1336 […].
1337 […].
1338 […].
1339 […].
1340 Reply to the Article 6(1)(c) Decision, paragraph 444 [ID2323].

(1502) The MBNL agreements provide for […]. […].

(1503) The Commission considers that the description of unilateral deployments that do not need to be […] in […] is narrow. Only enhancements that are […] are excluded. The example mentioned in this clause refers to […]. That leaves […] as being able to be shared. Therefore, the Commission takes the view that […].

(1504) The notification of […] has to contain […]:

"*(a)* […]*;*

(b) […]*;*

(c) […]*;*

(d) an indication as to whether and to what extent:

(i) […]*;*

(ii) […]*; and*

(ii) […]*; and*

(e) […]."[1341]

(1505) These general information requirements either require very careful, thorough and time-consuming preparation or, in case of less comprehensive notifications, opportunity to claim that the respective enhancements have not been properly notified and that thus the […] review period has not been triggered. Even if this might not be a current problem for the MBNL partners, the increased misalignment of interests caused by the implementation of the [Plan A] is likely to cause such frictions even in areas where the cooperation before the Transaction has worked well.

(1506) However, even after an enhancement has been […], according to […], the party proposing a unilateral deployment is required to […]. In case […], it must be tested according to […] before the notification is submitted. According to […], the notification has to include, inter alia, information on whether and to what extent the unilateral deployment will or is likely to […] or […] and whether it will […]. The latter criteria are laid out in […] and form another area of potential dispute.

(1507) According to these criteria, the unilateral deployment may not […] that would result in […] or have any material effect on (i) […], (ii) […], or (iii) […].[1342] […].

(1508) The claim of BT/EE that […][1343] does not appear to be a contradiction in itself as claimed by the Notifying Party.[1344] […].

(1509) The argument of the Notifying Party that […][1345] is neither a convincing counter. As already described, […]. Given the general character of these information requirements, there is ample leeway in interpreting what is needed in each individual case. […]. The suggestion of the Notifying Party to skip all these well-established procedures seems rather likely to further deteriorate the effectiveness of MBNL than to improve it.

1341 Clause 10.2 of the Coopoeration Agreement, Annex 67 to Form CO.

1342 Schedule 9 to Co-Operation Agreement, Annex 67 to Form CO, clause 2.1.

1343 Letter of Facts of 23 March 2016, paragraph 20.

1344 Reply to the Letter of Facts of 23 March 2016, paragraph 24.

1345 Reply to the Letter of Facts of 23 March 2016, paragraph 26.

(1510) Even if […], it has at any time to comply with […]. If this is not the case, the respective party is obliged to either […] within […] or to […] so that it complies with […] within […] according to […].

(1511) In addition, the party that unilaterally deploys equipment has to […].

(1512) The Commission notes that […]. Even though […], the Commission notes that the criteria also include […]. […].

(1513) In the view of the Commission, under these provisions Three will have ample opportunity to delay unilateral deployments […] and/ or to frustrate them altogether. Given the misalignment of incentives resulting from the Transaction as discussed in Recitals (1400) to (1439), Three will also have the incentive to use this ability to avoid additional cost and to harm BT/EE.

(1514) […], it seems indeed likely that upgrading antennae by replycing them with new antennae that are also suitable for additional frequency bands […]. Given that Three could obstruct deployment via the described mechanisms under the MBNL agreements, BT/EE would either have to incur higher costs for deploying an additional antennae or might refrain from utilising such additional frequency band at all.

(1515) When the Notifying Party points out that BT/EE was able to unilaterally deploy 4G under the existing MBNL arrangements, the Commission notes that the interests of the parties would be very different after the Transaction compared to the situation before. It was a mutual interest of BT/EE and Three to deploy an own 4G network in all MBNL sites. Therefore, both parties have been incentivised to find practical solutions that do not obstruct deploying 4G. After the Transaction, however, the merged entity could deploy new technologies on a nationwide basis exclusively on CTIL sites. It is not dependent on MBNL sites to offer such technology to its customers. BT/EE, on the contrary, has to deploy any new technology on MBNL.

(1516) If the merged entity would want to prevent a unilateral deployment from being made by BT/EE, it could […]. The […] of the managing director of MBNL in […] is unlikely to constrain this ability of the merged entity. The argument of the Notifying Party that […]. In the view of the Commission, the managing director is unlikely to side with one shareholder unless an action by the other shareholder is clearly not based on the MBNL agreements. If, however, obstructive behaviour is disguised as a technical concern, it is precisely his fiduciary duty to MBNL rather than to one of the shareholders that will prevent the managing director from siding with one shareholder on such an assessment.

(1517) The Commission notes that the opinion of an English barrister on […]. The opinion concludes that the […].[1346]

(1518) According to this opinion, […]. However, the concern of the Commission is that Three could argue to the contrary that […]. Furthermore, the MBNL shareholders might have agreed absent the Transaction that […] since both parties intend to roll-out a specific deployment unilaterally. Such reasonable compromises could not be substituted by […] of the managing director that has to be based on a strict application of the MBNL agreements.[1347]

1346 Reply to the Letter of Facts of 23 March 2016, Annex 1.2, paragraph 41.

1347 See also Reply to the Letter of Facts of 23 March 2016, Annex 1.2, paragraph 40: […].

(1519) Furthermore, the Commission understands that certain unilateral deployments that are economically feasible would […]. However, while the incentives of the shareholders before the Transaction have been aligned in accepting […] in exchange for being able to make relevant investments in an economical way, the […] of the managing director of MBNL would be no substitute for such willingness to compromise.

(1520) Considering the ability of the merged entity to […], the Commission takes the view that making such deployment without […] would be very risky for BT/EE. The consequences of […] is severe. In particular in circumstances where the shareholders would no longer have a mutual interest in an effective functioning of the MBNL arrangements, the contractual rights under the MBNL agreements constitute […]. Even though […], the consequences if […] will decrease the incentives to make them.

(1521) In light of these consequences, the argument of the Notifying Party that BT/EE could […] seems highly unrealistic.

(1522) Based on these considerations, the Commission finds that the merged entity is likely to significantly harm BT/EE by delaying or frustrating BT/EE's network investments. Given the importance of network quality to compete within the mobile market in the United Kingdom and the need to constantly invest to cope with growing consumer demands and the technological evolvements, in the present case this factor is particularly important and crucial for BT/EE's competitive position going forward.

Harm to BT/EE's competitive position

Notifying Party's view

(1523) The Notifying Party claims that even if the Transaction were to cause harm to BT/EE, such harm would not be sufficiently severe to leave BT/EE unable to compete effectively.[1348] Uncertainties, inconveniences or economic disadvantages for BT/EE would not be sufficient to assume a significant impediment to effective competition.[1349]

(1524) In the Reply to the Statement of Objections, the Notifying Party submits that BT/EE will continue to have the ability and incentive to invest in its network. The Notifying Party states that increasing BT/EE's costs does not constitute in and of itself a significant impediment of effective competition.[1350] According to the Notifying Party, the potential impact on BT/EE's cost is modest compared to the scenario absent the Transaction[1351] while BT/EE would have a significant financial strength even before they merged.[1352] After the BT/EE merger, BT/EE would have a combined revenue of GBP 23.8 billion and a combined EBITDA of GBP 8.1 billion. Incurring higher costs for maintaining or improving MBNL would therefore not have a significant adverse effect on BT/EE's competitive position.[1353] Furthermore, any additional costs would be fixed in nature and would therefore not be passed through

[1348] Reply to the Article 6(1)(c) Decision, paragraphs 459, 460.
[1349] Reply to the Article 6(1)(c) Decision, paragraph 462.
[1350] Reply to the Statement of Objections, paragraph 661.
[1351] Reply to the Statement of Objections, paragraph 663.
[1352] Reply to the Statement of Objections, paragraph 664.
[1353] Reply to the Statement of Objections, paragraph 665.

to consumers.[1354] The experience in other countries would show that network sharing is not necessary for being an effective competitor.[1355]

(1525) The Notifying Party submits that BT/EE would not rely on Three's cooperation in MBNL for future investments. This would, according to the Notifying Party, only be the case if BT/EE and Three would have cooperated with regard to a specific investment absent the merger and BT/EE would not make such investment without such cooperation. Because of the difference in scale between Three and BT/EE, however, any investment which Three would have made jointly with BT/EE would also be profitable for BT/EE on a standalone basis.[1356]

(1526) Furthermore, the Notifying Party claims that there is no evidence that would support the finding of significant impediment to effective competition in relation to the MBNL network. The Notifying Party argues that a more detailed analysis of the extent to which the costs of BT/EE increase would be needed, as well as of BT/EE's financial position, of specific network enhancements or developments, of the impact of their absence on BT/EE's network quality, of the lost value for consumers, of BT/EE's ability or incentive to fund unilateral network deployments and of the extent to which a reduction of investments would be offset by increased investments by the merged entity.[1357]

(1527) Moreover, the Notifying Party submits that if the Commission's concerns were to be correct, they have to be taken into account when assessing Three's ability to compete as a standalone business. The Notifying Party argues that BT/EE can expand and differentiate its network in ways not available to Three and has an incentive to restrict network competition from Three. Therefore, the Notifying Party regards it as a significant and fatal legal error that the Commission did not take into account how BT/EE could use the MBNL arrangements to harm Three absent the Transaction.

(1528) On the internal document of Three discussing […], the Notifying Party submits in its Reply to the Letter of Facts of 23 March 2016 that this document was created at a very early stage of process related to the Transaction and is a result of an initial brainstorming session. The Notifying Party points out that the MBNL agreements contain multiple provisions on […] that would render it impossible for Three to […] in the ways envisaged in this document.[1358]

Commission's assessment

(1529) The Commission considers that two very different potential harms to the competitive position of BT/EE need to be distinguished: increased cost for current and future infrastructure and a decrease in the ability of BT/EE to make unilateral investments.

(1530) Regarding the first harm, increased cost for current and future infrastructure, the Commission notes that Ofcom submitted model calculations that assess the impact on the long-run incremental cost if a mobile operator were to decrease its level of network sharing.[1359] According to this model, a reduction from passive sharing to no sharing would increase the long-run incremental cost by 3-9%.

[1354] Reply to the Statement of Objections, paragraph 667.
[1355] Reply to the Statement of Objections, paragraph 670.
[1356] Reply to the Statement of Objections, paragraph 636.
[1357] Reply to the Statement of Objections, paragraph 674.
[1358] Reply to the Letter of Facts of 23 March 2016, paragraphs 123 and 124.
[1359] See recitals (1704) et seq.

(1531) This increase is, however, based on a complete termination of passive sharing. Even though the Commission concluded above that the merged entity would have the incentive and ability to reduce its obligations under MBNL, such reduction would fall significantly short of the effects of terminating MBNL.

(1532) An internal document of Three discussed savings that could be achieved if Three were to […]. According to this document, such strategy could achieve savings in a total amount of roughly GBP […] in […] in a scenario in which the merged entity would […].[1360] These savings increase from GBP […] in […] to GBP […] in […]. As a caveat for such scenario, the document mentions […].

(1533) Even though the Notifying Party claims that this document is the result of a mere brainstorming exercise before a deal with Telefónica had been agreed, the Commission regards it as a clear indication that Three is able to […]. MBNL is the current network sharing arrangement of Three. Employees of Three can be expected to have a reasonable understanding of the obligations under these arrangements. In addition, the document is clearly more than a "brainstorming" exercise. The respective excel file contains 25 riders. Some of these riders seem to have been taken from previous calculations (in particular […]) but other riders containing detailed calculations have clearly been developed for the purposes of this document. Furthermore, based on the file properties, the file was created on 4 December 2014. This implies that Three has worked for more than a month on these calculations. Finally, the Commission does not take this document as proof any specific amount of […] but as a clear indication that Three itself considered […] a possible benefit under a potential network consolidation scenario.

(1534) BT/EE submitted that Three's total share of OPEX is expected to amount to approximately […] and its total share of CAPEX to approximately […]. Assuming that this would stay the same, the savings […] would amount to […]% of the total CAPEX in 2016 to […]% in 2019. In terms of total shared cost, also including CAPEX, the assumed savings would amount to […]% in 2016 to […]% in 2019. In particular in the medium-term, these reductions of costs would be […].

(1535) In addition, higher cost for future network improvements will make them less attractive to BT/EE. The Commission notes that BT/EE and the Notifying Party submitted different views on the amount of current and likely future cost sharing.[1361] BT/EE estimates that […] would be shared with Three.[1362] Additional cost-savings would have been expected from BT/EE for […]. Furthermore, absent the Transaction, BT/EE would have expected, based on public announcements of the CEO of Three, that […].

(1536) Even though the Notifying Party disputes that there would have been significant future cost savings absent the Transaction, already the expection by BT/EE of being able to share some of the cost of network improvements with its network sharing partner might influence the incentives of BT/EE to invest. […]. Even the prospect of potential future cost sharing would have an impact of the assessment whether investments are economically feasible or not.

(1537) BT/EE has a larger customer base than Three. For BT/EE, certain investment may therefore be economically feasible at an earlier point in time than for Three.

1360 […].
1361 See in particular Section 8.2.2.3 a.
1362 See recital (1458).

However, if Three would want to make a similar investment at a later date, it would do so within MBNL absent the Transaction. Once Three is considering such an investment, it would be in the best interest of Three to consider sharing the existing infrastructure already deployed by BT/EE. Even though the parties decided to roll-out the active LTE equipment independently from each other and to […], this is not necessarily a blueprint for any future investment. The Notifying Party itself pointed out that the LTE deployment was strongly influenced by the fact that EE was allowed to refarm spectrum and thus to deploy LTE ahead of any other MNO.

(1538) Taking together all these cost elements, the Commission considers that BT/EE will likely incur or least expect higher cost for certain network investments. This is likely to negatively affect investment decisions. In addition, BT/EE will likely incur higher operating expenditures. Together, these higher cost will make certain investments unprofitable that otherwise would have been expected by BT/EE to be profitable.

(1539) As to BT/EE's ability to invest, the Commission notes that all MNOs are currently constantly investing in their networks to be able to make a competitive offer to customers. As network quality is of significant importance to compete within the mobile market in the United Kingdom, all MNOs are constantly investing to cope with growing consumer demands and with technological evolvements. Significant delays or even the frustration of a number of such investments in several areas and over a prolonged period of time would therefore have significant impact on BT/EE's network quality. At least in the short to medium term, BT/EE would not be able to address such decrease by investments outside of MBNL as there currently is no alternative to a nationwide macro site network to provide mobile services. Other than the MBNL sites, BT/EE would be unable to gain access to sufficient other sites in all of the United Kingdom to compensate for the MBNL sites. The unilateral sites of BT/EE are insufficient to replace MBNL as basic grid.

(1540) In this regard, the Commission notes that the Notifying Party itself states that the ability to make unilateral deployments is *"a key means of competitive differentiation"*. The Notifying Party argues that the partners of the MBNL agreements are well-advised and sophisticated competitors that would not have knowingly agreed on a process for unilateral deployments that is unworkable despite their importance.[1363]

(1541) However, the Commission considers that the situation is very different for as long as both network sharing partners rely on MBNL and thus have a joint interest in an effective and efficient process for unilateral deployments. The event that changes the mutual co-dependence on this process was not foreseen when entering into MBNL.

(1542) For these reasons, the Commission concludes that an inability to make unilateral investments in MBNL would significantly affect the network quality of BT/EE. All MNOs, the result of the Survey as well as the responses to the market investigation clearly indicate that network quality is one of the most important parameters of competition.[1364] Therefore, this degradation of network quality is likely to harm the current BT/EE customers as well as the competitive constraints exercised by BT/EE on its competitors.

(1543) For the assessment of the argument of the Notifying Party that the Commission fails to take into account the ability of BT/EE to delay or frustrate unilateral deployments

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[1363] Reply to the Letter of Facts of 23 March 2016, paragraph 22.
[1364] See recital (1246).

of Three absent the Transaction, the Commission takes into account that the current situation within MBNL is very different to the one that would be created by the Transaction. Whereas BT/EE currently has approximately […] sites outside of MBNL[1365], Three has access to approximately […] of those sites and BT/EE is obliged to grant access to another […] sites. Based on these numbers, the current difference in available sites amounts to […] sites for BT/EE and […] sites for Three. Once BT/EE has granted access to all […] so called "free carrier sites" under the T-Mobile/ Orange commitments, the difference will be reduced to […] sites out of […] sites.

(1544) Following the Transaction, the merged entity would, to the contrary, have access to all […] MBNL sites, all […] Beacon sites and the free carrier sites – a total of […] sites. Compared to the […] sites available to BT/EE, it is quite clear that the two situations are not the same. Furthermore, the additional sites of BT/EE do not constitute a nationwide network on which BT/EE could rely instead of MBNL whereas the Beacon sites are exactly that. Therefore, the situation following the Transaction cannot be compared to the situation following the Transaction.

(1545) The Commission further notes that Ofcom considers that there is a material risk that BT/EE would face higher costs, have less incentive to invest, and would act as less of a competitive constraint on Three and Vodafone than would be the case absent the Transaction.[1366]

(1546) Taking into account the potential factors that are likely to impede the competitive position of BT/EE, namely increased costs for maintaining the existing network, increased cost for future network improvements, a degradation of network quality and the delay and/ or frustration of network investments, the Commission considers that in particular the harm caused by potential delays or frustration of unilateral investments in MBNL is likely to decrease the network quality of BT/EE and therefore to severely harm the ability of BT/EE to compete. This harm to BT/EE's ability to compete is further aggravated by the sum of increased costs BT/EE is likely to face for current and future infrastructure following the implementation of the [Plan A].

ii. Effects of the [Plan A] on competition by Vodafone

<u>Notifying Party's view</u>

(1547) The Notifying Party underlines that the merged entity will have a strong incentive to commit to the CTIL network sharing arrangement under the [Plan A] as it plans to […].

(1548) The Notifying Party states that the allegations that the merged entity could degrade the CTIL network by investing as little as possible have no basis in fact. Instead, Vodafone would enjoy greater flexibility to take independent action to avoid facing any network degradation.[1367] Any investment requirements of Vodafone following the Transaction would have to take into account Vodafone's financial strength and would have to be compared to the investments required absent the Transaction,

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1365 […].

1366 Ofcom's further submission on network sharing, 20 March 2016, paragraphs 1.37 and 1.38 (provided with the Letter of Facts of 23 March 2016).

1367 Reply to the Article 6(1)(c) Decision, paragraph 464 [ID2323].

including investments likely needed to keep up with the predicted growth of data traffic in the United Kingdom.[1368]

(1549) As to the risk of congesting the Beacon network, the Notifying Party submits that the [Plan A] does only provide for […]. This would […] and would likely have only an insignificant impact on […].[1369] In addition to the significant time it would take to […], it would not be feasible for the merged entity to seek to […] as this would degrade the quality of service experienced by Three and O2 customers which would not be in the interest of the merged entity.[1370]

Commission's assessment

(1550) The Notifying Party provided Vodafone with a proposal for the future of the Beacon network sharing arrangements after the Transaction in October 2015. The Commission understands that this proposal is based on the [Plan A] of the Notifying Party.

(1551) Vodafone and Three are negotiating an agreement to address the concerns of Vodafone regarding the implementation of the [Plan A]. These negotiations have not resulted in an agreement as of the date of this Decision. The Notifying Party submitted to the Commission that Vodafone *"does not have concerns about the technical impact of Hutchison's network plans and that its concerns are purely commercial in nature".*[1371]

(1552) Vodafone submits that […].[1372] Vodafone further states that […].[1373]

(1553) In assessing the impact of an implementation of the [Plan A] on the competitive position of Vodafone, the Commission takes the view that the need to reach an agreement with Vodafone does not, in itself, preclude harm to the competitive position of Vodafone. However, a potential harm based on the [Plan A] as modified by an agreement with Vodafone could only be assessed on the basis of an actual agreement between Vodafone and the merged entity. As in the present case no agreement has been reached between these parties, the Commission considers that Vodafone is likely to ensure that the [Plan A] will not have a significant adverse impact on its competitive position because […].

(1554) For this reason, the Commission concludes that the [Plan A] is unlikely to have a negative impact on competition by Vodafone. The Commission notes, however, that this conclusion is premised on the assumption that Vodafone will enter into an agreement with the Notifying Party that offers sufficient protection to prevent harm to Vodafone's competitive position.

iii. Effects of the [Plan A] on overall network investments

Notifying Party's view

(1555) The Notifying Party claims that under the [Plan A] each of Vodafone, BT/EE and the merged entity will have the ability to differentiate their respective networks as there will be […] than before.[1374] Vodafone and BT/EE will continue to be strongly

1368 Reply to the Article 6(1)(c) Decision, paragraph 464 [ID2323].
1369 Reply to the Article 6(1)(c) Decision, paragraph 478 [ID2323].
1370 Reply to the Article 6(1)(c) Decision, paragraphs 480 and 483 [ID2323].
1371 Form RM dated 6 April 2016, paragraph 282.
1372 Vodafone's response to RFI 59, paragraph 2.6 (i) [ID3147].
1373 Vodafone's response to RFI 59, paragraph 2.6 (iii) [ID3147].
1374 Reply to the Article 6(1)(c) Decision, paragraph 454 [ID2323].

incentivised to compete on network quality by their own, independent networks.[1375] Any decrease of investments in network quality by the merged entity would face the risk that BT/EE and Vodafone would continue to invest and thus attract customers away from the merged entity, in particular since they will face stronger competition from the merged entity.[1376]

Commission's assessment

(1556) In Section 8.2.2.2.c) three factors have been discussed that could lead to an overall decrease in industry-wide investments following the Transaction. With regard to a potential increase of transparency, the Commission notes that the [Plan A] could increase transparency to some extent.

(1557) Under the [Plan A], the merged entity would have visibility as to the planned investments of BT/EE. As outlined in recitals (1502) et seq., any unilateral deployment requires […]. Such notification has to include according to […], inter alia, […] as well as […]. […].

(1558) The Commission considers that […]. The firewalls that are currently in place cannot prevent the representatives of the merged entity from sharing sensitive information with other persons within the merged entity. This information would allow the merged entity to consider whether or not it will react. If the merged entity were to gain such knowledge and were to decide that it will also deploy such technology, it would likely deploy it on the CTIL network sites.

(1559) The Commission understands that it is not clear under the Beacon agreement, how […]. However, it seems likely that there will be some procedures that will provide for a certain visibility of planned investments.[1377] Under such procedures, Vodafone would also be made aware of the upcoming deployment of the respective technology and decide whether or not to also invest.

(1560) In the opposite case that BT/EE were to decide to implement a certain technology, the merged entity would know such plan as well since BT/EE needs to […]. Again, the merged entity could then decide whether to deploy such technology itself. Since such deployment would likely take place on the Beacon sites […], Vodafone would become aware that the merged entity plans to implement the respective technology itself. Therefore, until this occurs, Vodafone could reach the conclusion that the technology will not be implemented by either BT/EE or the merged entity based on the assumption that the merged entity, as explained in this Recital, would know of respective plans of BT/EE and would start deploying such technology itself once BT/EE would plan to deploy it. This "comfort" could cause Vodafone not to deploy such technology itself until the merged entity starts doing so.

(1561) While this chain thus ultimately provides Vodafone with a visibility of certain network investments by BT/EE and the merged entity, it is, however, unlikely to function the other way around and to provide a similar visibility to BT/EE. While the merged entity would be likely to gain knowledge of any deployment plans of Vodafone under the revised Beacon agreements, the merged entity would most likely start deploying such technology on the Beacon sites […]. Therefore, BT/EE could

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[1375] Reply to the Article 6(1)(c) Decision, paragraph 455 [ID2323].

[1376] Reply to the Article 6(1)(c) Decision, paragraph 456 [ID2323].

[1377] The Commission notes that the current procedures in the Beacon arrangements provide for even greater transparency between the network sharing partners as each operator will likely deploy the unilateral demand of the other operator in its own region.

not draw conclusion about an upcoming technological deployment from the behaviour of the merged entity within MBNL.

(1562) For these reasons, the Commission finds that the situation arising under the [Plan A] as presented by the Notifying Party will likely increase the visibility of investments by other MNOs in the market. However, this visibility is unlikely to reach a point where it will incentivise all competitors to delay investments. Therefore, it may reduce the incentives of the merged entity and of Vodafone to invest but not the ones of BT/EE. Overall, the Commission therefore concludes that the implementation of the [Plan A] is not likely to have a significant negative effect on industry-wide network investments.

(1563) The Commission notes that this assessment could lead to different conclusion on the effect of the [Plan A] on industry-wide investments if the plan would have been modified by an agreement with Vodafone. For example, such agreement between two of the remaining three competing MNOs could have protected the financial interests of Vodafone but could have caused harm to consumers by reducing overall network investments.

iv. No commitment to implement the [Plan A] as submitted

(1564) The assessment of the [Plan A] is premised on the assumption that the plan will be implemented as submitted by the Notifying Party. The Commission notes, however, that the [Plan A] does not provide for a firm commitment of the merged entity to actually implement the plan as envisaged. Absent such commitment, the merged entity could decide to alter its plan at any time.

(1565) Even though a radical shift seems unlikely once agreements involving significant commercial obligations of the merged entity have been reached, in particular with Vodafone concerning the amendments to the Beacon agreements, even small changes might influence elements of the competitive assessment of the resulting network sharing situation.

(1566) Furthermore, an agreement with Vodafone could itself provide for relevant changes to the [Plan A]. Such changes could cause further harm to the competitive position of BT/EE, could give rise to the finding of harm to the competitive position of Vodafone or could give rise to the finding of harm due to lower industry-wide investments.

v. Conclusion on the [Plan A]

(1567) If it were implemented as submitted by the Notifying Party, the [Plan A] presented by the Notifying Party would have a severe negative impact on the competitive position of BT/EE by likely increasing BT/EE's cost to maintain the MBNL network, by increasing BT/EE's costs to improve MBNL, by degrading MBNL network quality and, most importantly, by delaying or frustrating investments by BT/EE. Such reduced competitive pressure is likely to lead to a significant impediment of effective competition in an oligopolistic market featuring a limited number of players and high barriers to entry.

c) Assessment of the [Plan B]

i. Effects of the [Plan B] on competition by BT/EE

(1568) The Commission notes that the Notifying Party regarded the description of the [Plan B] as confidential towards BT/EE. Therefore, BT/EE has not been able to comment on the effects of the [Plan B] on the basis of a detailed understanding of such plan. Instead, BT/EE provided the Commission with different scenarios that, in the view of

BT/EE, describe different possible network consolidation options of the merged entity.

(1569) One of these scenarios is called *"long-term partial sharing"*. BT/EE describes this scenario as a situation in which the merged entity […]. BT/EE further explains that […].[1378]

(1570) The [Plan B] provides for a long-term involvement in both network sharing arrangements and therefore corresponds to this scenario assumed by BT/EE. It addition, it is a mixture of the two variants of this scenario which BT/EE regarded as most likely. In the [Area 1], […]. In the [Area 2], the [Plan B] is […].

Notifying Party's view

(1571) The arguments presented by the Notifying Party concerning a potential impact of the [Plan A] on competition from BT/EE also relate to the [Plan B].

(1572) Specifically relating to the position of BT/EE under the [Plan B], the Notifying Party submits that the merged entity will continue to engage in passive sharing with BT/EE on […]% of all MBNL sites under the [Plan B].[1379] The merged entity would further be subject to severe contractual consequences for failure to meet the terms of the MBNL agreement, in particular for failure to […]. Therefore, the merged entity would have no incentive to undermine the MBNL site grid.

(1573) Furthermore, the Notifying Party argues that […].[1380] Even if the merged entity would not meet its funding obligations under the MBNL agreements, BT/EE would be able to compete effectively due to their significant commercial strength and strong market share.[1381]

(1574) For these reasons, the Notifying Party considers it apparent that there is no basis for assuming that the merged entity would run down or terminate the MBNL agreements or *"cherry pick"* or rationalise its maintenance investments across the two shared networks. Therefore, according to the Notifying Party, the competitive position of BT/EE would not be harmed.[1382]

Commission's assessment

Misalignment of interests between BT/EE and the merged entity

(1575) The Commission considers that under the [Plan B], the interests of BT/EE and the merged entity would be misaligned, even though to an extent below the level of misalignment under the [Plan A].

(1576) In the [Area 1], the situation will be as discussed for the [Plan A]. BT/EE will continue to depend on the entire MBNL grid to provide mobile services to its customers while the merged entity will […]. This difference in usage and dependency on the MBNL sites will inevitably lead to different interests going forward concerning MBNL in the [Area 1].

(1577) In the [Area 2], however, the merged entity plans to […]. Both parties to MBNL will rely on these sites for providing mobile services to their customers. However, with its

1378 […].
1379 Reply to the Article 6(1)(c) Decision, paragraph 475 [ID2323].
1380 Reply to the Article 6(1)(c) Decision, paragraph 475 [ID2323].
1381 Reply to the Article 6(1)(c) Decision, paragraph 476 [ID2323].
1382 Reply to the Article 6(1)(c) Decision, paragraph 477 [ID2323].

access to the additional CTIL sites, the merged entity might have different interests when it comes to installing new sites to increase coverage or capacity. Also, the merged entity will not be obliged to […]. It might […]. Therefore, the Commission considers that even in the [Area 2], the interests between the merged entity and BT/EE will not be as aligned as absent the Transaction.

(1578) Overall, the Commission concludes that the interests of BT/EE and the merged entity would be misaligned. How the two different situations in the [Area 1] and in the [Area 2] play out with regard to the individual elements of a potential harm that might undermine BT/EE's competitive position will be discussed below.

Increased costs of maintaining the current network

(1579) In the assessment of the [Plan A], the Commission concluded that the merged entity would have the ability to decrease the amount of shared cost under the MBNL agreements. This could occur by either utilising leeway in interpreting the […] after […] or by forcing BT/EE to accept an overall reduction of cost sharing.

(1580) Taking the specific situation under the [Plan B] into account, the Commission considers it unlikely that the merged entity might be incentivised to force BT/EE to accept changes to the MBNL arrangements demanded unilaterally by the merged entity. As the merged entity will depend on MBNL sites in […], it could not afford an overall degradation of MBNL during an open fight with BT/EE over such amendments.

(1581) However, the Commission considers it still likely that the merged entity might try using […] and […] to reduce its commitment to share the cost of sites that it does not utilise or of the shared 3G network that is does neither use.

(1582) Therefore, the Commission considers that BT/EE is likely to incur increased costs under the [Plan B] for maintaining the current network.

Increased costs of network improvements

(1583) As to future network investments, BT submits that […].[1383] […].[1384]

(1584) The Commission considers that it needs to be differentiated between the [Area 1] and the [Area 2] also with regard to this issue. In the [Area 1] where the merged entity aims to […], the situation is as discussed for the [Plan A]. The merged entity will have no or minimal interests in sharing costs of new investments that Three would have been likely to share absent the Transaction.

(1585) To the contrary, in the [Area 2], the merged entity is likely to share certain costs with BT/EE. This is likely to be the case when preparing MBNL sites for the deployment of new technologies or to utilise additional spectrum available to both parties. In particular regarding roll-out of 4G in the [Area 2] under the [Plan B], the Notifying Party stated that […].[1385] Given […], it might, however, not be incentivised to share investments in additional sites that it might have shared absent the Transaction.

(1586) The Commission therefore concludes that BT/EE is likely to incur higher costs for network improvements under the [Plan B]. These higher costs relate in particular to investments in the [Area 1] but also, to a lesser degree, to investments in the [Area 2].

1383 BT's Submission on Network Sharing, paragraph 3.22 (a) [ID3771].

1384 BT's Submission on Network Sharing, paragraph 3.22 (e) [ID3771].

1385 Annex 2 to Three's response to RFI 64, paragraph 24.

Degradation of Network Quality

(1587) The Commission considers that the merged entity would have no incentive to degrade the quality of the MBNL network in the [Area 2] where it will use MBNL sites for […]. Even though the merged entity might be less dependent on specific MBNL sites in case a CTIL site is located nearby, overall the incentives of the merged entity and BT/EE would be aligned in maintaining the network quality of MBNL in the [Area 2].

(1588) In the [Area 1], the merged entity would have no such incentives. To the extent possible without disrupting the effective operation of MBNL, the merged entity could try to degrade the MBNL network in the [Area 1] as described under the [Plan A].

(1589) In this context, the Commission notes that following the acquisition of EE by BT, the merged entity will […]. […] in the [Area 2] to the expense of network quality in the [Area 1].

(1590) Also BT/EE submits that […].[1386]

(1591) Based on the above, the Commission concludes that the merged entity would be able and incentivised to degrade the quality of certain elements of the MBNL network, mainly those located in the [Area 1].

Delaying or frustrating unilateral investments in MBNL

(1592) The ability to delay or frustrate unilateral investments of BT/EE in MBNL remains largely unchanged under the [Plan B] compared to the [Plan A]. However, the Commission considers it likely that the incentive of the merged entity to pursue such strategy is significantly lower under the [Plan B].

(1593) Under the [Plan B], the merged entity depends on MBNL sites in […] and thus on the reasonable cooperation of BT/EE. If it were to obstruct unilateral deployments by BT/EE, it stands to risk being able to undertake similar deployments as well. The fact that the merged entity will only utilise MBNL in the [Area 2] would not reduce significantly opportunities for BT/EE to retaliate for uncooperative behaviour in the [Area 1] as long as […].

(1594) Therefore, the Commission considers that the merged entity will be unlikely to have the incentive to significantly delay or frustrate unilateral investments by BT/EE under the [Plan B].

Congestion of MBNL

(1595) As the Notifying Party envisages under the [Plan B] to […] and to […][1387], the […] will not affect the shared 3G network.

(1596) However, BT/EE submits that […].[1388] […].[1389]

(1597) In comparing the situation of BT/EE in the [Area 2] under the [Plan B] with the position of Vodafone under the [Plan A], the Commission notes that Vodafone would need to consent to changes in the Beacon arrangements to allow for the [Plan A] to be implemented. Such mitigating factor for concerns relating to a potential

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1386 […].

1387 Annex 2 to Three's response to RFI 64, paragraph 22 (a) [ID2338].

1388 […].

1389 […].

congestion is not present here as the merged entity would not be required to agree with BT/EE on amendments of the MBNL agreements to implement the [Plan B]. Even though the merged entity would neither have an incentive to experience congestion for the existing and the new customers on the consolidated network, the merged entity might not only take into account the potential harm of congestions for its own customers but also other interests involved in the migration, like, for example, a swift migration of customers at a given point in time.

(1598) In addition, the Commission notes that Three itself seemed to have been concerned that the network integration following the T-Mobile/ Orange merger could cause congestion on MBNL sites. […].[1390]

(1599) Therefore, the Commission considers that the migration of customers to the MBNL network might cause congestion and thus a deterioration of the network quality at least during a transition period.

Harm to BT/EE's competitive position

(1600) Overall, several factors might have a significant adverse effect on BT/EE’s competitive position under the [Plan B]. The Commission considers that BT/EE is likely to face higher cost for maintaining and improving its network. In addition, BT/EE’s competitive position might be impaired by a deterioration of network quality in the [Area 1] as well as, during a transition period, from congestion in the [Area 2].

(1601) The likely increase in cost will affect the ability and incentives of BT/EE to compete. However, compared to the effects of an implementation of the [Plan A], these effects are likely to be more limited. While the merged entity is unlikely to share the cost of any additional sites, given its access to the combined sites of MBNL and Beacon, cost sharing of certain investments in the [Area 2] seems likely. Similarly, the degree to which the merged entity can be expected to decrease its involvement in MBNL is smaller.

(1602) In conclusion, the Commission finds that the implementation of the [Plan B] as presented by the Notifying Party will harm the competitive position of BT/EE as BT/EE is likely to incur higher cost for maintaining its current network as well as for investing in the network and could suffer from a deterioration of network quality in the [Area 1] as well as, during a transition period, from congestion in the [Area 2].

ii. Effects of the [Plan B] on competition by Vodafone

(1603) The Commission notes that the Notifying Party regarded the description of the [Plan B] as confidential towards Vodafone. Therefore, Vodafone has not been able to comment on the effects of the [Plan B] on the basis of a detailed understanding of such plan. Instead, Vodafone provided the Commission with different scenarios that, in the view of Vodafone, describe different possible network consolidation options of the merged entity.

(1604) The [Plan B] is […]. In the [Area 1], it is similar to the scenario assuming that […]. In the [Area 2], the [Plan B] is similar the scenario that the merged entity will […].

[1390] Clause 3.5 (c) of the Godiva Variation and National Roaming Variation Agreement.

Misalignment of interests between Vodafone and the merged entity

Notifying Party's view

(1605) The Notifying Party argues that […].[1391] The Notifying Party claims that […].[1392]

(1606) In the Reply to the Statement of Objections, the Notifying Party argues that there will be continued mutual co-dependence between O2 and Vodafone after the implementation of the Transaction because network consolidation will not start until […] and even after consolidation, the merged entity will use […] CTIL sites under the [Plan B]. These sites would be needed to […]. In addition, the merged entity would have to rely on Beacon for […].[1393]

(1607) In addition, the Notifying Party argues that presuming that the continuation of Beacon absent the Transaction would be a more competitive situation than the one following the Transaction would constitute a fundamental analytical flaw as the Transaction would lead to greater differentiation and network independence.[1394]

(1608) The Notifying Party further claims that such approach would be inconsistent with the Commission's approach in the case 38.369, T-Mobile Deutschland/ O2 Germany dated 16 July 2003 in which it concluded that a site sharing and national roaming agreement between O2 Germany and T-Mobile raised concerns under Article 101 TFEU. According to the Notifying Party, only the findings that the agreement did not limit the parties commercial freedom to engage in site sharing with third parties and that both parties plan to continue actively sharing sites with third parties and that the parties retain independent control over their radio planning and freedom to add sites to increase network coverage and capacity motivated the Commission not to conclude that the arrangement had an appreciable adverse effect on competition.[1395] The Notifying Party argues that the Commission should not […] an agreement that includes elements that have been considered as restricting the commercial freedom of an operator in another case.[1396]

(1609) The Notifying Party underlines that under the [Plan A] and the [Plan B], there would be three different mobile networks in the United Kingdom. Therefore, the Transaction would reduce coordination, introduce greater competition and allow the merged entity to compete effectively.[1397]

Commission's assessment

(1610) The Commission considers that the interests of Vodafone and the merged entity would be […] misaligned following the Transaction and the implementation of the [Plan B].

(1611) The Commission notes the submission by Vodafone that […].[1398] Vodafone points out in particular that […].[1399] According to Vodafone, […].[1400]

1391 Reply to the Article 6(1)(c) Decision, paragraph 439.
1392 Reply to the Article 6(1)(c) Decision, paragraph 439.
1393 Reply to the Statement of Objections, paragraphs 716 – 717.
1394 Reply to the Statement of Objections, paragraphs 694 – 696.
1395 Reply to the Statement of Objections, paragraph 697.
1396 Reply to the Statement of Objections, paragraph 698.
1397 Reply to the Statement of Objections, paragraph 701.
1398 Vodafone's response to RFI 97, paragraph 1.3 (A) [ID5535]; Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 1.2 (A) [ID5536].
1399 Vodafone's response to RFI 97, paragraph 1.3 (A [ID5535].

(1612) After […], Vodafone and the merged entity would likely […]. However, the degree to which they will depend on the CTIL network will vary in the [Area 1] and in the [Area 2].

(1613) In the [Area 1], both parties will […]. The merged entity will, however, have access to all MBNL sites in that region as well. The merged entity could decide to use certain MBNL sites instead of nearby CTIL sites. In such a case, the merged entity would not have an interest to maintain or upgrade such site anymore. Therefore, the incentives between the merged entity and Vodafone are even in the [Area 1] less aligned than absent the Transaction.

(1614) In the [Area 2], the merged entity plans to […]. Assuming that […][1401], it would use approximately […] CTIL sites in the [Area 2] to […].

(1615) In this region, the interests of Vodafone and the merged entity will be misaligned. Similar to the misalignment of interests of BT/EE and the merged entity discussed under the [Plan A], the merged entity will have no incentive to expand the CTIL network in the [Area 2] or to invest at all in the sites it discontinues to use and will have only limited incentives to invest in the sites it uses […]. To the contrary, Vodafone will depend on the CTIL network to deliver mobile services to its customers. It will have every incentive to maintain and upgrade this network to keep up with technological evolution and consumer demand.

(1616) Therefore, the Commission considers that the interests of the parties to the CTIL agreement would be significantly misaligned in the [Area 2] as well as, to a lower degree, in the [Area 1].

(1617) Overall, despite the plan of the Notifying Party to continue using […] sites out of the total of […] Beacon sites, the relevance of in particular […] sites in the [Area 2] for the network of the merged entity will be significantly reduced. Regarding these sites, the merged entity would be less dependent on Beacon than Vodafone. Whereas Vodafone would need to be able to fully rely on all Beacon sites for providing and improving its service offer to customers, the merged entity would mainly rely on MBNL sites in the [Area 2]. Even if 2G would still play an important role in a couple years, the merged entity would not have to rely on an effective functioning of CTIL for further improving such services as the currently installed equipment can be expected to be sufficient for future usage. Vodafone, however, would be dependent on a proper functioning of CTIL for constantly upgrading its 4G network.

Increased costs of maintaining the current network

(1618) As to potential cost increases stemming from maintaining the current network, the Commission first notes that following […], Vodafone will […] a network in the [Area 1] […]. Within […] following […], Vodafone would be obliged to […].

(1619) The Commission considers it as evident that this process would require very substantial investments of Vodafone to […] following […]. While the Parties point out that […] is more expensive than […] and that therefore […][1402], the Commission considers that […] would require significant investments by Vodafone, and would

1400 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 1.2 [ID5536].
1401 See recital (1383).
1402 Annex 15 to the Form CO, page 11.

likely result in a deterioration of its competitive position with adverse effects on consumers.

(1620) As discussed in Section 8.2.2.3.b), these costs would not occur absent the Transaction as […]. […]. Even though the Parties are correct to point out that […], such […] would, in the view of the Commission, be unlikely to occur absent the Transaction. Therefore, these costs will only be incurred as a consequence of the Transaction as implemented under the [Plan B].

(1621) Vodafone submits that it would have to incur […] of GBP […] to […]. This would translate in an additional cost of GBP […] over […].[1403] The size of this addition cost is significant. In […], […] and O2 quoted a press release by EE in 2010 stating that the CAPEX savings EE expects to realise over ten years under MBNL amount to GBP 700 million.[1404]

(1622) Concerning potential benefit of being able to […] in the [Area 2] […], Vodafone states that […].[1405] Considering that […], the Commission takes the view that savings achievable by […] would be limited.

(1623) As discussed below under the degradation of network quality, Vodafone might decide to avoid some of the cost by […]. If the merged entity would […], Vodafone submitted that it would consider […].[1406] […]. Nevertheless, even taking […] into account, the Commission considers that […].

(1624) The Notifying Party pointed out that Vodafone will benefit under the [Plan B] from deferred investments in the [Area 2] as Vodafone will be able to […]. While the Commission considers this statement to be true, the amount of these savings will, however, be very limited as […]. The deferral of these investments will be in no way comparable to the amount of investments required for […].

(1625) Furthermore, Vodafone will also incur higher ongoing cost for maintaining and operating its network under the [Plan B] compared to the likely situation absent the Transaction.[1407] The Commission notes that, assuming […], Vodafone estimates that […]. The main factors for this increase are […], […] and […].[1408]

(1626) In addition, Vodafone submits that, […].[1409] This will likely result in […], further increasing […] for […] and for […].

(1627) Finally, Vodafone would incur higher cost under the […]. Vodafone will have to […]. To the extent the operational costs of CTIL increase because of […], Vodafone will also be required to pay […]% of such additional costs.

<u>Increased costs of network improvements</u>

(1628) Under the [Plan B], the merged entity would […]. In the [Area 1], where […], the merged entity will have incentives to continue investing in these sites. In the

1403 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.10 [ID5536].

1404 […].

1405 Vodafone's response to RFI 97, paragraph 16.2 [ID5535].

1406 Vodafone's letter on Network Sharing, Annex I, 18 December 2015, paragraph 1.4 [ID4206].

1407 See also Annex 15 to the Form CO, page 11.

1408 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.8 [ID5536].

1409 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.3 (A)(ii) [ID5536].

[Area 2], however, it might only be incentivised to share specific investments relating to some, but not all sites.

(1629) Compared to the situation absent the Transaction, Vodafone would have a network sharing partner that is less dependent upon the CTIL network and less willing to share investments. In particular taking into account that absent the Transaction, the parties are likely to […] and thus would have shared also investments relating to […] Vodafone is very likely to have to undertake significant investments unilaterally that would have been shared absent the Transaction. Therefore, Vodafone is likely to incur higher costs for network improvements.

<u>Degradation of network quality</u>

Notifying Party's view

(1630) The Notifying Party states that […]. In particular, Vodafone would be able to […].[1410]

(1631) The Notifying Party further claims that it will be strongly incentivised to complete the CTIL roll-out as planned to achieve the post-Transaction plans for the merged entity. Otherwise, it would […].[1411] […].[1412]

(1632) The Notifying Party underlines that the Beacon agreements provide for […].[1413] If the merged entity were to "run down" the Beacon network, Vodafone would have the right to […].[1414]

(1633) Furthermore, after […], Vodafone would benefit from […] in the [Area 2], whereas the merged entity would need to […] in this region.[1415]

(1634) In its Reply to the Statement of Objections, the Notifying Party submits that the Beacon arrangements contain […] to ensure that the merged entity would not be able to undermine Vodafone's position. These would in particular include an obligation of O2 to […].[1416] The Notifying Party points out that the Beacon arrangements provide for […].[1417]

Commission's assessment

(1635) As the Beacon network is still being rolled-out, it is particularly vulnerable to a degradation of quality in case one of the two network sharing partners would not have an incentive to complete the Beacon roll-out as envisaged.

(1636) Under the Beacon arrangement, Vodafone is responsible for […] and O2 is responsible for […]. Therefore, any harm for Vodafone by delaying or frustrating the roll-out of Beacon would likely concern […]. According to Vodafone, the merged entity could […]. However, the Notifying Party envisages rolling-out Beacon […] as planned under the Beacon arrangements.

(1637) The merged entity might nevertheless be incentivised to deviate from such plan. In case a "non-Beaconised" CTIL site seems to be interchangeable with an MBNL site,

[1410] Annex 2 to Three's response to RFI 64, paragraph 34 [ID2338].
[1411] Reply to the Article 6(1)(c) Decision, paragraph 467 [ID2323].
[1412] Reply to the Article 6(1)(c) Decision, paragraph 468 [ID2323].
[1413] Reply to the Article 6(1)(c) Decision, paragraph 469 [ID2323].
[1414] Reply to the Article 6(1)(c) Decision, paragraph 470 [ID2323].
[1415] Reply to the Article 6(1)(c) Decision, paragraph 471 [ID2323].
[1416] Reply to the Statement of Objections, paragraph 705.
[1417] Reply to the Statement of Objections, paragraph 706.

the Notifying Party might not want to incur cost for rolling-out Beacon to such site as it has access to the MBNL site and will even have to pay for maintaining the MBNL site whether it is used by the merged entity or not.

(1638) However, the merged entity would need the Beacon network to provide mobile services […]. […].

(1639) The Commission further notes that the assumption under which the [Plan B] is assessed is that the Notifying Party will implement this plan as presented to the Commission. Additional harm resulting from any uncertainty as to its implementation will be discussed in Sections 8.2.2.4 c) iv. and 8.2.2.4 d). Therefore, the Commission considers a degradation of network quality by a delay or frustration of the roll-out of Beacon sites in the [Area 1] unlikely.

(1640) However, as already discussed under the cost for maintaining the Beacon network, following […], Vodafone will be likely to re-evaluate […].[1418] Vodafone will be faced with the decision to either […] or to […]. Asked specifically for the consequences of […], Vodafone submits that it would […] as a result of weighting the increased cost for operating its network against the disadvantages of […].[1419]

(1641) This is not only stated by Vodafone but also the Parties submitted that it is likely that Vodafone might […] because Vodafone is not […].[1420]

(1642) According to Vodafone, Vodafone might […].[1421] […].[1422] Even though this statement by Vodafone was based on the assumption that the merged entity would […], a completion of the Beacon roll-out would not change the incentives of Vodafone to […] as in both cases, Vodafone would have to […].

(1643) According to a model of Vodafone, […]. […].[1423]

(1644) The Commission finds the underlying assumption of the model to be realistic, that if […], Vodafone is likely to […]. Even though the model presented by Vodafone might be influenced by the interests of Vodafone in the outcome of the investigation by the Commission, the Commission notes that it presents […] of the benefits of Beacon presented by O2 and Vodafone to Ofcom in 2012. According to […] the network sharing will, inter alia, make […].[1424] […]. Therefore, the Commission considers it as likely that […].

(1645) The Commission considers that […] constitutes a significant deterioration of network quality. Offering […] in a market in which all other MNOs are likely to […][1425] will significantly reduce the competitiveness of tariffs offered by Vodafone. It is likely to result in Vodafone not being able to compete effectively for individual subscriptions,

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1418 Vodafone's letter on Network Sharing, Annex I, 18 December 2015, paragraph 1.4 [ID4206].

1419 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 4.3 [ID5536]; Vodafone's letter, 10 March 2016, page 6 [ID5533].

1420 Annex 15 to the Form CO, page 11.

1421 Vodafone's letter on Network Sharing, Annex I, 18 December 2015, paragraph 1.5 [ID4206].

1422 Vodafone's letter on Network Sharing, Annex I, 18 December 2015, paragraph 1.8 [ID4206].

1423 Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraphs 4.6 and 4.7 [ID5536].

1424 As cited in Ofcom's further submission on network sharing, 20 March 2016, paragraph 1.19 (provided with the Letter of Facts of 23 March 2016).

1425 Vodafone submits that it would be the only MNO that would not offer 98% population coverage for 4G and points out that O2 is obliged to achieve such threshold, Vodafone's response to RFI 59, paragraph 6.10 [ID3147].

enterprise customers and certain large contracts that require […] as well as for wholesale contracts.[1426]

(1646) The Commission further notes the claim of Vodafone that […] following the Transaction. In the view of the Commission, in particular the need to […], could turn-out to take considerable time and lead to increased costs. In addition, considering the claim of Vodafone that it would neither have the ability nor the incentive to deploy additional capacity using 2100 MHz or 2600 MHz spectrum while […][1427], the Commission considers it likely that […] will at least negatively impact the speed and extent of other network improvements by Vodafone, and would likely result in a deterioration of Vodafone's competitive position with adverse effects on consumers.

(1647) Furthermore, Vodafone points out that […]. The Commission considers that it is therefore likely that, as claimed by Vodafone[1428], […]. The need for […][1429] will further complicate […] and make the process more time-consuming and burdensome.

(1648) Moreover, Vodafone estimates that […]. […].[1430] […].[1431]

(1649) The Commission finds it plausible that […] in the [Area 1] would cause temporary network outages […]. Given […], these outages could contribute to an overall lower perception of network quality.

(1650) In addition, due to the overarching importance of […] in the [Area 1] within […], the Commission considers it as likely that other network investments, like deploying additional frequencies or technologies like carrier aggregation[1432], will be delayed or reduced to […]. These consequences will further compound the negative impact of […] on the network quality of Vodafone.

(1651) The statements of Vodafone that the merged entity could […] seem not to constitute likely harmful scenarios under the [Plan B]. The merged entity will rely on the entire Beacon network for […] until […]. Even afterwards, the merged entity will use up to […]% of all Beacon sites for its own network. Therefore, it will not have an incentive to delay or frustrate investments of Vodafone into deploying Beacon in the [Area 2].

(1652) To conclude, the Commission considers that Vodafone would likely […] in the [Area 1] that would […] after […] to mitigate some of the investments required for […] in the [Area 1]. […]. These effects will be compounded by the likely disturbances during […] and delay of other network investments Vodafone would have undertaken if […].

<u>Delay or frustration of investments</u>

(1653) Concerns […] relating to the delay or frustration of the roll-out of the Beacon network as envisaged under the Beacon agreements have been addressed in the

1426 See Vodafone's response to RFI 59, paragraph 6.11 [ID3147].
1427 Vodafone's supplemental response to the network sharing section of the SO, paragraph 3.5 [ID5536].
1428 Vodafone's supplemental response to the network sharing section of the SO, paragraph 3.2 (B) [ID5536].
1429 Vodafone's supplemental response to the network sharing section of the SO, paragraph 3.3 (A)(i) [ID5536].
1430 Vodafone's supplemental response to the network sharing section of the SO, paragraph 3.4 [ID5536].
1431 Vodafone's letter to the Commission, 14 March 2016, page 8 [ID5534].
1432 See recital (2371).

previous recitals. Here, the Commission will assess whether Vodafone's competitive position might be impaired by a delay or frustration of future investments that have not been foreseen under the Beacon agreements.

(1654) For the period until […], both parties will be responsible for investments in their respective region. New investments not foreseen under the Beacon arrangements would need to […].

(1655) In terms of applying new features to the existing network sharing infrastructure on a national level, both MNOs depend on the cooperation of the respective other network sharing partner. Concerning new sites, the agreements provide for […].

(1656) Within this framework, the merged entity could block investments by Vodafone in network infrastructure in the [Area 1] at least until […]. However, given that the merged entity plans to use the CTIL network in the [Area 1] for […], the Commission considers that it would not have an incentive to delay or block any significant network improvements. In the [Area 2], Vodafone is […]. Any investments could be made as unilateral deployment without significant options of the merged entity to delay or frustrate such investments.

(1657) Therefore, the Commission considers that Vodafone's competitive position is not likely to be harmed by delayed or frustrated investments until […].

(1658) As to the situation after […], the Commission notes that […]. As such, it is difficult to assess whether the merged entity will be able to delay or frustrate future investments by Vodafone once […]. Considering the position of the two network sharing partners, the merged entity will be able to negotiate any agreement from a strong position as it […] and has access to many more sites than Vodafone. However, the merged entity will still be interested in reasonable working arrangement with Vodafone as partner in CTIL in order to ensure the efficient operation of its network in the [Area 1].

(1659) Therefore, any assumptions how this might influence the future CTIL governance seem rather speculative.

<u>Network congestion</u>

Notifying Party's view

(1660) In its Reply to the Statement of Objections, the Notifying Party argues that […] therefore is unlikely to have any impact on the network performance of Beacon. […].[1433]

Commission's assessment

(1661) Under the [Plan B] the merged entity […].[1434] According to the Notifying Party, […]. […].[1435] The Commission understands that in the [Area 1], the merged entity will be able to […].

(1662) Based on this description of the [Plan B], the Commission considers that the impact […] in the [Area 2]. In addition, as […], […].

(1663) In the [Area 1], […]. As explained by the Notifying Party in its description of the [Plan A], […].[1436] As of […][1437], […], the Beacon network in the [Area 1] would be

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[1433] Reply to the Statement of Objections, paragraph 718.
[1434] Annex 2 to Three's response to RFI 64, page 5 [ID2338].
[1435] Annex 2 to Three's response to RFI 64, paragraph 24 [ID2338].

likely to experience significant higher data traffic, taking in particular […] into account. The Commission notes in this regard that […].[1438]

(1664) The Commission considers that the merged entity would not be incentivised to have congestion impede the Beacon network quality in significant areas for a prolonged period of time. However, it cannot be excluded that due to other considerations like advertising roaming on O2's 4G network, the merged entity might be willing to accept some congestion that would not occur absent the Transaction. However, the Commission notes that in such case the Beacon agreements provide for […].

(1665) For these reasons, the statement of the Notifying Party that […] is not sufficient to exclude that […] might cause congestion in the [Area 1] also for Vodafone.

(1666) In the long-run, the two parties will […]. Congestion issues could only occur in relation to […]. As this becomes relevant only after […], and in certain areas even only in […], the Commission considers that both parties will be able to address and likely to avoid any congestion resulting from […].

(1667) Taking the above considerations into account and based on the high-level description plan of the implementation of the [Plan B] provided by the Notifying Party, the Commission concludes that there is a risk that the implementation of the [Plan B] leads to a congestion of the shared Beacon network in the [Area 1] during a transition period. Congestion would deteriorate the network quality of Vodafone and, given the importance of network quality to consumers, impair the competitive position of Vodafone.

<u>Harm to Vodafone's competitive position</u>

Notifying Party's view

(1668) The Notifying Party points out that under the [Plan B], Vodafone can continue to use all CTIL sites for unilateral investments in capability, coverage and capacity. Vodafone would have the opportunity to supplement its current capacity through […] without […].[1439]

(1669) Furthermore, […], which would defer future investments by Vodafone as it will have more capacity for its own customers without […] in the [Area 2].[1440]

(1670) In its Reply to the Statement of Objections, the Notifying Party claims that Vodafone would not be adversely affected after […]. […].[1441]

(1671) The Notifying Party points out that […]. […].[1442]

(1672) Moreover, the Notifying Party argues that increasing Vodafone's cost does not in and of itself constitute a significant impediment to effective competition. In order to draw such conclusion, the Commission would have the burden of proof to show the extent to which Vodafone's costs will be increased or why Vodafone would not be in a position to fund any necessary investment to […].[1443] Such burden of proof would in

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1436 Annex 1 to Three's response to RFI 64, paragraph 10 (c) [ID2337].
1437 Annex 2 to Three's response to RFI 64, paragraph 14 [ID2338].
1438 Form CO, Section 6, paragraph 242.
1439 Annex 2 to Three's response to RFI 64, paragraph 32 [ID2338].
1440 Annex 2 to Three's response to RFI 64, paragraph 33 [ID2338].
1441 Reply to the Statement of Objections, paragraph 708.
1442 Reply to the Statement of Objections, paragraphs 711 – 713.
1443 Reply to the Statement of Objections, paragraph 721.

particular be high because the merged entity envisages […].[1444] According to the merged entity, it can be assumed that Vodafone would not have entered into a contract that includes a provision that would expose it to fundamental damage to its position to compete effectively.[1445]

(1673) Furthermore, the Notifying Party argues that Vodafone would have the ability to undertake the necessary investments to […] because the additional cost would be modest and would have no impact on Vodafone's ability to compete. The Notifying Party points out that the additional CAPEX and OPEX […] would be affordable by a company of Vodafone's size and financial strength. Furthermore, Vodafone would benefit from […].[1446] The Notifying Party states that the operating profit of Vodafone in 2015 is largely due to the significant CAPEX under its multi-billion pound investment plan "Project Spring". Compared to the investments in the United Kingdom under this programme, the additional costs for […] would be very small.[1447] This would be further underlined by the fact that Vodafone itself has […].[1448] Moreover, as the additional costs would be fixed in nature, Vodafone would not pass them on to customers.[1449]

(1674) In addition, the Notifying Party submits that Vodafone will also be sufficiently incentivised to continue investing in its network due to increased competition after the Transaction. Project Spring would show that Vodafone has an incentive to compete on network quality. Therefore, and because […], the Notifying Party finds the submissions of Vodafone […] not credible.[1450]

(1675) Finally, the Notifying Party puts forward that Three and Vodafone have reached a broad agreement on the key technical elements of the [Plan A], including […]. The Notifying Party argues that therefore the concerns of Vodafone are purely commercial in nature and not based on any valid competition concerns.[1451]

(1676) In its Reply to the Letter of Facts of 23 March 2016, the Notifying Party submits that Vodafone will continue to be incentivised to invest in its network due to the importance of network quality.[1452] The submissions of Vodafone and Ofcom stating the contrary are regarded as unsubstantiated.[1453] On the CAPEX estimates of GBP […] by Vodafone, the Notifying Party notes that under Project Spring, Vodafone invested GBP 980 million in the United Kingdom in 2015.[1454]

(1677) In relation to Ofcom's calculations based on the MCT model, the Notifying Party raises the following arguments: (i) the approach is inconsistent with the Commission's quantitative analysis of unilateral effects, where the Commission has not taken account of incremental network costs; (ii) the model assumes that […] and therefore it cannot produce a credible estimate of the incremental cost savings for future capacity expansion; (iii) the MCT model was not built to estimate the impact

1444 Reply to the Statement of Objections, paragraphs 722 and 724.
1445 Reply to the Statement of Objections, paragraph 723.
1446 Reply to the Statement of Objections, paragraph 725.
1447 Reply to the Statement of Objections, paragraph 726.
1448 Reply to the Statement of Objections, paragraph 727.
1449 Reply to the Statement of Objections, paragraph 728.
1450 Reply to the Statement of Objections, paragraphs 729 and 730.
1451 Reply to the Statement of Objections, paragraphs 734 and 735.
1452 Reply to the Letter of Facts of 23 March 2016, paragraph 190.
1453 Reply to the Letter of Facts of 23 March 2016, paragraphs 190 and 191.
1454 Reply to the Letter of Facts of 23 March 2016, paragraph 192.

on incremental network costs of changes in network sharing agreements; (iv) the model focuses on call termination rather than data services; (v) the model is based on a hypothetical "efficient" operator and therefore the cost savings are a "best case" scenario; (vi) the model assumes that the sharing partners' interests are fully aligned and hence gives an upper bound to the potential cost savings from […]; (vii) the results are based on a weighted average of several technologies whereas the vast majority of current and forward looking investments would be in 4G; (viii) the model overestimates the impact of network sharing on incremental expenditures because the results are annualised cost based on an economic depreciation algorithm.[1455]

(1678) Furthermore, the Notifying Party claims that the cost savings of Vodafone due to the […] in the [Area 2] would amount to GBP […].[1456] According to the Notifying Party, any cost increases would in any case be fixed in nature and would therefore not be passed on to consumers.[1457]

Commission's assessment

(1679) Higher costs for an operator in themselves do not necessarily cause harm to competition. However, if they lead to fewer investments, to a decrease in the quality of services offered or if they would be passed on to consumers as higher prices, they decrease the competitive pressure of such operator on the market. As discussed in Recital (1247), higher incremental costs are likely to result in higher prices while higher fixed costs are likely to result in lower network quality. In case of oligopolistic markets with a limited number of operators, such loss of competitive pressure by one operator is highly likely to translate into an overall loss of competition on such market.

(1680) Regarding the arguments of the Notifying Party that the consequences of […] would "only" increase the cost of Vodafone, the Commission notes that the immediate consequence of […] is not only increased costs. Instead, the most direct consequence is that Vodafone, after […], will not have […].

(1681) If Vodafone decided to […], the consequences of […] – leaving aside for a moment the degradation of network quality during […] and the potential degradation following the delay of other network investments – would consist of higher cost for […]. However, while the cost arguments of the Notifying Party presuppose that Vodafone would make a decision to […], this is not the direct effect of […].

(1682) The Commission considers that before undertaking such investment, Vodafone will weigh the costs of […] with the impact on its position if it were to […]. Higher fixed costs for investments like […] can render investments unprofitable that would have been profitable if the costs were lower. Such considerations are reflected in a model that Vodafone submitted to the Commission (see Recital (1643). According to this model, […].

(1683) A degradation of network quality is thus not a consequence of a potential or claimed inability of Vodafone to make the investments required to […], but rather the result of an economic decision that has to be made as a consequence of […]. As such, the Notifying Party is incorrect to claim that the consequences of […] for Vodafone would "only" consist of increased costs for Vodafone.

1455 Reply to the Letter of Facts of 23 March 2016, paragraph 192 and Annex 9.1 to this reply.

1456 Reply to the Letter of Facts of 23 March 2016, paragraph 192.

1457 Reply to the Letter of Facts of 23 March 2016, paragraph 194.

(1684) Moreover, the argument of the Notifying Party that the financial position of Vodafone would allow Vodafone to incur higher costs resulting from the implementation of the [Plan B] would not contradict the finding of a harm to Vodafone's competitive position even if it were true. The Commission does not argue that the competitive position of Vodafone will decrease due to an inability to cope with increased costs. Instead, the Commission considers that it would be rational for Vodafone to decrease its network quality in response to an increase in network costs. Reduced network quality will result in lower competitive pressure exercised by Vodafone.

(1685) A decrease in network quality after […] seems rational taking into account the submissions of O2 and Vodafone when presenting the benefits of Beacon in general and of […] in particular to Ofcom. Ofcom explained that it carefully reviewed the efficiencies claimed in relation to Beacon in 2012. Ofcom concluded that the benefits of moving from passive to active sharing were significant. In particular, Ofcom considered that Beacon would […].[1458]

(1686) In the joint submission of Vodafone and Telefónica to Ofcom, the benefits of Beacon have been described to include increased coverage because of […].[1459] The report explains that […][1460] and that […].[1461]. The report concludes that […].[1462]

(1687) The Commission acknowledges that the situation following […] is not exactly the same as the alternative situation the "Benefits under Beacon" reports refers to. […]. Nevertheless, the Commission finds that the considerations submitted at the time Beacon was presented to Ofcom are still valid as each site which is actively shared produces lower costs to each sharing partner compared to the cost a partner must bear under passive sharing. Specifically, […].

Figure 119: Relative Site Costs Based on United Kingdom average costs

[…]

Source: Report Benefits under Beacon by Frontier Economics, dated June 2012, page 26 (submitted by Telefónica in response to RFI 110).

(1688) […].

(1689) These are exactly the costs Vodafone will have to take into account when deciding whether and where to […] after […]. Under the Beacon arrangements, […].[…]. Both costs […]. Therefore, coverage in areas which would be profitable with […] will possibly not be profitable […] – even if […].

(1690) Based on these considerations, the Commission considers it likely that Vodafone will […] than absent the Transaction. This will decrease the coverage of Vodafone's network and therefore its quality.

1458 Ofcom's further submission on network sharing, 20 March 2016, paragraph 1.17.

1459 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 1 (submitted by Telefónica in response to RFI 110).

1460 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 21 (submitted by Telefónica in response to RFI 110).

1461 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 24 (submitted by Telefónica in response to RFI 110).

1462 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 28 (submitted by Telefónica in response to RFI 110).

(1691) In addition to the long-term decrease in network quality, the implementation of the [Plan B] would result in a decrease of network quality during […]. Furthermore, the Commission considers it likely that the network quality will be further degraded by the delay of other network investments. The "Benefits under Beacon" report explains that […].[1463]

(1692) The Commission acknowledges that […]. However, the relevant comparison for the assessment of the present case would be […] as discussed in Section 8.2.2.3. Even though the conclusions in the "Benefits under Beacon" report do not compare exactly the same scenarios, it compares the benefits of […] with […]. At a site level, the comparison appears to be relevant for assessing the situation after […].

(1693) The report further states that […].[1464] As commercial rationale for Beacon, the report explains that […]. […].[1465]

(1694) According to Figure 5 in this report, the […] significantly exceed the ones of […].[1466]

[…]

(1695) The Commission notes that this calculation has been based on the Ofcom MCT model that the Parties claim to be unsuited to describe the impact of network sharing in the Reply to the Letter of Facts of 23 March 2016.

(1696) When discussing the topic […], the report explains that […].[1467] The report continues stating that also incremental costs for additional sites […].[1468]

(1697) Regarding coverage, the report submits that […].[1469]

(1698) Therefore, taken together, there will be several negative impacts on network quality following […]. These negative impacts will directly affect the network quality available to the customers of Vodafone as well as the competitive pressure Vodafone can exercise on the other remaining two MNOs.

(1699) The argument of the Notifying Party, that there would be no harm to network quality for Vodafone because Vodafone agreed to […] does not prove these findings to be incorrect. Every […] has been agreed between the respective […] partners. That does not preclude that under certain conditions, the exercise of such […] can harm the other party. It is the very purpose of such […], that one party may […] despite the harm caused to the other party.

1463 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 1 (submitted by Telefónica in response to RFI 110).

1464 Report Benefits under Beacon by Frontier Economics, dated June 2012, pages 3 and 4 (submitted by Telefónica in response to RFI 110).

1465 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 5 (submitted by Telefónica in response to RFI 110).

1466 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 6 (submitted by Telefónica in response to RFI 110).

1467 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 21 (submitted by Telefónica in response to RFI 110).

1468 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 25 (submitted by Telefónica in response to RFI 110).

1469 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 28 (submitted by Telefónica in response to RFI 110).

(1700) It is important to note in this regard that the Commission takes the view that absent the Transaction, due to […], it is unlikely that […]. Therefore, […] as foreseen under the [Plan B] is unlikely to occur absent the Transaction.

(1701) For this reason, it is equally misleading to argue that Vodafone would not have entered into a contract that would allow the contractual partners to cause significant harm. There can be no doubt about the fundamental importance of the mobile network infrastructure to a mobile network operator. Agreeing to a network arrangement under which each party operates its own network and the network of the other party in half of the United Kingdom is evidently a particularly sensitive contract. This is precisely why in particular an active sharing agreement requires a high degree of aligned incentives between the network sharing partners. As both O2 and Vodafone submitted, at least when entering into Beacon, there was such a high degree of alignment. […].

(1702) An additional harm to the competitive position of Vodafone will be a likely increase in its long-run incremental costs to expand capacity. The Commission notes, in addition to the fact that higher fixed cost can harm consumers by reducing investments in network quality, that the respective submission by Vodafone and Ofcom as well as joint submissions by O2 and Vodafone to Ofcom in 2012 contradict the argument of the Notifying Party, that all cost increases will be fixed in nature and are therefore unlikely to be passed on to consumers.

(1703) Using Ofcom's model for mobile call termination rates ("MCT Model"), aimed at identifying the long run incremental costs of a typical mobile operator in the United Kingdom, Vodafone submits that […].[1470]

Figure 120: Impact on LRIC of […], MCT Model[1471]

[…]

(1704) The Commission notes that these results are similar to an assessment submitted by Ofcom, who has used its 2015 MCT model to illustrate the effect of […] on the network costs of a hypothetical MNO. Ofcom considers that notwithstanding the limitations of this model[1472], its output provides a reasonable proxy for the volume driven incremental cost under different network sharing scenarios. Ofcom's results are as follows:

Figure 121 – MCT Model by Ofcom[1473]

[…]

Source: Ofcom.

(1705) According to Ofcom, the outcome of this model could be seen as a reasonable proxy for the impact of a change in the network sharing situation for either BT/EE or Vodafone. Even if the merged entity were not to […] but rather […], the incremental cost of adding capacity through the provision of new sites may increase by up to

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[1470] Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.9.

[1471] Vodafone's supplemental response to the network sharing section of the SO, 19 March 2016, paragraph 3.9, Table 3.1.

[1472] Which has originally been built to estimate the incremental costs of mobile call termination.

[1473] Ofcom's further submission on network sharing, 20 March 2016, paragraph 1.10 (provided with the Letter of Facts of 23 March 2016).

[…]% if the merged entity had fewer incentives to share the cost of such measures.[1474]

(1706) In Ofcom's view, the magnitude of this impact on incremental cost of either or both Vodafone and BT/EE shows that there would be a material risk that either Vodafone and/or BT/EE would be a less effective competitor which would reduce their incentives to invest, reduce their incentives to price as aggressively and reduce the competitive constraint on the remaining MNOs resulting in lower industry wide investments and less competition on price.[1475]

(1707) The Commission notes the results of […] under the MCT model according to which […] would increase the long-run incremental cost by […]%. The Commission considers this model as being able to provide an indication of the magnitude of likely effects on the incremental costs of MNOs in the United Kingdom in such cases.

(1708) Furthermore, the Commission notes that the results of the MCT model seem to be in line with the economic analysis annexed to the joint submission of Vodafone and O2 to Ofcom concerning Beacon. […].[1476]

(1709) Concerning the criticisms raised by the Notifying Party on the use of the MCT model in this context[1477], the Commission notes the following.

(1710) First, the approach is not inconsistent with the Commission's quantitative analysis of unilateral effects. In the quantitative analysis presented in this Decision, the Commission does take into account the short run incremental network costs in the computation of the operators' economic margins. The short run incremental network costs are indeed the ones that the Commission and the Notifying Party consider to be more relevant for an MNO's pricing decisions compared to the long run incremental network costs.[1478] In this context, the Commission considers that long-run incremental network costs are more likely to be relevant for the operators' network expansions decisions than the short run incremental network costs. In addition, for the purpose of illustrating that incremental network costs would increase as a result of changes in the network sharing agreements, the Ofcom's MCT model is the only tool the Commission is aware of which features the necessary level of detail and granularity.[1479] This is also confirmed by the fact that O2 and Vodafone also resorted to the MCT model when they submitted to Ofcom in 2012 their estimates of the costs savings enabled by Beacon.

(1711) Second, on the argument of the Notifying Party that the MCT model would only look at […], the Commission considers that this neither contradicts the overall result of the model but rather indicates that the results do not fully reflect the impact of […]. As pointed out by the Notifying Party in Annex 9.1 to its Reply to the Letter of Facts of 23 March 2016, the MCT model comprises all types of geographic areas and

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1474 Ofcom's further submission on network sharing, 20 March 2016, paragraph 1.42 (provided with the Letter of Facts of 23 March 2016).

1475 Ofcom's further submission on network sharing, 20 March 2016, paragraph 1.43 (provided with the Letter of Facts of 23 March 2016).

1476 As cited in Ofcom's further submission on network sharing, 20 March 2016, paragraph 1.19 (provided with the Letter of Facts of 23 March 2016).

1477 See recital (1677) and Annex 9.1 of Reply to the Letter of Facts of 23 March 2016.

1478 See Annex A, Section 3.2.3.

1479 The cost deferral method proposed by the Notifying Party and used by the Commission to calculate the short run incremental network costs for the quantitative analysis does not feature the required level of granularity to perform such exercise.

assumes that all infrastructure is shared in all areas, with the exception of 25% of the infrastructure being shared in "Suburban 1" areas and 0% of the infrastructure being shared in "Urban" areas.[1480] Under the Beacon arrangements, however, the parties […].[1481] For this reason, the Beacon arrangement is a […] network sharing agreement than […] Therefore, the MCT model […] the effect of reverting from active to passive sharing in "Urban" and "Suburban 1" areas.

(1712) Third, as regards the argument that the model was not built to estimate the impact on incremental costs of changes in network sharing agreements, the Commission notes Ofcom's statements that the Notifying Party is correct in pointing out that the model was not intended to estimate changes in network costs resulting from changes in network sharing, that the model would not take into account […] and that the model is based on a weighted average of different technologies.[1482] However, in the Commission's view, these arguments do not contradict using the model as an additional indication of the likely effects of changes in network sharing on costs which needs to be regarded in conjunction with further evidence pointing to a significant incremental cost increase to provide capacity.

(1713) The fact that the purpose of the model was not to estimate changes in network costs as a result of modifications of network sharing agreements, does not render any results of the model based on changes of network costs irrelevant. As explained by Ofcom in Annex 7 to its MCT review 2015-2018, the aim of the model is to "*forecast the cost of providing MCT for an average efficient MCP [mobile communication provider] during the period 1 April 2015 to 31 March 2018"*.[1483] The model is "*hypothetical, but by using inputs […] sourced from the national MCPs and by using a careful calibration process to verify the model outputs against the national MCP networks […] the aim is to deliver a bottom-up model which is grounded in reality*".[1484]

(1714) The model is thus aimed at forecasting the cost of MNOs that either use active or passive network sharing or do not share parts of their network at all. It is developed based on actual costs of MNOs in the United Kingdom. Therefore, even though it is not developed with the purpose to assess the effect of changes in network sharing, it is developed to assess the likely cost of a representative, hypothetical MNO either with active or passive network sharing or without any level of network sharing. For this reason, the Commission agrees with the assessment of Ofcom that the model *"can be used to provide a simple illustration of the effects on costs of changes in network sharing arrangements"*.[1485]

1480 Annex 9.1 to the Reply to the Letter of Facts of 23 March 2016, paragraph 16. According to table A7.2 contained in Annex 7 to Ofcom, Mobile call termination market review 2015-18, 17 March 2015 [ID4231], "Urban" areas cover 6% of the total population, 0.1% of the total area and 12.8% of the total traffic and "Suburban 1" areas make up for 30% of the total population, 1.6% of the area and 59% of the total traffic.

1481 Each operator fully pays for operating the networks in half of the United Kingdom. Therefore, effectively, the costs for operating the networks in the United Kingdom are shared equally.

1482 […].

1483 Ofcom, Mobile call termination market review 2015-18, Annex 7, paragraph A7.11, 17 March 2015 [ID4231].

1484 Ofcom, Mobile call termination market review 2015-18, Annex 7, paragraph A7.12, 17 March 2015 [ID4231].

1485 Ofcom comments on Three's analysis of the incremental costs of network sharing, 8 April 2016, paragraph 1.2 [ID5984].

(1715) Fourth, the Commission agrees with the Notifying Party that the Ofcom calculations regarding the changes in incremental costs focus on call termination rather than data services (the latter being more relevant for retail consumers). To address this point, the Commission has taken a slightly amended version of the Ofcom MCT model that allows estimating the change in incremental network costs of providing mobile services (including data services) to retail subscribers.[1486] Based on this model, the Commission estimated that changing the network sharing settings from […] to […] increases an operator's incremental network costs by […]%.[1487] The model allows estimating the impact of changing the network sharing settings from […] to […]. Such a change implies an increase in an operator's incremental network costs of […]%.[1488] This latter result also confirms the qualitative assessment presented at recital (1711) that the more […], the larger is the increase in incremental costs as a result of […]. The Commission also notes that this calculation is based on a discounted cash flows approach which therefore also addresses the Notifying Party's criticism of the use of economic depreciation (see recital (1718)).

(1716) Fifth, as regards the criticism that the model is based on a hypothetical efficient provider, the Commission notes that the model is not used to look at the level of costs of such provider but rather to look at how thes costs of such provider would change […]. As such, the level of costs of such operator (that is, how efficient the operator is) is of second order of importance given that the focus is on changes in costs. In addition, as explained also by Ofcom, the model does not assume network sharing between two perfectly aligned operators but rather *"reflects the reality of UK mobile operators' costs and their network sharing arrangements"*.[1489]

(1717) Sixth, regarding the argument that the model is based on a weighted average mix of different technologies, the Commission notes that the results reflect the relative relevance of 2G, 3G and 4G technology forecasted by Ofcom in the respective year. The argument of the Notifying Party that the results are *"heavily weighted towards 3G technology"* whereas the *"vast majority of investments in incremental network capacity will be in 4G (and successor) technologies"*[1490], does not reflect the fact that Vodafone would have to […] following […]. Moreover, the Commission notes that Ofcom's MCT model assumes that the operator uses so called single RAN equipment which handles jointly 2G, 3G and 4G. Therefore, the implications of assuming a larger 4G traffic share can be expected to be significantly less pronounced than indicated by cost implications of 2G, 3G and 4G termination prices, respectively.

1486 Such amended version of the Ofcom MCT model has been provided by Ofcom to the Commission in the context of the review of the Transaction. This version of the model was made available to the Notifying Party in the data room that opened on 5 February 2016 [ID6120-6125].

1487 To produce this scenario, the Commission has compared the incremental network costs relating to a 10% change in subscriber numbers (as reported in sheet "Controls and results" of file "Additional calculations.xlsm") resulting from two runs of the amended verison of the Ofcom MCT model made available to the Notifying Party. One run consisted in […]. The other run consisted in […].

1488 To produce this scenario, the Commission has compared the incremental network costs relating to a 10% change in subscriber numbers (as reported in sheet "Controls and results" of file "Additional calculations.xlsm") resulting from two runs of the amended verison of the Ofcom MCT model made available to the Notifying Party. One run was based on […]. The other run consisted in […].

1489 Ofcom comments on Three's analysis of the incremental costs of network sharing, 8 April 2016, paragraph 1.4 [ID5984].

1490 Annex 9.1 to Reply to the Letter of Facts of 23 March 2016, paragraph 19.

(1718) Seventh, on the argument of the Notifying Party that the use of economic depreciation would overstate the effect of network sharing on incremental costs, Ofcom submitted the results of an alternative calculation using discounted cash flows instead. The result of this alternative calculation does not materially deviate from Ofcom previous results as presented in the Letter of Facts of 23 March 2016.[1491]

(1719) Finally, the Commission takes note of the fact that O2 and Vodafone themselves in their joint submission to Ofcom that included the report […] use the Ofcom model to provide a breakdown of mobile network costs and to argue that […].[1492] While the model at that time did not include differentiations between active and passive sharing, it shows that the parties based their argument that significant cost savings can be achieved by active sharing on this model.

(1720) Furthermore, the Commission notes that in […] report on the effects of Beacon, […] explicitly points out that […].[1493]

(1721) The Commission does not take the actual percentage of cost increase forecasted by the Ofcom model into account as the model is not exactly tailored towards the situation of Vodafone. However, in the view of the Commission, these models give an impression of the magnitude of a likely effect and thereby provide evidence of a negative impact of the Transaction as implemented under the [Plan B] that exceeds the likely degradation of network quality. By increasing the long-term incremental costs of Vodafone, the [Plan B] is likely to negatively affect the price of mobile services provided by Vodafone.

(1722) Regarding Three's claim that the current Beacon arrangements are anti-competitive by restricting […], the Commission notes the submission of Ofcom that it has seen no evidence of anti-competitive behavior or effects since its assessment of Beacon in 2012 that would have caused Ofcom to reconsider opening an investigation.[1494]

(1723) Based on these considerations, the Commission considers that the implementation of the [Plan B] will significantly harm the quality of mobile services offered by Vodafone as well as being likely to cause an increase in prices due to higher long-run incremental costs. These effects will decrease the competitive pressure exercised by Vodafone on the other MNOs as well as the overall level of competition.

(1724) In conclusion, the competitive position of Vodafone under the [Plan B] is likely to be impaired by a significant decrease in network quality compared to the Beacon network which is caused by higher costs for expanding coverage. This harm is further aggravated by an increased incremental cost of Vodafone for providing mobile services after […].

iii. Effects of the [Plan B] on overall network investments

Notifying Party's view

(1725) The Notifying Party argues that the participation of the merged entity in both network sharing arrangements would not facilitate coordination between the MNOs.

1491 […].

1492 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 8 (submitted by Telefónica in response to RFI 110).

1493 Report Benefits under Beacon by Frontier Economics, dated June 2012, page 33 (submitted by Telefónica in response to RFI 110).

1494 Ofcom's further submission on network sharing, 20 March 2016, paragraphs 1.32 (provided with the Letter of Facts of 23 March 2016).

It further points out that CTIL and MBNL contain robust information sharing barriers that prevent the disclosure of competitively sensitive information.[1495] In addition, the [Plan B] would […] with the effect of reducing the information that needs to be shared compared to the situation absent the Transaction.[1496] Finally, none of the MNOs will have incentives to inappropriately share information on new technologies given the importance of network quality as a parameter of competition.[1497]

(1726) In the Reply to the Statement of Objections, the Notifying Party submits that experience from other markets shows that concerns relating to overall network investments are unfounded and points to Sweden where Tele2 and Telenor participate in two network sharing arrangements with different partners each.[1498] The Swedish Competition Authority did not raise concerns against these arrangements and the Swedish market would be recognised as being one of the most developed markets in Europe with competitive prices relative to peer countries.[1499]

(1727) Furthermore, the Notifying Party argues that the merged entity would not be able to block investments by the other MNOs and would not have the incentives to do so.[1500] The Notifying Party also states that the Transaction would not lead to a reduction in BT/EE or Vodafone's incentives to invest – neither on a stand-alone basis[1501] nor as a consequence of increased transparency. Regarding the latter, the Notifying Party submits that the [Plan B] would not result in the sharing of sensitive information on network investments and that the asymmetries and misaligned incentives between the remaining three MNOs would make coordination of network investment strategies implausible.[1502]

(1728) The Notifying Party points to the information sharing barriers in MBNL and Beacon and concludes that sensitive information is therefore ring-fenced under both arrangements.[1503] According to the Notifying Party, the [Plan B] would rather reduce information sharing because it […].[1504]

(1729) The Notifying Party further submits that simply observing investment activity without knowledge of the commercial imperative for that investment does not provide any insights for other MNOs. As an example, the Notifying Party mentions that network investments are likely to be triggered by the need to increase capacity and a lack of investment might therefore be caused by the absence of any immediate capacity shortage.[1505] For that reason, other MNOs would be unable to judge whether an investment or the lack of investments is based on unilateral or coordinated reasons. Furthermore, the different capacity positions of the MNOs would make aligning the scale or timing of forward looking investments impossible.[1506]

1495 Reply to the Article 6(1)(c) Decision, paragraph 497 [ID2323].
1496 Reply to the Article 6(1)(c) Decision, paragraph 498 [ID2323].
1497 Reply to the Article 6(1)(c) Decision, paragraph 499 [ID2323].
1498 Reply to the Statement of Objections, paragraph 738.
1499 Reply to the Statement of Objections, paragraphs 739 and 740.
1500 Reply to the Statement of Objections, paragraphs 741 to 743.
1501 Reply to the Statement of Objections, paragraphs 744 and 745.
1502 Reply to the Statement of Objections, paragraph 748.
1503 Reply to the Statement of Objections, paragraphs 749 and 750.
1504 Reply to the Statement of Objections, paragraph 751.
1505 Reply to the Statement of Objections, paragraph 755.
1506 Reply to the Statement of Objections, paragraphs 756.

(1730) In addition, the Notifying Party claims that any incentive to coordinate network investments would be undermined by the strategic asymmetry between the remaining MNOs. While the merged entity would be incentivised to implement network consolidation, BT/EE and Vodafone would have an incentive to use their spectrum advantage. BT/EE would do so to protect its leading position and Vodafone to regain ground lost in recent years.[1507] Therefore, BT/EE and Vodafone would have an incentive to make the most of their capacity advantages before the merged entity could adequately react with its consolidated network. Reducing investments between the closing of the Transaction and […] would expose them to substantial strategic threats after the merged entity completed network consolidation.[1508]

(1731) The Notifying Party further submits that instead of lower overall network investments, the Transaction would result in increased network competition by […].[1509] The Notifying Party argues that infrastructure sharing made economic sense whilst network quality was driven by coverage. MBNL and Beacon would have allowed the respective network sharing partners to rapidly roll-out national coverage of their network. However, such phase would be more or less complete and the future of mobile networks would centre on their ability to deliver additional capacity.[1510] According to the Notifying Party, the Transaction would increase the capacity available to the Parties because of the combined site portfolio and thereby create a strategic network asymmetry compared to BT/EE and Vodafone which will base their capacity strategy on their spectrum holdings.[1511] This would allow all remaining MNOs to compete on capacity whereas absent the Transaction, the Parties […].[1512]

Commission's assessment

(1732) The implementation of the [Plan B] could reduce the overall industry-wide investments in network infrastructure if it were to increase the transparency of investments between all competitors.

(1733) As discussed in recitals (1556) et seq., the merged entity could become aware of any investment plans of BT/EE or Vodafone under the [Plan A]. When discussing the effects of the [Plan A] on overall industry-wide investments, the Commission found that this could reduce the incentives of the merged entity to invest in new technologies since the merged entity would become aware of a respective deployment of a competing MNO and thus there is a lower risk of falling behind.

(1734) If Vodafone were to assume that the merged entity were to react to any important technological investment of BT/EE by implementing a similar investment in the Beacon network, it might also have an incentive not to invest unless the merged entity starts investing. However, under the [Plan A], BT/EE would have no visibility of investments by the merged entity or Vodafone as such investments would likely be rolled out on the CTIL network first.

(1735) Under the [Plan B], this transparency works both ways. As under the [Plan A], the merged entity could become aware of investments by BT/EE. Because the merged

1507 Reply to the Statement of Objections, paragraph 757.
1508 Reply to the Statement of Objections, paragraph 758.
1509 Reply to the Statement of Objections, paragraph 765.
1510 Reply to the Statement of Objections, paragraph 769.
1511 Reply to the Statement of Objections, paragraph 770.
1512 Reply to the Statement of Objections, paragraph 772.

entity would be likely to roll-out a new technology in certain areas in the West and in the East more or less simultaneously, Vodafone could also gain knowledge of such investments before they are made.

(1736) The other way around, the merged entity could also gain knowledge of investments planned by Vodafone. If it were to implement them as well, it would likely do so not only in the East but also in the West where […]. […], BT/EE could then become aware of such investments. If BT/EE were to assume that the merged entity would gain knowledge of significant investments by Vodafone and that the merged entity were to implement such investments on MBNL sites following the respective plans of Vodafone, BT/EE would have a perceived visibility on investments by all other MNOs as well.

(1737) As a result, all three MNOs might be able to assume that unless the merged entity starts investing in significant new technology, no one will. This situation is very different compared to the situation absent the Transaction in which there is a significant amount of competition in network quality at least between Three and BT/EE as part of MBNL on the one side and O2 and Vodafone as part of Beacon on the other side.[1513] Such transparency could significantly decrease the incentives of all MNOs to invest, thereby reducing the level of overall investment in network technology in the United Kingdom or delaying the availability of new technologies to consumers.

(1738) As regards the argument of the Notifying Party that all MNOs would pursue different network strategies and coordination on investment would therefore be difficult to achieve, the Commission first points out that less overall network investment as a consequence of increased transparency does not require coordination. Instead, a reduction in overall network investment would be caused by reduced incentives of each individual MNOs to invest.

(1739) Such reduced incentives resulting from transparency would not relate to all potential investments. The Notifying Party is right when stating that the main driver for certain investments is the ability of the individual MNO to offer sufficient download speeds to their customers. Whether or not to deploy 6-sector antennae or whether or not to make use of additional spectrum is unlikely to be affected by increased transparency. However, the incentives to achieve certain milestones in network development, such as for example offering 5G, could very well be affected by increased transparency.

(1740) These reduced incentives to invest due to increased transparency are further aggravated by the increased costs of BT/EE and Vodafone for investments compared to the situation absent the Transaction. The reduction in the level of synergies achieved by the network sharing partners of the merged entity absent the Transaction will increase their willingness not be the first to make certain network investments.

(1741) Overall, the Commission concludes that following the implementation of the [Plan B], the merged entity would have visibility as to the future network investments of its competitiors. In addition, all competitors would have a limited understanding of certain investments by all other competitors.

(1742) As network quality is one of the main drivers of competition, the likely decrease of overall investments in network technology constitutes a reduction of competitive pressure on all MNOs and will harm consumers.

[1513] Also see recitals (1295) and (1296).

iv. No commitment to implement the [Plan B] as submitted

(1743) The Commission notes that the [Plan B] does not provide for any commitment of the merged entity to implement the plan as envisaged nor for any significant incentive not to adjust its plan for network consolidation should any of the assumptions made when setting out the [Plan B] were to change. In particular, and contrary to the [Plan A], the merged entity does not need to enter into any significant obligations for achieving consent to the plan. Therefore, under the [Plan B] as submitted by the Notifying Party, there is no certainty that the [Plan B] will actually be implemented.

(1744) The assessment in this Section 8.2.2.4.b) has assumed that the [Plan B] will be implemented as envisaged by the Notifying Party. However, the Commission notes that the non-binding nature of the plan could incentivise the Notifying Party to deviate from the plan. The merged entity could, for example, and the Notifying Party stated that […], try to […] and "switch" to implementing the [Plan A] should it […]. In the same way, the merged entity could also pursue any other potential long-term scenario.

(1745) This flexibility under the [Plan B] will affect the alignment of interests between the merged entity and Vodafone/ BT/EE. Obviously, the potential decision to […] as well would significantly alter the position of the merged entity towards MBNL and BT/EE.

v. Conclusion on the [Plan B]

(1746) The implementation of the [Plan B] as presented by the Notifying Party will harm the competitive position of BT/EE as BT/EE is likely to incur higher costs for maintaining its current network as well as for investing in the network and could suffer from a deterioration of network quality in the [Area 1] as well as, during a transition period, from congestion in the [Area 2].

(1747) Moreover, the [Plan B] is likely to significantly hamper the competitive position of Vodafone because of the cost of Vodafone for […] and because of the likely reduced quality of Vodafone's network resulting from mitigating measures to avoid increased cost of […].

(1748) Furthermore, the [Plan B] is likely to increase transparency on network investments which is in turn likely to decrease the overall level of investments in network infrastructure in the United Kingdom or to delay the availability of new technologies to consumers.

(1749) Therefore, the [Plan B] is likely to reduce in particular the competitive pressure exerted by Vodafone but also, to a lesser degree, by BT/EE. Such reduced competitive pressure, taken together with the decreased incentives of all MNOs to investment in network infrastructure, is likely to lead to a significant impediment of effective competition in an oligopolistic market featuring a limited number of players and high barriers to entry.

d) Assessment of other scenarios

(1750) As there is significant uncertainty as to the future network sharing situation, the Commission also reviewed, on a very high level, options of the merged entity other than the [Plan A] and the [Plan B]. The purpose of the following analysis is not to assess how likely these scenarios are or what obstacles the merged entity would need to overcome in order to implement these scenarios. Instead, they highlight potential harm caused under these scenarios.

(1751) Furthermore, as long as the merged entity did not commit to the [Plan A] or the [Plan B], the likely harm under all potential scenarios needs to be taken into account also when evaluating the Preferred and the [Plan B] as it cannot be excluded that the merged entity pursues such other plans at any point in time during the implementation of the network consolidation.

i. The merged entity will rely only on MBNL

(1752) One option of the merged entity is to switch all customers – after a transition period – to the MBNL network. For the purposes of this scenario, it is assumed that the merged entity will comply with the Beacon agreement and […].

(1753) Such scenario is very likely to lead to harm to Vodafone that will ultimately reduce the ability of Vodafone to compete. As discussed in more detail under the [Plan B], Vodafone is dependent upon O2 to roll-out the Beacon network in the East. Any significant deterioration of such roll-out will also significantly impact Vodafone's competitive position. If the merged entity were to rely only on MBNL for providing mobile services, it is likely to use any possible way to reduce its obligations under the Beacon agreements regardless of the impact of the effects on the Beacon network. With such a highly disruptive network sharing partners, it is hard to image that the Beacon network will be rolled-out as envisaged. This, as well as the delays to or frustration of most other investments by Vodafone, will be very likely to have a significantly negative impact on Vodafone.

(1754) As to potential harm to BT/EE's ability to compete, this scenario provides for the highest alignment of interests between the merged entity and BT/EE and thus makes any harm caused by uncooperative or obstructive behaviour unlikely. However, BT/EE could suffer from a deterioration of network quality by a congestion of shared network infrastructure as outlined under the [Plan B].

(1755) Reduced industry-wide investments seem rather unlikely if the merged entity were to rely only on MBNL.

(1756) To conclude, the Commission considers that if the merged entity were to rely only on the MBNL network, it would cause significant harm to the competitive position of Vodafone.

ii. The merged entity will rely only on Beacon

(1757) If the merged entity were to rely only on Beacon, it would evidently seek to reduce its investments into the MBNL network. There would be a clear misalignment of interests as the merged entity would not use a single MBNL site in the long-run whereas BT/EE would continue to use all MBNL sites. In such circumstances, the merged entity would have no interest at all in the MBNL sites once the customers of Three migrated to the Beacon network. Assuming that it will not commit any breach of the MBNL agreements to avoid damage claims, there would still be ways to reduce its involvement in MBNL as discussed within the context of the [Plan A]. This would harm BT/EE significantly.

(1758) With Vodafone, however, this scenario provides for a significant alignment of interests. Therefore, the Commission considers it unlikely that Vodafone would be harmed. The only potential harm to the competitive position of Vodafone could consist in congestion caused by the migration of Three customers.

(1759) As the merged entity will not be incentivised to block investments in CTIL, the incentives to invest of Vodafone would not be reduced and because there is no increased transparency of investments, a reduction of industry-wide investments seems unlikely in this scenario.

iii. The merged entity will rely mainly on MBNL, supplemented by Beacon

(1760) This scenario is similar to […]. It provides for more or less aligned interests between the merged entity and BT/EE but would be highly disruptive for Vodafone.

(1761) Therefore, the Commission does not consider that such scenario would lead to a significant harm to the competitive position of BT/EE. The merged entity will be incentivised to jointly invest in certain upgrades of the passive network structure and is unlikely to disrupt the operation of MBNL by blocking or frustrating unilateral investments of BT/EE.

(1762) However, this scenario would be very likely to lead to significant harm to the competitive position of Vodafone. The merged entity would be incentivised not to continue the roll-out of Beacon. It would further not want to incur higher costs by additional investments into the Beacon network. As long as active sharing continues, Vodafone would depend on the merged entity to operate its network in the East. […]. The merged entity would likely be a highly disruptive network sharing partner that will cause significant harm to Vodafone's ability to compete.

(1763) The Commission does not identify a harm caused by reduced industry-wide investments in network infrastructure.

iv. The merged entity will rely mainly on Beacon, supplemented by MBNL

(1764) This […]. […] is likely, […], to significantly impede the competitive position of BT/EE.

(1765) However, as discussed in the assessment of the effects of the [Plan A] on competition by Vodafone in Section 8.2.2.4 b) ii), the conclusion that the implementation of the [Plan A] would be unlikely to have a negative impact on competition by Vodafone is premised on the assumption that Vodafone will enter into an agreement with the Notifying Party that offers sufficient protection to prevent such harm to Vodafone's competitive position.

(1766) Within the general scenario that the merged entity will rely mainly on Beacon but supplement its network with MBNL sites, such agreement is not strictly necessary. If the merged entity were to […], the harm to the competitive position of Vodafone following from […] would be the same as discussed under the [Plan B].

v. Uncertainty as to the final network sharing situation

(1767) A final scenario would be that the merged entity leaves its long-term consolidation plan open. The Commission considers this scenario to be equivalent to a mere statement of the merged entity that it will pursue a specific network integration scenario without any binding commitment to do so. The Commission notes that in both scenarios presented by the Notifying Party, but in particular in the [Plan B], the merged entity would not be committed to pursue the plan as presented to the Commission.

(1768) EE submits that […]. […].[1514] […].[1515]

(1769) EE further submits that […].[1516] […].[1517]

1514 […].

1515 […].

(1770) BT submits that […].[1518]

(1771) According to Vodafone, […].[1519]

(1772) The Commission considers that a scenario involving uncertainty as to the future outcome of the network sharing situation combines several, significant harms. By straddling and actively using two networks, the position and interests of the merged entity would likely be similar to the ones in the [Plan B] for Vodafone and BT/EE – with the added uncertainty that Vodafone and BT/EE would not know whether and when the merged entity will decide to migrate customers either to or from the respective networks. The merged entity would be very likely to […] absent an agreement with Vodafone to […].

(1773) Already without this uncertainty, the Commission concluded that the [Plan B] would significantly harm the competitive position of Vodafone and cause harm to the ability to compete of BT/EE as well. Taking the additional uncertainties in this scenario into account, the Commission considers that there would also be a substantial risk of lower industry-wide investments as both BT/EE and Vodafone will be incentivised to wait for the long-term outcome of the network sharing situation before undertaking significant investments.

(1774) In an internal document of Three discussing potential network scenarios following the Transaction[1520], benefits of the scenario […] are described as […] and […]. […].

(1775) The Commission takes this document as further evidence that there would be significant uncertainty as to the future network sharing situation if the Transaction were to be cleared. Under the scenario in which the merged entity stays in both networks, Three lists as an explicit benefit the […] and […]. In the Commission's view, that shows that the merged entity would have no interest in quickly resolving the uncertainty as to the future network sharing situation. Furthermore, it supports the claims of BT/EE and Vodafone that a position in both network sharing arrangements would provide the merged entity with significant leverage towards its network sharing partners.

vi. Conclusion on other scenarios

(1776) Each of the different other scenario discussed in this Section 8.2.2.4 d) would cause harm to the competition position of either one or both of BT/EE and Vodafone. Such reduced competitive pressure is likely to lead to a significant impediment of effective competition in an oligopolistic market featuring a limited number of players and high barriers to entry.

8.2.2.5. Overall conclusion on horizontal non-coordinated effects arising from network sharing

(1777) The Commission considers that the implementation of the network consolidation plans as presented to the Commission by the Notifying Party, following the reduction

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1516 […].

1517 […].

1518 BT's response to Questionnaire Q67 to non-MNOS of 4 December 2015, Submission on Network Sharing, paragraph 4.3 (a) [ID3771].

1519 Vodafone's response to RFI 59, paragraph 5.4 [ID3147].

1520 […].

of competing MNOs, would significantly harm the competitive position of either one or both of the Parties' partners in the network sharing arrangements.

(1778) The [Plan A] is likely to result in significant harm to BT/EE's ability to compete in the mobile telecommunications markets in the United Kingdom.

(1779) The [Plan B] is likely to result in a significant impediment to Vodafone's ability to compete in the mobile telecommunications markets in the United Kingdom. It is also likely to harm, but to a lesser extent, the competitive position of BT/EE.

(1780) Furthermore, the Commission notes that neither of these plans provide for a commitment of the merged entity to implement the network consolidation as presented to the Commission. Taking other possible integration scenarios into account, the Commission concludes that also in all other scenarios reviewed by the Commission the Transaction would harm the competitive position of either one or both of the Parties' partners in the network sharing arrangements.

(1781) Therefore, the Commission considers that the Transaction is likely to reduce the competitive pressure exerted by either one or both of the other MNOs that are partners of the Parties in the network sharing arrangements.

(1782) Furthermore, the network sharing situation resulting from the Transaction under the [Plan B] is likely to lead to less industry-wide investments into network infrastructure, reducing the level of effective competition which would have prevailed in the absence of the Transaction.

(1783) The Commission therefore concludes that, due to the reduced competitive pressure exerted by either one or both of the other MNOs and to the lower level of industry-wide investments into network infrastructure that will result from some of the network consolidation plans examined by the Commission, the Transaction is likely to give rise to non-coordinated anti-competitive effects on the retail market for mobile telecommunications services in the United Kingdom.

(1784) Since such effects cannot be offset by buyer power (as discussed in Section 8.2.3.1), entry (as discussed in Section 8.2.3.2) or efficiencies (as discussed in Section 8.4), the Transaction would significantly impede effective competition in an oligopolistic market featuring a limited number of players and high barriers to entry.

8.2.3. Countervailing factors

8.2.3.1. Buyer power

(1785) According to the Horizontal Merger Guidelines, the competitive pressure on a supplier is not only exercised by competitors but can also come from its customers. Even firms with very high market shares may not be in a position, post-merger, to significantly impede effective competition, in particular by acting to an appreciable extent independently of their customers, if the latter possess countervailing buyer power. Countervailing buyer power in this context should be understood as the bargaining strength that the buyer has vis-à-vis the seller in commercial negotiations due to its size, its commercial significance to the seller and its ability.[1521]

[1521] Horizontal Merger Guidelines, paragraph 64.

(1786) The Horizontal Merger Guidelines also explain that customers of the merging parties who have difficulties switching to other suppliers because there are few alternatives, are *"particularly vulnerable to price increases"*.[1522]

a) Notifying Party's view

(1787) The Notifying Party submits that customer switching is easy and frequent in the United Kingdom mobile market and the costs of switching operator play no role.

b) Commission's assessment

(1788) In assessing buyer power as a possible factor countervailing the anticompetitive effects of the Transaction, the Commission distinguished between private and business customers, and within the latter category between large and small business customers, to duly take into consideration their difference in size and purchasing mechanism.

(1789) The Commission notes that the largest part of customers of retail mobile telecommunication services in the United Kingdom are private consumers. Based on the results of the market investigation, the Commission considers that private customers cannot be expected to have any degree of buyer power vis-à-vis the suppliers of mobile communication services. Their demand is too fragmented. They do negotiate their mobile contracts on an individual basis and their individual subscription value is of no material commercial significance to the merged entity.

(1790) As regards switching possibilities for private customers, the results of the market investigation were mixed as regards the easiness to switch between providers depending on whether the customer wants to port his number or not. Most market participants indicated that there are no barriers to switching to a different provider once the minimum contract period has elapsed and the customer does not want to port his number. Respondents indicated that minimum contract periods are typically of 24 months, but operators also offer 12-month contracts. In the case of customers who want to port their number, most market participants indicated that number porting can be done in one or two days and it is a relatively easy process. However, a few market participants pointed out that number porting remains a barrier to switching in the United Kingdom, as compared to other European countries.[1523] Finally, the Commission notes that the Transaction would reduce the number of MNOs on the market, creating a new leading player by subscribers and reducing the alternatives for customers looking for a competitive mobile telecommunications service. In such a concentrated market, private customers would have fewer possibilities to switch to alternative suppliers.

(1791) As regards large business customers, respondents indicated that they have more bargaining power than private customers, as contracts are subject to individual negotiation. Small businesses have little bargaining power and are closer to the situation of private customers.[1524] The Commission thus notes that among business customers, only the larger companies may be able to exercise some degree of negotiating power.

[1522] Horizontal Merger Guidelines, paragraph 31.

[1523] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 54 (a) and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 54 (a).

[1524] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 55 (b) and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 55 (b).

(1792) As regards switching possibilities for business customers, some respondents argued that while there are no restrictions to switching once the contract is over, there are some potential challenges linked to differences in network coverage and the practicalities of swapping the SIMs of large numbers of employees without disrupting the ordinary course of business.[1525] One respondent pointed out that: "*The incumbent network is heavily involved in the porting process and will tend to try and retain the customer by offering improved terms only at the point that they try and leave. Bigger business mobile fleets may also have staggered contract end dates preventing a clean port away to a new network."* [1526]

(1793) In any event, according to the Horizontal Merger Guidelines, countervailing buyer power cannot be found to sufficiently offset potential adverse effects of a merger if it only ensures that a particular segment (or sub-segment) of customers, with particular bargaining strength, is shielded from significantly higher prices or deteriorated conditions after the Transaction.[1527]

(1794) The Commission, therefore, considers that possible buyer power exercised by customers of retail mobile communication services does not constitute a countervailing factor such as to offset the possible anti-competitive effects of the Transaction.

8.2.3.2. Entry

(1795) According to the Horizontal Merger Guidelines, a merger is unlikely to pose any significant anti-competitive risk if entering a market is sufficiently easy. For entry to be considered a sufficient competitive constraint on the merged entity, it must be likely, timely and sufficient to deter or defeat any potential anti-competitive effects of the merger. [1528]

a) Notifying Party's view

(1796) The Notifying Party considers that barriers to entry as an MNO on the market for retail telecommunications services are significant, but not prohibitive. On the other hand, the Notifying Party considers that barriers to entry as a non-MNO are low, as evidenced by the presence of numerous non-MNOs and service providers and the continuous interest from potential entrants. The Notifying Party submits it expects a couple of other non-MNOs to enter the market in the near future, including Sky.

(1797) The Notifying Party submits that the pre-requisites, costs and time necessary to enter the retail market vary with the type of non-MNO. Partial or light MVNOs can enter within a matter of months at very limited expense. While it would take longer and would require a greater budget to enter the market as a full or thick MVNO, barriers to entry are still low. Entry is also possible via MVNEs / MVNAs.

b) Commission’s assessment

(1798) The Commission considers that one has to distinguish between market entry as a non-MNO or as a MNO, when assessing the barriers to entry in the market for mobile communication services in the United Kingdom. While barriers to entry as a

1525 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 54 (b).

1526 See Dixons' response to Questionnaire Q27 to non-MNOs of 11 September 2015, question 54 (b) [ID1369].

1527 Horizontal Merger Guidelines, paragraph 67.

1528 Horizontal Merger Guidelines, paragraph 68.

non-MNO appear to be lower, barriers to entry as an MNO are very high, given the major investment required.

(1799) This view is supported by the results of the market investigation. First, respondents to the market investigation explained that entry as an MNO is very difficult. This requires significant investment and time. As one respondent explained, there are a number of elements in which a new entrant would need to invest into: acquisition of spectrum, construction of an initial greenfield radio access network with national or near to national coverage, establishing a backbone, core network and IT environment for the networks, establishing marketing, customer service and support and implementing interfaces for mobile number portability, legal interception, data retention and information services. It is estimated that such investments would require several billion pounds.[1529]

(1800) Second, respondents indicated that they do not expect any new MNO entrant in the near future.[1530]

(1801) In more detail, the Commission notes that a new MNO entrant would need to obtain access to spectrum of the right quantity and nature in order to be able to deliver national services. For example, in Ofcom's competition assessment for the 4G auction in 2012 Ofcom considered that, to be a credible competitor at that time, a new entrant would need, at a minimum, 60-100 MHz of spectrum (depending on the composition by frequency band).[1531] Such spectrum is scarce and expensive. Access to sub 1 GHz spectrum may be especially important for a new entrant as part of its spectrum portfolio to be able to deploy a national network quickly and without excessive cost.[1532]

(1802) The new entrant would build out its radio access network with national coverage, which involves significant sunk costs. Acquiring access to new sites is a lengthy and complex process because of the existence of a limited number of suitable locations for optimised outdoor coverage, the need for negotiations with landlords, potential planning requirements, potential works to host the network equipment and site engineering for interference management.[1533] While network sharing arrangements may reduce such costs, the entrant would still have to make a significant investment.

(1803) Moreover, it may be difficult for a new entrant to be able to negotiate a network sharing agreement with an established operator, as the established MNOs would have little incentive to facilitate the entry of a new competitor.[1534] A new entrant would probably also need a national roaming agreement with an existing operator while it builds its network, and again existing MNOs may have little incentive to provide contract with it.

[1529] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 48 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 50.

[1530] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 49.

[1531] Ofcom, "Assessment of future mobile competition and award of 800 MHz and 2.6 GHz", 24 July 2012, page 52, Figure 4.5. Available at http://stakeholders.ofcom.org.uk/binaries/consultations/award-800mhz/statement/statement.pdf (provided with the access to file on 4 February 2016).

[1532] Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 8.3 [ID2069].

[1533] Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 8.3 [ID2069].

[1534] Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 8.3 [ID2069].

(1804) In addition, the ability to build a customer base, typically involving a network of stores and investments in customer acquisition.[1535] A new entrant would have to win customers in a mature market which might involve significant costs to develop a brand and a retail presence.

(1805) The Commission therefore considers that the necessary investments and time required to enter as an MNO constitute a serious barrier to entry. Furthermore, any new entrant would have to start its network operations despite the competitive pressure exercised by the three established MNOs that already benefit from existing network infrastructure. In light of the above, the Commission preliminarily considers that the entry of an MNO in the next few years is unlikely.

(1806) As regards entry as a non-MNO, barriers to entry appear to be slightly lower, depending on the type of the non-MNO. As one respondent explained: "*The key step for any non-MNO to enter the UK market is to conclude a wholesale mobile access agreement to obtain access to an MNO's network. This access could be obtained either directly from the MNO or indirectly via a MVNA. The steps required to implement the non-MNO's technical requirements, the costs and the time involved in entering the UK market vary considerably depending on the nature of the non-MNO. For example, establishing a Service Provider, potentially relying the services of a MVNA / MVNE to obtain access, is less complex than for MVNOs that own more of their own systems and infrastructure that must be integrated with the systems and infrastructure of the MNO.*" [1536]

(1807) Respondents to the market investigation indicated that the timeframe to enter as a full MVNO would be of one to two years, and investment appears to be lower than in the case of an MNO.[1537] However, entry as a full MVNO still requires establishment of infrastructure such as a core network and to integrate that core network with the host MNO's own IT infrastructure. [1538]

(1808) Finally, respondents to the market investigation argued that entry as a partial MVNO or Service Provider could take place within six months to one year, as there is no need to establish a core network nor to integrate that core network with the host MNO's own IT infrastructure.[1539] For these reasons, entry as a partial MVNO or Service Provider also involves lower costs than entry as a full MVNO.[1540]

(1809) The fact that the number of full MVNOs is rather limited compared to the number of Service Providers active in the United Kingdom, supports this finding.[1541]

(1810) Respondents to the market investigation indicated that they expect new non-MNO entry on the market. For instance, Sky is expected to enter the market as an MVNO

[1535] Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 8.3 [ID2069].

[1536] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 50.

[1537] Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 48.

[1538] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 50 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 48.

[1539] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 50 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 48.

[1540] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 50 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 48.

[1541] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 50.

on O2's network in 2016 and FreedomPop as a Service Provider in the next few months.[1542]

(1811) The Commission considers that, while the required investment costs and time span suggest that barriers to entry as a full MVNO may be manageable, the main barrier to entry consists of the need to negotiate a wholesale access agreement with a host MNO. The Transaction would reduce the number of host MNOs from four to three and result in less choice of providers of wholesale services. Therefore in the future, it is likely that entry as a non-MNO will become more difficult.

(1812) In light of the results of the market investigation to date, the Commission preliminarily considers that the Transaction may make market entry as a non-MNO, and in particular as a full MVNO, more difficult as it would reduce competition in the wholesale market. The Commission has no evidence of potential entry by a new MNO, and considers that this does not appear likely in the near future.

(1813) Furthermore, even if entry of non-MNOs on the market would comply with the likelihood and timeliness conditions provided by the Horizontal Merger Guidelines (that is to say entry would be likely and timely), at this stage the Commission does not consider such entry sufficient to deter or defeat the anti-competitive effects of the Transaction, because, as shown in Section 8.2.1.3b), such non-MNOs would not be in a position to compete as effectively as an MNO with the merged entity.

(1814) Therefore, the Commission considers that the likelihood of MNO or non-MNO entry does not constitute a countervailing factor such as to offset the possible anti-competitive effects of the Transaction on the retail market for mobile telecommunication services in the United Kingdom.

8.3. Wholesale market for access and call origination on public mobile networks

8.3.1. Horizontal non-coordinated effects arising from the elimination of important competitive constraints

8.3.1.1. Introduction

(1815) This section sets out the Commission's concerns in relation to horizontal non-coordinated effects of the Transaction on the wholesale market for access and call origination services arising from the elimination of important competitive constraints.[1543] The Commission examines the presence of any countervailing factors, namely buyer power and entry in Sections 8.3.2.1 and 8.3.2.2.

a) Legal Test and the Commission's approach

i. The Legal Test

(1816) As explained in Section 8.1, under the Merger Regulation and paragraphs 24 and 25 of the Horizontal Merger Guidelines, the elimination of competition between two merging firms may give rise to a significant impediment of effective competition resulting from horizontal non-coordinated effects in oligopolistic markets, featuring a

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1542 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 51 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 49.

1543 Elsewhere in this Decision, the Commission may also refer to horizontal non-coordinated effects giving rise to price increases. This reference should be understood as also encompassing a slower decrease in prices than would occur absent the Transaction, as well as a reduction of output, choice or quality or slower innovation (see Horizontal Merger Guidelines, paragraph 8 and footnote 7).

limited number of players and particularly high barriers to entry, where the merging firms exert an important competitive constraint on each other and on the remaining competitors.

(1817) The factors listed in paragraphs 27 onwards of the Horizontal Merger Guidelines may influence whether or not significant horizontal non-coordinated effects would result from a merger, but not all of these factors need to be present to make significant non-coordinated effects likely and the list is not exhaustive.[1544] The presence of these factors may though have an impact on the degree of horizontal non-coordinated effects arising from the Transaction.

ii. The Commission's approach

(1818) Applying the legal test set out in the Merger Regulation and recalled above in Section 8.1, the Commission has assessed whether the Transaction is likely to lead to horizontal non-coordinated effects in the wholesale market for access and call origination services on public mobile networks in the United Kingdom, by eliminating the important competitive constraints exerted by the Parties on each other and reducing competitive pressure on the remaining competitors.

(1819) To this effect, first, the Commission examines the competitive constraint exerted by the Parties in the market, looking at market shares, concentration levels as well as shares of recently contested contracts (Section 8.3.1.2.a.(ii)). Then, it assesses the specific competitive constraints exerted by each of the Parties before and in absence of the Transaction (Sections 8.3.1.2.b. to 8.3.1.2.e. and Annex C). The Commission assesses in particular whether Three is an important competitive force pursuant to paragraph 37 of the Horizontal Merger Guidelines.

(1820) The Commission also assesses the likely behaviour of the merged entity post-Transaction (Section 8.3.1.2.f.) and the competitive position of the Parties' competitors, before and in absence of the Transaction, as well as their likely behaviour post-Transaction (Section 8.3.1.3).

(1821) The Notifying Party in its Reply to the Statement of Objections[1545] argues that the evidentiary value of certain third party submissions is diminished due to their potential involvement in seeking a commitments package from the Notifying Party. The Notifying Party argues that statements from TalkTalk, Sky, Virgin Media, SSE, Gamma and Dixons are informed by a clear bias and should not be treated as objective evidence.[1546]

(1822) The Commission notes that the above list includes the most important wholesale access seekers in the United Kingdom and that therefore their evidence has a factual relevance which cannot be disputed. The Commission also notes that the CMA in its Final Findings Report takes into account all third party evidence, including the evidence of the above third parties. There is no indication in the CMA's Final Findings Report that the CMA considers this evidence not to be credible.

(1823) In any event, the Commission's assessment takes into account the fact that certain third parties may have an interest in the Transaction and in any potential commitments offered by the Notifying Party when assessing the probative value of the submission by all third parties, including the ones mentioned above. In addition,

[1544] Horizontal Merger Guidelines, paragraph 26.
[1545] Reply to the Statement of Objections, sections 12.1.7 and 12.1.10.
[1546] Reply to the Statement of Objections, paragraph 1146.

the Commission does not base its decision only on the evidence provided by a single third party (or even by a few of them). To reach its conclusions the Commission has assessed all third parties' submissions together with a variety of other evidence, including contemporaneous internal documents, from the merging parties as well as from third parties, public information and has carried out quantitative analysis.

b) Market conditions

i. Structure of competition

(1824) As set out in Section 6.5.2.1, non-MNOs obtain access to a host MNO's network through a wholesale access agreement and use the host MNO's network to provide their services.

(1825) Both Three and O2 offer wholesale access and call origination on public mobile telephone networks in the United Kingdom, alongside Vodafone and EE. The Transaction would reduce the number of providers of wholesale access and call origination services from four to three.

ii. Categories of non-MNOs

(1826) There are over 100 non-MNOs currently active in the United Kingdom. Excluding those that are wholly or jointly owned by MNOs, non-MNOs' overall market share (at the retail level) is approximately [5-10]% in terms of subscribers and [0-5]% in revenues.[1547] In relation to the ability of non-MNOs to compete on the retail market, please see Section 8.2.1.3.b.

(1827) As explained in Section 6.5.2.1, there are different types of non-MNOs in the United Kingdom. Thus, in terms of network assets in infrastructure one may differentiate between full non-MNOs and light non-MNOs. Furthermore, in terms of target customer groups it is possible to differentiate between (i) mass-market fixed-mobile non-MNOs, (ii) mass-market mobile only non-MNOs and (iii) niche non-MNOs.

(1828) Figure 122 below (submitted by the Notifying Party) provides an overview of the main non-MNOs in the United Kingdom including the identities of their respective host MNOs.

[1547] This section refers only to independent non-MNOs and does not take into account non-MNOs which are wholly or partially owned by the MNOs. For example there are low price brands of MNOs (such as giffgaff for O2 and Talk Mobile for Vodafone). As these are 100% owned and fully controlled by MNOs, they do not introduce any additional competition on the market, or place an additional constraint on the MNOs. They are a means of price discrimination so that MNOs do not have to stretch their brands into the value part of the market. In addition, there are joint ventures between an MNO and a separate company (such as Tesco Mobile). They too are controlled by the MNO joint venture partner.

Figure 122: Overview of main MVNOs in the United Kingdom

MVNO	Type of MVNO	Market entry	Network provider
Virgin Media	Moving to full MVNO	1999	EE
BT Mobile	Full MVNO	2004	EE
Asda Mobile	Partial MVNO	2007	EE
Vectone	Full MVNO	2009	EE
Now Mobile	Partial MVNO	2010	EE
Lebara Mobile	Partial MVNO (niche, focus on ethnic customers)	2007	Vodafone
Amazon Kindle	Partial MVNO	2009	Vodafone
Truphone	Full MVNO	2008	Vodafone
XLN Telecom	Partial MVNO	2010	Vodafone
Gamma (MVNA)	Moving to full MVNO	2012	Vodafone (migrating to Three)[1548]
TalkTalk	Moving to full MVNO	2007	Vodafone (migrating to O2)
Lycamobile	Full MVNO (niche, focus on ethnic customers)	2006	O2
iD (Dixons)	Full MVNO	2015	Three

Source: Form CO, Section 6, Table 35.

iii. The role of MVNAs/MVNEs

(1829) Often MNOs decide not to participate in tenders for non-MNO contracts for various reasons, including the necessary technical work, the extent to which they have existing projects, and the likelihood of winning a contract (including taking into account whether the customer is new or has an incumbent host).[1549] Sometimes, this is a temporary bottleneck because of the demands of implementing non-MNOs in the pipeline.

(1830) Sometimes non-MNOs obtain wholesale access to an MNO's network not directly but indirectly through an MVNA/MVNE. Among non-MNOs, 41 have direct contracts with MNOs, with the remainder having indirect contracts through MVNAs/MVNEs.[1550] The latter can be commercially attractive to smaller non-MNOs since the set-up process is more straightforward and less costly.[1551]

1548 The Notifying Party noted in the Form CO, […]. Form CO, Section 6, footnote 653.
1549 CMA, Final Findings Report, paragraph 13.34 [ID4112].
1550 CMA, Final Findings Report, paragraph 2.49 [ID4112].
1551 CMA, Final Findings Report, paragraph 13.29 [ID4112].

(1831) Some of the main MVNAs/MVNEs are listed below:

On Three's network:[1552]

(a) **Globe Touch** (independent): Globe Touch is an MVNA and MVNE active primarily in relation to business customers through reselling network access and providing enabling solutions to those customers. Globe Touch obtains wholesale access services from Three.

(b) **AQL** (independent): AQL is both a non-MNO and an MVNE, providing some small business customers with MVNE services, as well as having its own direct end-user (business) customers via its own non-MNO.

(c) **Limitless** (independent): Limitless is an MVNA / MVNE that provides wholesale access and enablement services to small-scale MVNO customers. It has a retail and a business focus. Limitless obtains wholesale access services from Three.

(d) **X-Mobility** (independent): X-Mobility is an MVNA / MVNE that provides wholesale access and enablement services to small-scale non-MNO customers. It has a retail focus. X-Mobility obtains wholesale access services from Three.

(e) **Voiamo** (independent): Voiamo is both an non-MNO and an MVNA / MVNE, providing some small business customers with wholesale access and enabling services, as well as having direct end-user customers via its own two sub-brands. Voiamo obtains wholesale access services from Three.

(f) **HGES** (owed by the Hutchison group): CKHH has created HGES (also referred to as Hue), a sister subsidiary to Three, which is available to all CKHH domestic networks as an in house hosted core network solution MVNE. HGES offers its MVNE platform to Three to assist its hosting of light MVNO customers. HGES is in the early stages of development and no non-MNO customer has yet launched on Three's network using HGES.[1553] In an internal Three presentation, Three notes that HGES delivers a core network dedicated to non-MNOs, […].[1554] […]. HGES has been involved in a competing tendering process or informal commercial discussions in a number of potential wholesale customers since its launch in April 2015, such as […] and […]. Three negotiated the provision of wholesale access with […].[1555]

On O2's network:[1556]

(g) **Manx Telecom** (independent): Manx Telecom is provider of fixed, mobile and international telecoms and enablement services. It operates as an MVNO, as well as providing enablement (MVNE) and aggregation (MVNA) services to small MVNOs seeking wholesale access, with a focus on the business segment. Manx Telecom obtains wholesale access services from O2.

(h) **SSE Energy Supply Limited ("SSE")** (independent, no longer active): SSE was originally an MVNA/MVNE […]. SSE decided not to launch its retail

[1552] Notifying Party's response to RFI 81, Annex 45.
[1553] Notifying Party's response to RFI 81, question 47.
[1554] Three's internal documents, […].
[1555] Notifying Party's response to RFI 81, question 5.
[1556] O2's response to RFI 61, question 18; Notifying Party's response to RFI 81, Annex 45.

non-MNO in the middle of 2014. Therefore, SSE currently does not operate in the non-MNO market.

On EE's network:[1557]

(i) **Transatel** (independent): Transatel provides wholesale access (MVNA) and enablement solutions (MVNE) to both business and retail MVNO clients. According to the Notifying Party, it is the leading MVNA / MVNE in Europe. Transatel obtains wholesale access services from EE.

(j) **AQA Telecom** (independent): AQA Telecom was formed following a management buyout of Econet Wireless UK Limited, which first entered into an MVNO agreement with EE in 2010. AQA operates a number of MVNOs in the United Kingdom using the EE network.

(k) **Viacloud** (independent, no longer active): Viacloud became a MVNA on EE's network in 2012. However, it subsequently entered liquidation in 2014 without signing any third party MVNO customers.

On Vodafone's network:[1558]

(l) **Gamma** (independent, migrating to Three): Gamma is an MVNA involved primarily in providing mobile and fixed telecoms solutions to business customers through reselling network access (Gamma Resellers) and in certain cases also proving enabling services (Gamma Telecom) to those customers. Gamma was obtaining wholesale access services from Vodafone but is currently in the process of switching to Three.

(m) **Teleena** (independent): Teleena provides both resale (MVNA) and enablement (MVNE) services to its MVNO customers since 2010. It is primarily focused on the retail segment. Teleena obtains wholesale access services from Vodafone.

(n) **Cognatel** (independent): MVNA on Vodafone’s network since 2010. Cognatel is a United Kingdom version of a global platform created to provide wholesale mobile services to small MVNOs in the market in the United Kingdom.

(o) **Digitalk** (commissioned by Vodafone): Digitalk is an MVNE on Vodafone’s network since 2015. Digitalk is a bespoke, dedicated wholesale platform commissioned by Vodafone to support its wholesale business strategy.

(1832) A number of non-MNOs obtain wholesale access to Three's network through MVNAs/MVNEs.

1557 EE's response to RFI 82, question 13 [ID3943]; Notifying Party's response to RFI 81, Annex 45.

1558 Vodafone's response to RFI 83, question 12 [ID3747]; Notifying Party's response to RFI 81, Annex 45.

Figure 123: ***Indirect wholesale customers on Three's network since 2012***

Indirect MVNO Customer	Mode of access to Three's network
HP DataPass	GlobeTouch (MVNA/MVNE)
Uros	GlobeTouch (MVNA/MVNE)
Comfortway	GlobeTouch (MVNA/MVNE)
Huawei	GlobeTouch (MVNA/MVNE)
SAS	GlobeTouch (MVNA/MVNE)
Telfoni	X-Mobility (MVNA/MVNE)
Freedom Pop	X-Mobility (MVNA/MVNE)
Konnect	X-Mobility (MVNA/MVNE)
Simwood	Limitless (MVNA/MVNE)
ACL Mobile	Limitless (MVNA/MVNE)
Cellspan	Limitless (MVNA/MVNE)
GreenRoam	Limitless (MVNA/MVNE)
Media Markt	Voiamo (MVNA/MVNO)
AA	Voiamo (MVNA/MVNO)
Know How	Voiamo (MVNA/MVNO)
Gradwell Communication Limited	AQL[1559]
Janet 3G	AQL
Telecom Networks (Thistle Networks)	AQL
The One Point	AQL
Consega Limited	AQL
Anvil Mobile Limited	AQL

Source: Notifying Party's response to RFI 81, question 51.

(1833) To the extent that MVNAs/MVNEs are customers of the MNOs for wholesale access and call origination, the Commission will assess the effects of the Transaction on

1559 For completeness, AQL's role as an intermediary for MVNOs accessing Three's network is different from the role played by the other intermediaries with whom Three has a relationship, such as Limitless and X-Mobility. AQL provides both enablement (MVNE) services and network access (MVNA) services to its MVNO customers such as Janet 3G, but AQL also sells wholesale access directly to end-users (primarily enterprise customers). By contrast, Limitless, X-Mobility and other intermediaries who are customers of Three are mainly focused on reselling wholesale access to retail MVNOs, and do not have their own end-users.

MVNAs/MVNEs as part of its assessment of the wholesale market for access and call origination to public mobile networks.

iv. Contracting for wholesale access and call origination services

(1834) MNOs will negotiate on a case by case basis with non-MNOs and MVNAs/MVNEs.[1560] Key terms include the price of particular services (such as 3G and 4G services), minimum revenue commitments, exclusivity provisions, key performance indicators (KPIs) in relation to quality and technical support and the extent to which the non-MNOs may benefit from technology improvements that the MNO offers to its own retail customers during the life of the contract. In some cases, for example, where a light non-MNO is seeking to become a full non-MNO or a non-MNO is seeking to develop its own small cell network, the contract may also include provisions governing the obligations on the part of the MNO to support that transition. In addition, it is important to have a good working relationship and level of trust between non-MNOs and their host.[1561]

(1835) A number of non-MNOs invite the potential MNO hosts to bid for their services. Often they initially engage with the MNOs before seeking bids. The number of suppliers involved in the process is reduced as negotiations progress.

(1836) Not all the MNOs decide to bid for each wholesale access contract, as the bidding process is time consuming and costly. As shown in the CMA's Final Findings Report[1562] as well as in internal documents of MNOs (see recitals (1840) to (1844) below), in deciding whether or not to bid for a wholesale access contract, MNOs generally take into account a number of factors including short term considerations and long term strategic considerations:

(a) Practical considerations, such as the credibility of the non-MNO and its proposal, the likelihood that the contract will progress to completion and the MNO's assessment of its chances to winning it.

(b) Capacity considerations, both in terms of the work involved (for example a joining non-MNO may necessitate complex technical work which is incompatible with existing projects), available network capacity and whether the additional demand could result in possible congestion at some cell sites.

(c) Strategic considerations, include:

(a) The level of overlap between the MNO's and the non-MNO's target customers and so the likely extent to which the non-MNO will win customers at the MNO's expense ("cannibalisation"); and

(b) The likelihood that the non-MNO will obtain wholesale services on similar terms from another wholesaler (so that the MNO will lose retail customers whether or not it chooses to bid for the wholesale contract).

[1560] For ease of reference, when discussing the negotiation or tendering process for wholesale access and call origination services between MNOs on one hand and non-MNOs, MVNAs/MVNEs on the other, the term non-MNO shall include MVNAs/MVNEs, as the negotiation and tendering process is not impacted by the nature of the MVNA/MVNE as an intermediary (unless specified otherwise).

[1561] See responses to the Commission's Questionnaire Q27 to non-MNOs of 11 September 2015, question 73 and Notifying Party's response to RFI 56, Annex 11a – […]; Annex 11b – […]; Annex 12 – […]; Annex 13 – […]; Annex 14 – […]; Annex 16 – […]; Annex 19 – […]; Annex 22 – […]; Annex 23 – […]; Annex 24 – […]; Annex 25 – […]; Annex 26 – […]; Annex 27 – […].

[1562] CMA, Final Findings Report, paragraph 14.37 [ID4112].

(1837) These strategic considerations arise because any non-MNO that offers its services on the retail mobile market will do so to some extent in competition with the MNO which hosts it. All MNOs may therefore face a trade-off between serving a wholesale customer that wins retail customers and trying to win those customers directly, so it may be more profitable for the MNO to host the non-MNO if the level of overlap is small (for example if the non-MNO targets customers that would not otherwise buy from the MNO), so cannibalisation is small.

(1838) However, an MNO must also take into account the possibility that other MNOs may bid for the contract. If a rival hosts the non-MNO, then the MNO will still face cannibalisation but will not be able to offset this by earning any wholesale margin. The degree of cannibalisation depends on how strong the non-MNO's retail offer is, which in turn depends on how good an offer the rival makes – the wholesale price, network quality, whether it offers 4G, etc. This means that cannibalisation on the rival MNO may be lower, or higher, than on the first MNO. The presence of a rival will therefore increase the MNO's incentives to host, and incentives will be higher, the better the quality of contract the MNO expects the non-MNO to receive should it not bid.

(1839) On this basis, it is important to distinguish between mass-market and niche non-MNOs when assessing the impact of the Transaction on MNOs' incentives to supply wholesale mobile capacity. Niche non-MNOs (for example non-MNOs focussed on international calls) tend to be market-expanding from a host MNO's perspective, as they are seldom close competitors to the host MNO's main brand. They may also attract customers who may not have had a mobile phone, or encourage customers who may otherwise have used a prepaid subscription to switch to postpaid subscriptions. On the other hand, mass-market non-MNOs compete for a large proportion of the market and generally seek to win customers from the MNOs or from other non-MNOs rather than expand the overall retail market for mobile telecommunications services.[1563] Generally, MNOs are less willing to serve non-MNOs that compete for mass-market customers, as opposed to niche customer segments.

(1840) The considerations of MNOs in terms of cannibalisation of their market base is reflected in a number of internal documents. For example, O2 considers Sky as a potential non-MNO partner and takes into account that providing wholesale access to Sky (as well as to TalkTalk) would […].[1564]

(1841) O2's internal documents demonstrate that […]. Sky (with which O2 recently entered in a wholesale access agreement) will […]. And finally, […] enables O2 to […].[1565] O2 states in its internal documents that […]. O2 considers that […].[1566]

(1842) Similarly, in Three's internal documents, […]. For example, with regard to its recent agreement with Dixons, […]. It also took account of the fact that […]. Three concluded that […].[1567]

(1843) An internal presentation by Three states that […][1568]

1563 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 87.
1564 O2's internal documents, […].
1565 Annex 133 to the Form CO, […].
1566 Annex 133 to the Form CO, […].
1567 Annex 116 to the Form CO, […].
1568 Three's internal documents, […].

(1844) As a further example, […].[1569] Another example is the Notifying Party's claim that […].[1570]

(1845) The Commission has also identified evidence of instances in which non-MNOs demonstrate concerns about, or choose not to be hosted by, an MNO with which it competes at the retail level, whether directly with the MNO's retail business, or indirectly via competition with a non-MNO hosted by that MNO. For example, […]. Further examples are provided by other documents in the Commission's file.[1571] Certain non-MNOs, such as non-MNOs linked to a supermarket chain, may decide against partnering with an MNO host which already has a connection with another supermarket chain (such as O2's participation in the Tesco Mobile joint venture) because the non-MNO is concerned that the host MNO would focus on its own supermarket non-MNO joint venture at the expense of the independent supermarket non-MNO.

8.3.1.2. Assessment of the competitive constraints exercised by the Parties

a) General assessment

i. Notifying Party's view

(1846) The Notifying Party acknowledges that the Transaction will reduce the number of MNOs currently hosting non-MNOs from four (EE, Vodafone, O2 and Three) to three (EE, Vodafone and the merged entity).

(1847) According to the Notifying Party, however, Three is […] fourth player on the wholesale market for access and call origination on public mobile networks, with a market share of only [0-5]% based on revenues in 2014 and [0-5]% in 2015 (based on data up to June 2015).

(1848) In the Reply to the Statement of Objections,[1572] the Notifying Party argues that this market share is driven by Three's inability […]. Three hosts some minor wholesale customers but argues that it has struggled to attract serious interest in its network from existing large and new ambitious wholesale customers.

(1849) The Notifying Party argues in the Reply to the Statement of Objections and the Letter of Facts[1573] that Three's market share is a true indicator of Three's true competitive significance. In the Reply to the Statement of Objections,[1574] the Notifying Party argues that the Commission's analysis of the value of wholesale customers contested since November 2012 is flawed and does not credibly demonstrate that Three is a significant wholesale competitor for two main reasons.

(1850) First, the Notifying Party argues that Three's wholesale customers are very small, […] non-MNOs with predicted growth rates that are […] and more uncertain than those of big brand, mass-market non-MNOs. The Notifying Party submits that […].[1575][…]. Three argues that […].

[1569] […].
[1570] Reply to the Letter of Facts of 17 March 2016, paragraphs 149-151.
[1571] [CONF-ID 5 and 6]. Access to these documents was provided to the Notifying Party in the course of the proceedings under the data room procedure
[1572] Reply to the Statement of Objections, section 12.1.1.
[1573] Reply to the Statement of Objections, section 12.1.1; Reply to the Letter of Facts of 17 March 2016, section 11.1.3.
[1574] Reply to the Statement of Objections, paragraph 1050.
[1575] Reply to the Statement of Objections, paragraph 1051.

(1851) Second, the Notifying Party argues that the projections are based on biased assumptions and contain factual errors.[1576] In particular, the Notifying Party considers that the projections disregard established non-MNOs, disregard non-MNOs that choose not to launch a competitive process and only negotiate with their current host, include factual errors ([…]), and that the shares in later years are unlikely to be representative of the position going forward as they do not include any subsequent tenders that might take place over the next three years.

(1852) In the Reply to the Statement of Objections,[1577] the Notifying Party argues that the Commission's characterisation of the market dynamics as affected by large contracts and infrequent switching is inaccurate because if this were the case, historical market shares should show volatility over time and that this is not observed in the market shares presented in Figure 106 of the Statement of Objections.[1578]

(1853) In the Reply to the Statement of Objections,[1579] the Notifying Party also submits that the Commission's preliminary conclusion in the Statement of Objections that Three is active in tendering for and winning wholesale access contracts is based on analysis of "competitive processes" including informal discussions which were not followed by a formal bid. The Notifying Party argues that the construction of "competitive process" is imprecise and that only participation in a tender can be properly described as a competitive process, whereas participation in initial exploratory discussions has a completely different function to a tender.

(1854) The Notifying Party also notes that any finding that Three's projected wholesale market share on recent tenders is above its current overall market share, this is principally the result of the contract for Dixons, […]. In its Reply to the Statement of Objections,[1580] its Reply to the Letter of Facts of 17 March 2016[1581] and in its presentation in relation to the wholesale market at the Oral Hearing,[1582] the Notifying Party claims that Three won Dixons […]. The Notifying Party argues that these specific circumstances would not be present in Three's dealings with other non-MNOs.

(1855) Finally, […], the Notifying Party argues that […]. Three […].[1583]

ii. Commission's assessment

<u>Introduction</u>

(1856) Three is currently the smallest competitor in the market for wholesale access and call origination services, with only approximately [0-5]% market share in 2014 and [0-5]% in 2015 (based on data up to June 2015). The Commission examines the historical market shares of the four host MNOs in wholesale in recitals (1858) to (1863) and the HHI in recitals (1864) to (1867).

1576 Reply to the Statement of Objections, paragraph 1056.
1577 Reply to the Statement of Objections, paragraph 1048.
1578 Reply to the Statement of Objections, paragraph 1048.
1579 Reply to the Statement of Objections, section 12.1.2.
1580 Reply to the Statement of Objections, paragraph 1057.
1581 Reply to the Letter of Facts of 17 March 2016, section 11.1.3 and 11.1.4.
1582 Notifying Party's presentation at the oral hearing, Comments on the Wholesale Market, 7 March 2016, slide 9.
1583 Reply to the Statement of Objections, paragraph 1082; Reply to the Letter of Facts of 17 March 2016, section 11.1.4.

(1857) The Commission considers that Three's historical market share is not necessarily reflective of Three's competitive importance in the market and examines Three's share on an adjusted gross additions basis, namely Three's share of business won among recently contested non-MNO customers, taking into account the size and growth prospects of those customers (recitals (1868) to (1919)). The Commission's central estimate of Three's share on this basis is approximately [10-20]%.

Historical market shares

(1858) According to the Horizontal Merger Guidelines, market shares constitute useful first indications of the competitive importance of the market players.[1584]

(1859) The Notifying Party submits that, based on its best estimates, the merged entity's share of the relevant market for wholesale access and call origination on public mobile networks would be [50-60]% (both for 2014 and 2015). O2 and EE are the largest current providers of wholesale mobile services, with Vodafone third and Three the smallest.

(1860) Figure 124 provides the Parties' best estimates of the market shares of the mobile operators in the United Kingdom for the wholesale market for access and call origination on public mobile networks.

(1861) Because there is no readily available source of estimates of wholesale revenue for each MNO, the shares have been estimated on the basis of subscriber numbers. For 2014, this was done based on an average of quarterly subscriber numbers. For the 2012, 2013 and 2015 numbers presented here, quarterly data was not available and therefore the shares are based on annual subscriber numbers.

Figure 124: Each MNO's estimated share of wholesale revenues in the United Kingdom (including Tesco Mobile)

MNO	% wholesale revenues 2012	% wholesale revenues 2013	% wholesale revenues 2014	% wholesale revenues 2015
EE	[40-50]%	[40-50]%	[30-40]%	[30-40]%
Vodafone	[5-10]%	[5-10]%	[10-20]%	[10-20]%
O2 (incl. Tesco Mobile)	[50-60]%	[50-60]%	[50-60]%	[50-60]%
Three	[0-5]%	[0-5]%	[0-5]%	[0-5]%

Source: Form CO, Section 6, Table 36 and response to RFI 81, question 35.
Note: 2015 wholesale revenues are based on data for January - May 2015.

(1862) The estimates submitted by the Notifying Party suggest that Vodafone's share has grown in recent years based on the number of active subscribers as set out in Figure 124. The Commission notes that this appears counterintuitive when taken in the context of developments in the wholesale market, in particular the fact that […]. Further evidence in relation to Vodafone's performance in terms of wins is provided

1584 Horizontal Merger Guidelines, paragraph 14.

by other documents in the Commission's file.[1585] Vodafone's performance and the performance of the other MNOs on the wholesale market in recent years are discussed in quantitative terms in recitals (1868) to (1919). In light of the counterintuitive estimates of the Parties, the Commission calculated its own estimates based on monthly active subscriber information provided by the Notifying Party and the other MNOs.[1586]

(1863) Figure 125 and Figure 126: Each MNO's share of wholesale subscribers in the United Kingdom (excluding Tesco Mobile) show the development of each MNO's historical market shares over the period January 2013 to May 2015. These shares show that Vodafone's share of the market has been in decline over the period, while the other three MNOs have been growing, with Three's share of the wholesale market growing rapidly in the past few years from [0-5]% in 2013, [0-5]% in 2013 and [0-5]% in January to May 2015. The Commission considers that this acceleration in the growth of market share indicates a recent improvement in Three's competitive strength.

Figure 125: MNOs' shares of the wholesale market

[…]

Source: Commission analysis[1587]

Figure 126: Each MNO's share of wholesale subscribers in the United Kingdom (excluding Tesco Mobile)

MNO	% wholesale subscribers 2013	% wholesale subscribers 2014	% wholesale subscribers 2015
EE	[30-40]%	[40-50]%	[40-50]%
Vodafone	[30-40]%	[20-30]%	[20-30]%
O2 (excl. Tesco Mobile)	[20-30]%	[30-40]%	[30-40]%
Three	[0-5]%	[0-5]%	[0-5]%

Source: Commission analysis[1588]

Note: 2015 wholesale subscribers are based on data for January - May 2015.

Concentration levels – Herfindahl-Hirschman Index (HHI)

(1864) As set out in recital (398), the Horizontal Merger Guidelines explain that the absolute HHI level can give an initial indication of the competitive pressure in the market post-merger, while the change in the HHI is a useful proxy for the change in the concentration level directly brought about by the merger.[1589]

1585 […]. Access to this document was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1586 Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1587 Responses to RFIs 3 to 12 and follow up RFIs 15 to 25. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1588 Responses to RFIs 3 to 12 and follow up RFIs 15 to 25. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1589 Horizontal Merger Guidelines, paragraph 16.

(1865) The post-Transaction HHI on the overall wholesale market based on monthly subscriber data from January to May 2015 (that is, based on the most recent shares shown in Figure 126) would be […], following an increase of […] compared to the already high pre-Transaction value of […]. These values are above the presumption thresholds of absence of competition concerns under paragraphs 19 and 20 of the Horizontal Merger Guidelines[1590] and reflect a highly concentrated wholesale market pre-Transaction. The four MNOs account for the entire wholesale market, and two of those (EE and O2) account for [70-80]% of the market.

(1866) Over time, the increase in the HHI that would be brought about by the Transaction has grown. Using data over the 12 month period to May 2015, the increase brought about by the Transaction would be […], which is below the Commission's presumption threshold. In contrast, the increase in the HHI based on Three's share when considering only the most recent month for which data were available (May 2015) would be […]. The latter increase exceeds the threshold set out in the Horizontal Merger Guidelines. These changes over time reflect Three's increasing share of the wholesale market.

(1867) In light of the above, the Commission considers that the Transaction, by combining the […] operators, would increase the already very high level of concentration in the relevant market and lead to a more highly concentrated market post-Transaction.[1591] Moreover, the impact of the Transaction on concentration is greater now than it would have been in previous years or months.

Adjusted gross additions shares show that Three's historical market share does not fully reflect its competitive importance

(1868) The Commission considers that historical shares in the wholesale market are not necessarily a good indicator of competitive strength of individual competitors for several reasons and must be interpreted carefully. The Commission set out some of these weaknesses in recitals (1869) to (1875). In order to take these into account, the Commission has carried out an analysis of adjusted gross addition shares in the wholesale market that takes account of performance in terms of MNOs' success in competing for customers that were contested over a three-year period. The Commission's analysis adjusts these shares to take into account the growth prospects of each customer. On this basis, the Commission calculates that Three's adjusted gross addition share is approximately [10-20]%. The Commission's analysis is set out in recitals (1878) to (1919) below.

[1590] The equivalent pre- and post-Transaction HHIs on the overall wholesale market based on the Notifying Party's estimates of market shares are […] and […], respectively, implying an increase of […].

[1591] Horizontal Merger Guidelines, paragraphs 20 and 21.

Figure 127: Projected value in 2018 of wholesale customers contested by MNOs since November 2012

Operator	2018	
	Value (GBP million)	Share
Three	[…]	[10-20]%
O2	[…]	[30-40]%
Combined	**[…]**	**[40-50]%**

Source: Commission analysis of wholesale customer data provided by MNOs and MVNAs / MVNEs[1592]

(1869) As indicated in recital (1868), the Commission considers that historical market shares in the market for wholesale access and call origination do not fully reflect a company's role and competitive potential in the market for a number of reasons.

(1870) First, non-MNOs typically switch infrequently[1593] and an established non-MNO must incur substantial switching costs of a commercial, contractual and technical nature in order to change hosts.[1594] This means that established customers may not be contestable in the sense that even in the event that an MNO offers wholesale access terms that are more attractive than the terms applying to their current agreement, they may not switch to the more attractive host in the short run. Consequently, it may take some time before trends in the MNOs' ability to win new business will be reflected in historical market shares.

(1871) Second, competition in the wholesale market frequently takes place for newly entering customers (that is newly launching non-MNOs). Out of a total of 33 competitive processes identified by the Commission since 1 November 2012, 25 (76%) were for customers newly launching as a non-MNO. In the short run, success in winning newly launching non-MNOs will have very little impact on an MNO's historical market shares because a new non-MNO customer will begin with zero subscribers and revenues in its first year of operation. Therefore, where an MNO wins a new entrant non-MNO customer that is expected by MNOs to have strong growth prospects in terms of the wholesale revenues they will generate,[1595] the

1592 Vodafone's response to RFI 55 [ID2558] and EE's response to RFI 54 [ID2491]. Access to this data for EE and Vodafone was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1593 As described in recital (1826), there are over 100 non-MNOs active in the United Kingdom. As discussed in recital (1871), only 33 of these were involved in formal tenders or informal discussions about hosting during a three-year period. The Commission identified only four cases where a non-MNO switched from an incumbent to a new host. For a significant number of non-MNOs, switching did not occur.

1594 In response to the Commission's Questionnaire Q27 to non-MNOs of 11September 2015, 70% of respondents considered it was impossible for non-MNOs to migrate their existing customers to a new host MNO, with some non-MNOs referring to problems the need to switch SIMs, locked handsets, technical integration issues for 'thick' MVNOs and contract changes. The Commission has previously recognised high switching costs for non-MNOs, for example Commission decision of 2 July 2014 in case No. M.7018 – *Telefónica Deutschland/E-Plus*, recital 825 to 828.

1595 Newly launched MNOs may be expected to be especially significant customers for several reasons including, for example, because they have an established brand, an extensive distribution network or complementary product offering with which retail mobile products could be bundled or cross-sold.

importance of that "win" will generally be substantially underestimated by historical market shares in the short run and, therefore, so too will the competitive strength of the MNOs that win those customers.

(1872) Third, in the wholesale market for access and call origination on public mobile networks, a small number of large contracts can account for a relatively large proportion of revenues. Small differences in the competitive offerings for individual customers can therefore lead to high market shares for the marginal winner, and correspondingly a low market share for the marginal loser or losers of the competition. As such, the resulting market shares may be strongly influenced by the results of individual contracts when assessed over a short period of time. When assessed over longer periods, the influence of individual contracts may be dampened and market shares become a better indicator.[1596]

(1873) Finally, bidding and/or negotiation processes are a feature of many transactions in the wholesale market for access and call origination on public mobile networks, and especially for larger contracts. Firms competing in tenders or informal negotiation processes can play an important role in the competitive outcome even in cases when they do not win the contract in the end, for example by acting as a viable alternative for the customer in a bidding process or providing leverage in the negotiation process. This influence on outcomes for customers is not always reflected in the overall market share.

(1874) The recent analysis by the CMA of the BT/EE transaction supports the Commission's view that historical market shares do not reflect the MNOs' competitive position. The CMA states that *"when large contracts are allocated through bidding, such as is the case for some wholesale mobile contracts, static market shares may not be a good indicator of the strength of constraint provided by each competitor – firms with relatively "low" market shares at a point in time may be able to constrain the behaviour of larger players by bidding strongly for the same contracts"*.[1597]

(1875) The view that Three is an important competitor in wholesale, which exercises a higher competitive constraint than what its market share would indicate, is also reflected in many responses of market participants in the Commission's market investigation.[1598] For example […] has recognised the weakness of historical market shares.[1599]

(1876) With regard to Three's argument that its historical market share has consistently been under 1% over eight years to 2014 (that is, not including the first half of 2015) (recital (1848)), the Commission notes that the weaknesses of historical market shares as an indicator of an operator's current competitive strength apply to the interpretation of historical market shares both when referring to the historical market share in the most recent year and when referring to the annual shares up to and

1596 Consider, for example, a hypothetical market with two symmetric competitors, each competing for a single customer and with an equal (50%) chance of winning the contract. After the competition, given there is only one customer, one competitor will hold 100% market share, while the other will hold zero. These shares would not adequately reflect the strength of the competitors (which in this example, is equal). However, in the long run, if each competitor continues to have a 50% chance of winning, you would expect their average market shares over time to be equal to 50%.

1597 CMA, Final Findings Report, page 142, footnote 425 [ID4112].

1598 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 78-79; responses to Questionnaire Q67 to non-MNOs of 4 December 2015, question 25.

1599 […].

including the most recent year. To the extent that an operator improves its relative competitive strength, the infrequent switching by established customers and the small initial size of new customers will result in a delay in this competitive strength being reflected in its market share. This holds even if the improvement arises following a long period of no or of limited improvement. In relation to Three, the increase in its competitive strength only arose in the last few years, following Three's increased investments in Three's wholesale capabilty (as set out in recitals (2065) to (2072)).

(1877) In relation to the claim that Three has not won any mass-market non-MNOs and does not host any of the Top 10 MVNOs, the Commission notes that Three won the Dixons' iD wholesale contract and hosts iD, which […]. The Commission also notes that as of February 2016, Dixons had a subscriber base of […] and has increased its subscriber base by an average of […] net new subscribers per month since June 2015 (as depicted in Figure 129).[1600] Compared to the list of top ten non-MNOs provided by the Notifying Party in its Form CO (Section 6, Table 3) and shown in Figure 11, Dixons is already the sixth-largest independent non-MNO by subscribers.[1601]

(1878) In view of the above weaknesses of historical market shares in terms of reflecting the competitive strength of individual operators, and in order to form a view of the likely dynamics in the market for the years following the implementation of the Transaction, the Commission has (i) considered the shares of contestable customers recently won by MNOs in the wholesale market, discussed in the following recitals and (ii) assessed qualitative evidence on the importance of Three in bidding processes in recitals (1936) to (1983). In order to ameliorate any impact of 'lumpiness' (described in recital (1879) below), the Commission carried out its analysis over a three-year period.

(1879) With respect to the Notifying Party's argument that a lack of volatility in historical market shares is inconsistent with infrequent switches of lumpy contracts, the Commission considers volatility in historical shares is not necessary to identify lumpy markets and infrequent switching as features of the dynamics of a market.[1602] One potential reason, for example, is that infrequent switching, especially by large customers, may in fact give rise to stable market shares. Moreover, important new entrant wholesale customers that have or are expected to have a significant impact on market shares over a number of years will not cause market shares to "jump" immediately after they are won but nevertheless may cause them to change rapidly after they are launched. The Commission therefore considers that while "lumpiness" and infrequent switching may, under certain conditions, be reflected by volatile market shares, this is not a necessary condition for these market dynamics to be identified. Moreover, the Commission considers that there is clear standalone evidence of infrequent switching, as described in recital (1870), as well as of a distribution of contract sizes that includes a small number of very large contracts on one end and a large number of smaller contracts on the other. For example, even

1600 June 2015 represents the first full month of operation of Dixons MVNO, iD, following its launch in May 2015.

1601 That is to say, excluding non-MNOs that are partly or fully owned by another MNO, namely Tesco Mobile and BT Mobile.

1602 For example, in a market where switching is so infrequent that it does not occur during the period in question, market shares will not be affected by changes in competitiveness. Alternatively, a small number of switches by large contracts may have no significant impact on market shares if each MNO both wins and loses similar amounts of wholesale revenues to the extent that those wins and losses partially or wholly offset each other.

among the 10 largest non-MNOs by subscriber numbers listed in Figure 11, [..] is [50-60]% larger than the next […] non-MNO ([…]) and 15 times largest than the tenth-ranked non-MNO, […]. Moreover, Virgin Media alone accounts for [40-50] % of all subscriptions.[1603] Moreover, the shares of each of the MNOs are sensitive to individual contracts. For example, two customers – Lycamobile and Manx – account for [50-60]% of O2's wholesale subscriber base (excluding Tesco Mobile) by number of subscribers as at May 2015.[1604] In light of the above, the Commission concludes there is sufficient evidence that the wholesale market is characterised by "lumpy" contracts and infrequent switching and that it is therefore appropriate to MNOs' performance over several years.

(1880) In order to identify contestable wholesale customers won by MNOs in recent years, the Commission requested in RFIs 54, 55, 56 and 57 of 20 November 2015 that the Notifying Party and the other MNOs provide details of all non-MNOs for which they engaged in a competitive process, including by participating in formal tendering processes or informal discussions relating to potentially hosting a non-MNO (even where not followed by a formal bid) from 1 November 2012.[1605] The Commission also sent requests to MVNAs/MVNEs to identify new customers won by MNOs indirectly.[1606]

(1881) The Commission identified a total of 33 cases of non-MNO customers engaging in a competitive process including either a formal tender process or informal discussions related to potential hosting that were sufficiently advanced to identify the winner or likely winner.

(1882) As discussed in recital (1871), the value of new entrant non-MNOs in their initial years may not reflect their likely importance in the near future. In order to take into account the variation in the potential growth of wholesale customers, the Commission also requested that each MNO provide their internal projections of the value of these wholesale customers in terms of wholesale revenue in GBP for 2016, 2017 and 2018.

(1883) In certain cases, the Commission used alternative sources of information to approximate the value of certain customers for which data were not available:

(a) In the case of four small customers, the Commission assumed constant linear growth rates to generate projections for 2017 and 2018. As these are recently launched non-MNOs in a relatively rapid growth phase, this may overestimate their value, and therefore the projected value of customers won by EE (the relevant host MNO) since November 2012.

1603 Access to the underlying data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1604 Access to the underlying data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1605 RFIs to the EE (RFI 54), Vodafone (RFI 55), Notifying Party (RFI 56) and O2 (RFI 57) and RFI 85 to the Notifying Party. The Commission has recognised the importance of bidding data analysis in previous cases such as in Commission decision of 13 July 2005 in case No. M.3653 – *Siemens/VA Tech*, and Commission decision of 2 September 2003 in case No. M.3083 – *GE/Instrumentarium*.

1606 Questionnaire Q86 to MVNAs/MVNEs of 21 December 2015. The Commission considers that customers purchasing wholesale access to a given MNO's network through an MVNA/MVNE are relevant since MVNAs/MVNEs selling wholesale access are dependent on their host MNOs for the network components of the services they offer and, hence, cannot be considered as independent competitive forces in the market. This is especially the case where MVNAs/MVNEs have ownership links with the relevant host MNO.

(b) For one customer, the Commission used its total interconnection costs in 2014, which includes origination, transport and termination costs and therefore is likely to overestimate its value. The average monthly growth rate of these costs during 2014 was approximately zero, so the same value was used for each year.[1607]

(c) The Commission used projections contained in internal documents of Three, for […],[1608][…][1609]and […].[1610]

(1884) In order to assess the performance and competitive strength of each MNO in recent competitive interactions for contestable customers, and to differentiate between non-MNOs that are expected to be small or large (that is, taking into account customers' likely growth prospects), the Commission used the above-described information (recital (1883)) to calculate each MNO's share of the value of all non-MNOs contested in the three years between November 2012 and November 2015 based on the projected value of those customers in 2016, 2017 and 2018. The Commission notes that this approach amounts to the calculation of wholesale gross addition shares over a three-year period, with an adjustment to adjust to ensure the shares reflect the differing growth prospects of recent entrant non-MNO wholesale customers.

(1885) The Commission notes that there is a relationship between an MNO's adjusted gross adds shares by projected value and that MNO's eventual market share, as MNOs winning a gross adds share that is greater than its historical market share will win market share from those MNOs that win smaller gross adds shares than their historical market share under certain conditions. The Commission discusses these conditions and assesses the extent to which they apply in this case in recitals (1888) to (1891).

(1886) The resulting shares are presented in Figure 128. The Parties' combined share of wholesale value among contested customers since November 2012 is [40-50]% when weighted by those customers' projected value in 2018. By this measure, Three's share is greater than its historical market share ([10-20]% vs. [0-5] %), which reflects Three's recent success in attracting customers with significant expected growth.[1611]

1607 […]. Access to this data, including the identity of this particular MNO, was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1608 Three's internal documents, […].

1609 Three's internal documents, […].

1610 Three's internal documents, […].

1611 Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

Figure 128: Projected value over three years of wholesale customers contested by MNOs since November 2012, by winning MNO

Operator	2016		2017		2018	
	Value (GBP million)	Share	Value (GBP million)	Share	Value (GBP million)	Share
Three	[…]	[0-10]%	[…]	[10-20]%	[…]	[10-20]%
O2	[…]	[0-5]%	[…]	[10-20]%	[…]	[30-40]%
Combined	**[…]**	**[10-20]%**	**[…]**	**[30-40]%**	**[…]**	**[40-50]%**

Source: Commission analysis of wholesale customer data provided by MNOs and MVNAs / MVNEs

(1887) The Notifying Party submits that it is unlikely that Three's market share would suddenly jump to 10-20% within 2017-2018,[1612] and that the shares in later years are unlikely to be representative of the position going forward, as they do not include any subsequent tenders that might take place in subsequent years.[1613] However, the Commission considers that this misinterprets its analysis. The Commission has not sought to calculate a projected market share of the Notifying Party or other MNOs. Rather, the Commission has sought to calculate the share of value contested in the period November 2012 to November 2015 that was won by Three, using projected rather than current values to take into account the differing growth prospects of customers.

(1888) Nevertheless, as mentioned in recital (1885) an MNO's adjusted gross adds shares by projected value can be a good indicator of an MNO's eventual market share under certain conditions. In particular, for a given MNO, convergence of historical market shares to gross adds market shares will be more rapid if (i) the size of contestable customers is large relative to the current size of the market; (ii) the MNO does not lose business, or loses a proportion of its customer base that is smaller than other MNOs, (iii) the MNO's customers do not underperform relative to their projections disproportionately compared to other MNOs, and (iv) the MNO's competitive strength does not decline (or improves) relative to other MNOs during the period over which the shares are calculated.

(1889) In this regard, the Commission notes that the size of those customers contested during the three-year period is large relative to the market. The Commission's analysis incorporates Virgin Media, BT, TalkTalk and ASDA, which based on the Notifying Party's estimates account for […] million wholesale subscribers, more than half of the total of wholesale subscribers (excluding Tesco Mobile) based on information provided by each of the MNOs.[1614] The Commission considers this is very likely to underestimate the size of the cohort of contestable customers analysed by the Commission because it includes only four example customers (that is to say it excludes some existing contestable customers with incumbent hosts) and, moreover,

1612 Reply to the Statement of Objections, paragraph 1058; Reply to the Letter of Facts of 17 March 2016, paragraph 165.

1613 Reply to the Statement of Objections, paragraph 1056.

1614 Access to the underlying data, including the exact total number of wholesale subscribers, was provided to the Notifying Party in the course of the proceedings under the data room procedure.

it does not include any new entrant customers which are projected to be large relative to the wholesale market and likely to have an impact on wholesale market shares. Therefore, a large proportion of the market has been contested in the period over which the gross adds shares by projected value were calculated.

(1890) The Commission also notes in this regard that […]. Rather, […]. Further evidence is provided by other documents in the Commission's file.[1615] The fact that Three […] means that its market share will, other things being equal, converge to its gross add share at a more rapid rate.

(1891) The extent of any effect of uncertainty about the projected value of Three's customers on its gross adds share, and therefore the growth of its market share, is examined in greater detail in recitals (1899) to (1952).

(1892) The Notifying Party argues that the Commission's analysis accounts for recently contracting non-MNOs and unreasonably disregards non-MNOs which were not contested (that is, non-MNOs which did not engage in competitive processes as described in recital (1851)).[1616] The Commission has set out the rationale for focusing on customers that have been contested in recitals (1869) to (1878).

(1893) With regard to the Notifying Party's argument that contestable customers exclude customers that choose not to launch such a process and instead to negotiate with their current host,[1617] the Commission agrees that the set of contestable customers includes customers that (actively) choose to remain with their current host. While the Commission does not hold data on within-contract negotiations between a non-MNO and its current host MNO, any such occasion wherein the relevant non-MNO discussed with a potential alternative host was included in the data used for this analysis. Given that the competitive offerings of MNOs are not transparent (as they involve discussions on pricing, non-price offering and technical aspects related to hosting), the Commission considers that it is likely that the significant majority of those customers that would have seriously considered switching is captured within the data used for its analysis. In addition, the Commission notes that a large proportion of the value of the wholesale market has been captured by the Commission's analysis, as discussed in recital (1889).

(1894) The Notifying Party argues that the inclusion of informal discussions relating to hosting *"overestimates the number of actual tenders"* (which the Commission understands to refer to formal tender processes including the issue of a request for proposals, or similar tender processes). The Commission considers that it would be inappropriate to exclude instances of switching or winning a new customer that does not include a formal bidding process, as it is clear that these constitute examples of competitive interaction. However, the Commission agrees that it is possible that some instances of informal discussions that do not proceed to any switching or new wholesale contract may not reflect a truly contestable customer. While this is not necessarily the case, the Commission has assessed the impact of including these customers in the analysis.

(1895) The 33 "competitive processes" identified by the Commission, include 28 instances of (new or existing) customers choosing a new host and four instances where an

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1615 Access to the underlying data in relation to Vodafone and EE's performance was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1616 Reply to the Statement of Objections, paragraph 1056.

1617 See recital (1851).

existing customer held discussions with a potential alternative host but ultimately remained with the incumbent host. Of these four cases, one customer […] and therefore did not affect the shares calculated by the Commission in that time period.[1618] Therefore, including instances of informal interaction that do not give rise to a switch gives rise to a smaller wholesale gross add share by projected value than if such instances were excluded.

(1896) With regard to the Notifying Party's argument that Three's projected wholesale market share on recent tenders is principally the result of one individual contract, namely that of Dixons,[1619] the Commission notes that each of the other MNO's shares is also mainly driven by one or two contracts and that this is reflective of the 'lumpy' nature of contracts in the wholesale market. Excluding Virgin Media and BT would reduce EE's share by [30-40]% and [30-40]%, respectively; excluding Sky would reduce O2's share by [60-70]%; and excluding Lebara would reduce Vodafone's share to [0-10]%.[1620] In this sense, Three's share is less sensitive to a single contract than certain other MNOs.[1621] Nevertheless, the Commission notes that excluding Dixons from the analysis would reduce Three's share of [10-20]% by [50-60]%. The remaining [5-10]% share of wholesale gross adds by projected value, would still be much higher than Three's historical market share and is illustrative of Three performing more strongly than would be suggested by its historical market shares even through success in competing for contracts other than that of Dixons.

(1897) The Notifying Party additionally argues that the Commission should not take into account the projections of Dixons, […]. The Notifying Party's argument that Dixons was a unique opportunity from which it cannot be inferred that Three could win further mass-market MVNOs is discussed in recitals (1946) to (1953); the Commission sets out its reasoning in recitals (1955) to (1956) for concluding that, absent the Transaction, Three would have secured a wholesale agreement with […]; and the Commission's assessment of the relevance of its success in […] to Three's competitive position in the United Kingdom are discussed in recitals (1957) to (1958).

(1898) The Notifying Party argues in the Reply to the Statement of Objections[1622] and the Reply to the Letter of Facts of 17 March 2016[1623] that the predicted growth rates of Three's wholesale customers are not credible and that it is not credible for the Commission to assume that Three's long term projections will be met.[1624] The Notifying Party claims that […] in recital (1854). The Notifying Party argues in recital (1850) and that Three's customers, by virtue of their being [small non-MNOs], are more uncertain than that of big brand, mass-market MVNOs.

1618 Vodafone's response to RFI 55 [ID2558] and EE's response to RFI 54 [ID2491]. Access to this information, including details about the outcome of the competitive processes, was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1619 Reply to the Statement of Objections, paragraph 1057.

1620 Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1621 Vodafone's response to RFI 55 [ID2558] and EE's response to RFI 54 [ID2491]. Access to this data, including the identity of these particular MNOs, was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1622 Reply to the Statement of Objections, paragraph 1050.

1623 Reply to the Letter of Facts of 17 March 2016, paragraphs 167 to 175.

1624 Reply to the Letter of Facts of 17 March 2016, paragraph 167.

(1899) As an initial observation, the Commission notes that it does not assume that the projections provided by Three will be met with certainty. While the Commission considers that the projections of non-MNOs' performance provided by the MNOs form a useful basis to compare their growth prospects, the Commission nevertheless notes that uncertainty exists with respect to future performance and, therefore, the Commission has assessed both (i) evidence on the credibility of the projections, and (ii) the sensitivity of Three's estimated share of recent wins to changes in non-MNOs' performance relative to those projections. This assessment is carried out first in relation to Dixons and subsequently in relation to other non-MNO customers in recitals (1940) to (1952).

(1900) The Commission notes that in its Response to the Letter of Facts[1625], the Notifying Party argues that the forecasts provided in respect of […] should not be considered a 'best case' scenario but rather a realistic estimate from a sophisticated commercial operator based on the information currently available. The Commission considers that a similar logic can be applied in the case of projections on the performance of […]– indeed, more than is the case with […] – with both an […].

(1901) […][1626] […].[1627] […].[1628]

(1902) In addition, the Notifying Party submitted revised forecasts to reflect the current market performance of its non-MNO customers.[1629] […].

(1903) […].[1630] […].

(1904) […],[1631] […].

(1905) […],[1632] […].

1625 Reply to the Letter of Facts of 17 March 2016, paragraph 23.
1626 […]
1627 […].
1628 Three's internal documents, […].
1629 Reply to the Statement of Objections, Annex C1.1.
1630 Annex 158 to the Form CO.
1631 […].
1632 […].

Figure 129: […]

	Wholesale Invoice (GBP)	Minutes 000's	SMS 000's	MB's 000's	Average Base	Average Mins	Average SMS	Average MB
May '15	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
June '15	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
July '15	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Aug '15	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Sept '15	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Oct '15	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Nov '15	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Dec '15	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Jan '16	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Feb '16	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Total	**[…]**	**[…]**	**[…]**	**[…]**		**[…]**	**[…]**	**[…]**

Source: […].

Figure 130: […]

[…]

Source: […]

Figure 131 […]

[…]

Source: […]

(1906) The Notifying Party submits in its Reply to the Letter of Facts of 17 March 2016 that […].[1633] The Commission considers that […]. The Commission notes that […].[1634] In addition, the Commission refers to [1635] […].[1636] […].[1637] […].[1638]

(1907) The Notifying Party argues that […].[1639] […].

(1908) In light of the above, the Commission concludes that […].

(1909) Separately from the credibility of the forecasts, the Commission has also assessed the potential sensitivity of Three's share of recently contested customers as calculated by the Commission to variance in Dixons' performance relative to its projections.

1633 Reply to the Letter of Facts of 17 March 2016, paragraph 171.
1634 Reply to the Statement of Objections, paragraph 1080.
1635 […].
1636 […].
1637 […].
1638 […].
1639 […].

(1910) The Commission considered two conservative scenarios on […].[1640] […].

(1911) The Notifying Party submits that […]. […].The Commission notes that […].

(1912) The Commission notes that, to the extent any underperformance relative to projections would result in Three ultimately holding a smaller share of the value of customers contested since 2012, underperformance by the other MNOs' customers would conversely contribute to Three holding a greater share. For example, O2's forecast is […]. O2's forecasts […].

(1913) With regard to customers other than Dixons, the Commission notes that, […]

(1914) The Notifying Party submitted in its Reply to the Statement of Objections[1641] descriptions of the current market performance of […] of Three's non-MNO customers and indicated that Three […].[1642] The Notifying Party's advisors, as part of the data room procedure, adjusted the shares calculated by the Commission to reflect what they submit are current reasonable growth projections as well as removing some customers that they argue should not be attributed to Three as part of this calculation.[1643] The Notifying Party submits that […].

(1915) The Commission considers that, while some adjustments to forecasts may be reasonable in view of positive or negative signals emerging over time, the reasonable level for those adjustments is difficult for the Commission to verify to the extent they are made on qualitative grounds. However, it is possible for the Commission to leave open the reliability of the newly submitted forecasts as the magnitude of the adjustments is small enough that they do not materially affect the Commission's conclusions, as set out in the following recitals (1916) to (1920).

(1916) The Notifying Party provides […].[1644] […].

(1917) Three's share of wholesale revenues from customers contested since November 2012 based on projected values in 2018 adjusted by the Notifying Party's advisors in the data room are [10-20]% (compared to the higher value of [10-20]% as calculated by the Commission), taking into account the Notifying Party's current reasonable growth projections.[1645] The Commission considers that, while lower, a share of this magnitude would still constitute a share of wins considerably greater than Three's historical market share. The Commission notes that these adjustments include not only adjustments to the uncertainty of projections (relating to all of Three's customers including Dixons) as well as the removal of customers which the Notifying Party argues should be excluded from the analysis, with which the Commission disagrees as outlined in recital (1897) above.

(1918) The Commission notes that the 'reasonable current projections' provided by the Notifying Party[1646] differ from the adjustments made in the data room. The total value in 2018 of the customers won by Three based on the projections submitted

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1640 Access to this data, including the precise figures, was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1641 Reply to the Statement of Objections, paragraph 1055.

1642 Reply to the Statement of Objections, paragraph 1055.

1643 Reply to the Statement of Objections, Annex B4.1.

1644 Reply to the Statement of Objections, paragraph 1052.

1645 Access to this data, including the precise figures, was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1646 Reply to the Statement of Objections, Annex C1.1.

directly[1647] is GBP […] million (again, excluding […] and […]), compared to GBP […] based on the projections used by the Commission when originally calculating the shares. In order to assess the sensitivity of the Commission's analysis to the Notifying Party's adjusted forecasts, the Commission used this smaller amount of GBP […] million to calculate the value of customers contested since November 2012 and Three's share thereof. On this basis, Three's share is reduced to [10-20]%.[1648]

(1919) In light of the above, the Commission concludes that Three's share of recently contested customers by projected value in 2018 is not very sensitive to uncertainty around the projections.

Conclusion on the general assessment

(1920) Based on the above, the Commission considers that Three's 2014 market share fails to capture the current competitive strength of Three in the market and its importance in the competitive process in the future. The difference between the historical market share and the share of Three's wins is a strong indicator that Three is an important competitive force which has more of an influence on the competitive process than its market share would suggest, in accordance with paragraph 37 of the Horizontal Merger Guidelines.[1649]

b) The competitive constraints currently exerted by Three on O2 and on other competitors

i. Notifying Party's view

(1921) The Notifying Party argues in its Reply to the Statement of Objections,[1650] that there would be no removal of a competitive force on the wholesale market for access and call origination services on public mobile networks in the United Kingdom post-Transaction. The Notifying Party argues that the Commission overstates Three's competitive significance in the wholesale market and that […].

(1922) The Notifying Party argues that historically it has […] in the wholesale market for access and call origination on public mobile networks. First, as a new entrant to the mobile market in the United Kingdom in 2003, […]. These contributed to the public perception that the Three network was […]. Second, Three does not have its own 2G network but instead relies on a national roaming agreement with […]. […]. Third, until recently, […].[1651][…].

(1923) In 2011, non-MNO […] terminated its wholesale access agreement with Three and […]. The Notifying Party argues that […] contributed to […]'s decision to switch away from Three in 2011.

(1924) The Notifying Party argues that Three's non-participation in certain bidding processes points to the same root cause, which is Three's […].[1652] The Notifying Party argues that for Three to be an important competitive force, […]. The Notifying

1647 These figures exclude Voiamo and Personal Group, which were won by Three prior to November 2012 but were included in the spreadsheet.

1648 Access to this data, including the precise figures, was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1649 Horizontal Merger Guidelines, paragraph 37.

1650 Reply to the Statement of Objections, section 12.

1651 On-boarding / supporting capability refers to the systems and processes (including systems capacity) needed to support the provision of services to a non-MNO, and the migration, over a short period of time, of a significant number of that non-MNO's customers onto the host MNO's services.

1652 Reply to the Statement of Objections, paragraph 1067.

Party argues that Three's lack of significance in the wholesale market is reflected by the fact that Three did not participate in bids for the Post Office, BT, TalkTalk, Sky and SSE, and that it was not invited to participate in tenders for […] and […]. The Notifying Party submits that Three considered it was unlikely to be in a position to bid credibly for TalkTalk.[1653]

(1925) The Notifying Party argues that with few exceptions, all instances where Three has participated in a tender are with small […] rather than with mass-market non-MNOs. The Notifying Party argues that […]. According to the Notifying Party, […]. According to the Notifying Party, […]. […].

(1926) In its Reply to the Letter of Facts of 17 March 2016,[1654] the Notifying Party argues that the evidence relied upon by the Commission in relation to […] does not support the Commission's finding that Three is an important competitive force.

(1927) The Notifying Party argues[1655] that Three's mere presence in the market and in negotiations does not have a material competitive impact. The Notifying Party argues that in a sealed bid auction participants care only about what the second-best bid might look like because it is that bid alone that could cost them the contract. Whilst bidders might not always be able to identify exactly which of their rivals might proffer the next best bid, they will not factor in those rivals who could not secure a winning bid. Moreover, the Notifying Party argues that the other MNOs do not consider Three or its participation (or lack of participation) as an important factor in submitting their bids.

(1928) In its Reply to the Letter of Facts of 17 March 2016,[1656] the Notifying Party argues that the Commission would have to show that the hints or assumptions of Three's involvement in the tender negotiations actually led the competing MNOs to adjust their pricing or their terms.

(1929) In relation to the Commission's view that Three offers 4G services at competitive rates, the Notifying Party argues that Three is not unique in offering 4G to its wholesale customers.[1657] The Notifying Party argues that all mass-market non-MNOs have 4G capability except Virgin Media. The Notifying Party argues that the Commission is only able to compare the offers of Three with those of the other MNOs […]. The Notifying Party argues that […]. The Notifying Party points to the forthcoming launches of Sky and TalkTalk on O2's network where both customers will have 4G access […]. Similarly, the Notifying Party argues that also EE and Vodafone offer 4G access on their networks. In any event Three argues that Three's offer of 4G to wholesale customers has not been material in improving its credibility as a wholesale competitor.

(1930) The Notifying Party argues[1658] […].

1653 Reply to the Statement of Objections, section 12.1.5.

1654 Reply to the Letter of Facts of 17 March 2016, section 11.1.2.

1655 Reply to the Statement of Objections, section 12.1.5; Reply to the Letter of Facts of 17 March 2016, section 11.1.2

1656 Reply to the Letter of Facts of 17 March 2016, section 11.1.1.

1657 Reply to the Statement of Objections, section 12.1.7; Reply to the Letter of Facts of 17 March 2015, section 11.5.

1658 Reply to the Statement of Objections, recital 1114; Reply to the Letter of Facts of 17 March 2016, paragraph 143.

(1931) Moreover, the Notifying Party argues that Three's investments in wholesale […].[1659][…]. In any event, the Notifying Party claims that […]. […], these improvements are of no significance to Three's credibility to tender for mass-market contracts.

(1932) The Notifying Party argues that Three's on-going capacity issues have impacted Three's ability and incentive to offer wholesale access to its network. […].

(1933) […] does not consider Three a strong competitor in wholesale.[1660]

(1934) Finally, the Notifying Party argues that […]. […].[1661] In its Reply to the Article 6(1)(c) Decision, the Notifying Party refers to […].[1662]

ii. Commission's assessment in relation to Three's ability to compete

Introduction

(1935) The Commission examines Three's activity and its success in recent individual tenders and informal negotiations and assesses how these successes reflect on Three's credibility as a competitor and importance as a non-MNO host (recitals (1936) to (1983)). The Commission then examines Three's participation in competitive processes for small and large contracts (recitals (1966) to (1983)) and considers the reasons for Three's absence from certain tenders (recitals (1984) to (2022). The Commission also considers the effect of Three's presence in the tender processes or informal negotiations (recitals (2023) to (2042)). The Commission considers the fact that Three provides competitive terms of access in relation to new technologies, in particular 4G and assesses how this relates to Three's growth in the market (recitals (2043) to (2064)). The Commission continues its assessment of Three as a competitor on the wholesale access and call origination on public mobile networks by exploring Three's recent investments in wholesale access (recitals (2065) to (2072)). Moreover, the Commission assesses the Notifying Party's arguments that Three has perceived weaknesses in providing wholesale access (recitals (2074) to (2090)) and that it has capacity constraints which restrict it from providing wholesale access (recitals (2092) to (2097)). Then, the Commission considers how Three perceives itself as a competitor on the wholesale market (recitals (2098) to (2113)) and how other market participants (such as non-MNOs and competitor MNOs) perceive it (recitals (2114) to (2124)).

Three has recently been very active in tendering for and winning wholesale access contracts and is rapidly growing its market share

(1936) The fact that Three plays a significant role in the above described bidding dynamics is shown by the information provided by Three in responses to the Commission's information requests relating to its bidding activity.[1663] This information shows the bids that Three made for providing wholesale access. According to Three's bidding data, Three has actively participated in bidding processes over the past three recent years, engaging in […] out of the 33 competitive processes identified since November 2012. Through participation in these […] competitions, Three won […]

1659 Reply to the Statement of Objections, section 12.1.6.
1660 Reply to the Statement of Objections, paragraph 1098.
1661 Reply to the Statement of Objections, section 12.1.8.
1662 Reply to the Article 6(1)(c) Decision, section C.I.2.2.1.
1663 Annex 64 to Notifying Party's response to the questions on the first draft Form CO of 5 July 2015, and Annex 1 to the Parties' response to the RFI 56 and Q57.

non-MNO customers. In recitals (1868) to (1920) above, the Commission conducted a quantitative analysis of the recent success of Three. In this section, the Commission considers the qualitative evidence of the effects of Three's participation in the tender processes and its wins.

(1937) In 2012, Three competed for […] wholesale access agreements and won […] of them (namely […]). […].[1664] In 2013, Three participated in tenders or informal discussions for […]wholesale access agreements and won […], namely […]. In 2014, Three participated in tenders or informal discussions for […] wholesale access agreements and won […], namely […] as well as […].[1665] In 2015, Three competed for […]. According to Three's internal documents Three […][1666][…].[1667] According to Three's internal documents, […].[1668][…].[1669] On this basis, the Commission considers that absent the Transaction, […]. In any event, what is important is the fact that […] considered Three to be a credible host and selected it as its wholesale partner.

(1938) Finally, Three progressed to advanced negotiations with the established non-MNO […].

(1939) Importantly, among Three's recent wins relate to wholesale access for: (i) Dixons' new non-MNO iD, a new mass-market non-MNO which is expected to capitalise on the Dixons' market experience in indirect distribution of retail mobile contracts and grow to be a significant non-MNO; (ii) […]; (iii) […] (iv) and Gamma, an established MVNA with a fixed/mobile offering. In recitals (1940) to (1965) below, the Commission sets out the characteristics of these non-MNOs and how Three won their business in relation to providing wholesale access.

(1940) **Dixons' iD:** In early 2015, Three entered into a wholesale agreement with Dixons with respect to its start-up light non-MNO iD, which launched in 2015. iD offers 4G services as standard on all its plans and Dixons does not charge a premium or surcharge for this service (compared to some other MNOs that ask for a premium for 4G). All voice traffic is currently carried over the Three's 3G network. Data is carried over both 3G and 4G networks. The Dixons request for proposals ("RFP") indicates that Dixons intends to operate as a partial non-MNO but with the potential to move to a full non-MNO model with a seamless customer experience through this transition.[1670]

(1941) The Commission rejects the Notifying Party's argument that the Dixons' win was a […]. In its response to the Commission's RFI 101,[1671] Dixons described the process through which it selected a wholesale host for its iD non-MNO and the reasons why it selected Three. During 2014, Dixons issued an RFP to the four MNOs to seek a new commercial partner for the new non-MNO that Dixons wished to launch. All MNOs were invited to submit proposals in response to the RFP. […]. On this basis, Dixons proceeded with the remaining three MNOs.

1664 […]. See Three response to RFI 56, question 1.
1665 Further in the past, Three had won contracts with […].
1666 Three's internal documents, […].
1667 Three's internal documents, […].
1668 Three's internal documents, […].
1669 Three's internal documents, […].
1670 Notifying Party's response to RFI 56, Annex 3 – […].
1671 […].

(1942) […],[1672] […]:

(a) […];

(b) […]

(c) […].

(1943) […].[1673]

(1944) […][1674] […]. It offered roaming rate card with good terms which enabled […] into the retail market. […].[1675] Therefore, Dixons' choice of Three as a host was based on […].

(1945) As stated by Three in its internal documents, […].[1676] Moreover, the Notifying Party argues that […].[1677]

(1946) In relation to the Notifying Party's arguments[1678] that […], the Commission notes that according to the list of top 10 non-MNOs, provided by the Notifying Party and set out in Figure 11 of this Decision,[1679] the biggest non-MNOs by subscriber numbers range from [4-5] million to [0-1] million subscribers. Dixons was projected to have […] million subscribers in 2016, […] million in 2017 and […] million in 2018. […].

(1947) In terms of Dixons' usage, the Commission notes that […].[1680] By comparison, the Commission notes […].[1681] […]

(1948) […].[1682] […].

(1949) More generally, based on its analysis and conclusions set out in Annex C to this decision, that the Commission concludes that Three is unlikely to experience serious capacity constraints that will affect its ability to compete in the future.

(1950) On the basis of the evidence set out above, the Commission considers that Three could have supported Dixons […].

(1951) The Notifying Party also claims that […]. The Notifying Party argues that […].[1683] The Commission has seen no evidence that […]. In fact, none of the relevant involved parties refer to it in their submissions or internal documents and Three does not refer to it in its internal documents until its Response to the Letter of Facts on 17 March 2016.

(1952) Moreover, even if this were the case, the Commission notes that the potential absence of individual MNOs due to the potential for new non-MNOs to compete strongly with their own retail propositions or non-MNOs already hosted on their networks is not specific to Dixons. O2 notes in its response to the Commission's RFI

1672 […].

1673 […].

1674 […].

1675 […].

1676 Three's internal documents, […], Annex 7.101 to the Form CO.

1677 Reply to the Letter of Facts of 17 March 2016, paragraph 181.

1678 Reply to the Statement of Objections, section 1080; Reply to the Letter of Facts of 17 March 2016, paragraphs 149-151.

1679 Form CO, Section 6, Table 3.

1680 Annex 4.2B of the Notifying Party's response to RFI 81, […].

1681 Three's internal documents, […].

1682 Three's internal documents, […].

1683 Reply to the Letter of Facts of 17 March 2016, paragraphs 149-151.

56 of 20 November 2015 […]. Further examples are provided in other documents in the Commission's file.[1684] As the only MNO that does not host a non-MNO with a fixed line business, a supermarket business, or an ethnic non-MNO, Three will enjoy the advantage of the absence of channel conflicts for many of the largest non-MNOs in future tenders. The Commission considers that Three's advantage in this respect is reflected in […] prior to announcement of the Transaction and in the fact that afterwards, […].[1685]

(1953) Finally, the Notifying Party argues that […].[1686] The Notifying Party seems to have misunderstood […].[1687]

(1954) […].[1688] […].[1689] […].[1690]

(1955) The Notifying Party argues that […][1691][…].[1692][…].[1693][…].[1694] […].[1695] […].

(1956) On the basis of the above, the Commission considers that Three's participation in tender processes and informal negotiations and the ability to win important non-MNO customers demonstrates that Three is a credible competitor for mass-market non-MNO entrants and that it is an important competitive force which exercises more of an influence on the competitive process than its market share would suggest.

(1957) […][1696] […].[…].

(1958) The Notifying Party notes[1697] that […].[1698][…].

(1959) **Gamma:** Gamma is an MVNA which focuses on the non-MNO market and provides a converged fixed / mobile solution. […].[1699][…].[1700] […].[1701]

(1960) […].[1702] The Notifying Party in its Reply to the Letter of Facts of 17 March 2016[1703] argues that […]. As is set out in recital (2056), there are lengthy […].[1704] Further evidence is included in the Commission's file.[1705]

1684 Letter of Facts of 17 March 2016, paragraph 46-51 and 61-64. Vodafone's response to RFI 55 [ID2558] and EE's response to RFI 54 [ID2491]. Access to these documents was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1685 Three's internal documents, […].

1686 Reply to the Letter of Facts of 17 March 2016, paragraph 193.

1687 [CONF-ID 7]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure

1688 Three's internal documents, […].

1689 Three's internal documents, […].

1690 Three's internal documents, […].

1691 Reply to the Statement of Objections, paragraph 1082; Reply to the Letter of Facts of 17 March 2016, paragraph 188.

1692 Three's internal documents, […].

1693 Three's internal documents, […].

1694 Three's internal documents, […].

1695 Three's internal documents, […].

1696 Three's internal documents, […].

1697 Reply to the Statement of Objections, paragraph 103; Reply to the Letter of Facts of 17 March 2016, paragraphs 185-187.

1698 Annex 18 to the Form CO, Contact details potential entrants.

1699 O2's response to RFI 57, Annex 5, […].

1700 […].

1701 […].

1702 […].

1703 Reply to the Letter of Facts of 17 March 2016, paragraphs 152-153.

1704 […].

(1961) The Notifying Party[1706] argues […]. While, Gamma mentions the fact […].[1707] The Commission also notes that non-MNOs have various business plans and target customers and cannibalisation analysis is a common feature for all decisions in relation to hosting arrangements, as mentioned in recitals (1941) and (1952). The fact that […] does not mean that Three is not an important competitor.

(1962) The Notifying Party[1708] also argues that […]. […]. The Notifying Party submitted that […]. The Commission notes that these are assumptions made by Three and that […]. Irrespective of the reasons why Gamma switched, the Commission considers it particularly pertinent that, according to the Notifying Party's own submissions, when a non-MNO wished to switch away from its current provider (Vodafone) […]. Taking this example to its logical conclusion, the Commission considers that, following the Transaction, there would be no MNO host which would take this position with respect to other customers, as the Transaction would eliminate Three from the market. Additional evidence in relation to this concern is provided in the Commission's file.[1709]

(1963) The Notifying Party argues in its Reply to the Statement of Objections[1710] that […]. The Commission notes that a number of mass-market non-MNOs are either already full non-MNOs (with their own core network) or are transitioning to a full non-MNO (for example Virgin Media). In addition, in its Reply to the Statement of Objections[1711] Three states that […]. This means that Three is well placed to provide services […]. Again, this is not a unique characteristic of Gamma indicating that by analogy, Three will be well placed to serve other similar non-MNOs absent the Transaction. Moreover, the Commission notes that full non-MNOs are still dependent on their hosts for the most important part of the service, wholesale access to the mobile network, as set out in section 8.2.1.3.b. above.

(1964) The Notifying Party argues that Gamma has only […] subscribers, which is relatively low, compared to […]. In addition, Gamma is a business to business MVNA rather than a mass-market non-MNO. The Commission notes that Gamma is projected to grow to over […] subscribers by 2018 based on Gamma's projections, which were provided by Three in its response to the Commission's RFI 56. In its Reply to the Statement of Objections,[1712] the Notifying Party submits that […]. The Commission notes that […]. The Commission considers that these growth rates are likely to be underestimated, noting that […].

(1965) In any event, irrespective of Gamma's predicted growth, its contractual relationship with its MNO hosts and in particular with Three provides a good insight of Three's role in the market. The Commission considers that the example of Three's win of Gamma is an important indicator of Three's position and competitiveness in the market. This is not necessarily because Gamma is a particularly large non-MNO. It is

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1705 Letter of Facts of 17 March 2016, paragraphs 46-51 and 61-62. [CONF-ID 8]. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1706 Reply to the Letter of Facts of 17 March 2016, paragraphs 152-153.

1707 Letter of Facts of 17 March 2016, paragraphs 46-51. [CONF-ID 13]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1708 Reply to the Letter of Facts of 17 March 2016, paragraphs 152-153.

1709 Letter of Facts of 17 March 2016, paragraphs 46-51 and 61-62. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1710 Reply to the Statement of Objections, paragraphs 1117-1119.

1711 Reply to the Statement of Objections, paragraph 1120.

1712 Reply to the Statement of Objections, table 25.

because […] and, according to the Notifying Party's submissions, […]. Three agreed to provide commercial terms for wholesale access to Gamma and Gamma is currently undergoing the switching process. In a comparable situation following the Transaction, a non-MNO like Gamma would have no willing alternative host and would thus not be able to switch to another wholesale provider.

Three participates in tender processes and/or informal negotiations for small and large (mass-market) non-MNOs

(1966) The Commission notes Three's argument in the Reply to the Statement of Objections[1713] that Three's engagement with the market is with small, niche new entrant non-MNOs. The Commission agrees with the Notifying Party that Three is the only MNO host which is willing to host new, growing non-MNOs. However, the Commission does not accept that Three only competes for small non-MNOs. The Commission notes that Three has been actively competing for all types of non-MNO contracts, from small contracts with non-MNOs with growth opportunities to the mass-market non-MNOs (such as Dixons, […] and […]). The Commission considers that the fact that Three actively participates in these processes demonstrates Three's willingness to compete on the wholesale market but also its ability to do so. If Three was not able to host non-MNOs, it would not spend time and resources in competing for contracts. Three's ability is also manifested by its successes, such as securing Dixons' wholesale business.

(1967) The ability of Three to secure large wholesale contracts and its increasing importance as a competitor is reflected in Three's internal documents. Contrary to what the Notifying Party claims now, these contemporaneous documents provide evidence that Three considers itself to be a credible competitor for large mass-market non-MNOs. […].[1714]It is clear from Three's internal communications that Three […].[1715][…].[1716]

(1968) Contrary to the Notifying Party's arguments, […].[1717][…].[1718]

Small but growing non-MNOs

(1969) In relation to wholesale access contracts with small but growing non-MNOs, the Commission notes that Three gave wholesale access to ACN, Joi and The People's Operator.

(1970) This approach is different to the approach of other non-MNOs, such as O2 and Vodafone which are more selective and focus on two main non-MNO groups (i) niche non-MNOs (such as non-MNOs focussing on international calls) which will not cannibalise their revenues; and (ii) large and established non-MNOs which (although carrying the risk of cannibalisation) are likely to be hosted by other MNOs.

(1971) O2 […].[1719] O2 submits that […].[1720] Similarly, Vodafone, has publicly declared that its approach to wholesale access is selective as set out in section 8.3.1.3.

1713 Reply to the Statement of Objections, section 12.1.4.
1714 Three's internal documents, […].
1715 Three's internal documents, […].
1716 Three's internal documents, […].
1717 Three's internal documents, […].
1718 Three's internal documents, […].
1719 Annex 133 to the Form CO, […]
1720 O2's response to RFI 57, question 2.

(1972) […] argues that Three is the MNO which is willing to get new non-MNOs signed up.[1721] Similarly, the […] submits that Three is currently the smallest MNO and, unsurprisingly, appears to be one of the most open to supplying non-MNOs with wholesale access, operating through several MVNAs as well as directly. Three is generally considered to be a lower-cost wholesale provider than the other MNOs.[1722]

(1973) Finally, the Commission notes that, […]. As discussed above in recitals (1959) to (1965), following the Transaction, a non-MNO in the same situation as Gamma would have no alternative host, as Three would have been eliminated from the market.

(1974) On this basis, the Commission agrees with the Notifying Party that Three competes actively for small and growing non-MNOs.

Large mass-market non-MNOs

(1975) Moreover, the Commission considers that Three's activities are not limited to small non-MNOs. As discussed above in recitals (1940) to (1949), Three managed to secure its first Tier 1 non-MNO, Dixons iD and […].

(1976) The CMA's Final Findings and submissions confirm the Commission's view that Three is a credible wholesale competitor for large mass-market non-MNOs. The CMA found that in addition to winning the bid for Dixons, Three has been invited to bid for a number of contracts, including with fixed non-MNOs.[1723]

(1977) Aside from Three's participation in the Dixons and […] negotiations, another piece of evidence of its importance in the market and its credibility as a potential non-MNO host is the fact that Three is invited to the tender processes for mass-market non-MNOs, such as […].

(1978) In fact, in relation to the […] tender in 2012/2013, Three did not only get invited but also participated in the tender process. Three initially engaged in meetings with […] in Q1 2012, and received an RFP in March 2012. The RFP response was sent to […] in May 2012. According to the RFP response, Three states to have radically increased its network coverage, capacity and quality to become the market leading network for 3G. [1724] Three used its small size as an advantage and described itself as *"smaller and more agile"* than its competitors.[1725] Despite Three reaching the final round (summer 2012), Three decided not to submit a final proposal in November 2012. Three submitted that this was due to […].

(1979) […].[1726] This directly contradicts the submissions of […], which assessed the bidders. The fact that an MNO may score lower than the other participants does not mean that the MNO was not *"remotely competitive"*. Further evidence is provided in the Commission's file.[1727]

1721 […].
1722 […].
1723 CMA Final Findings Report, paragraph 14.60-63 [ID4112]; CMA, Phase 2 Submission to the European Commission, Third Submission 11 March 2016, paragraph 6(e) [ID5251].
1724 Notifying Party's response to RFI 56, Annex 25 – […]bid response.
1725 Notifying Party's response to RFI 56, question 1(a) to (m).
1726 Reply to the Letter of Facts of 17 March 2016, paragraphs 147-148.
1727 Letter of Facts of 17 March 2016, paragraph 46-51 and 61-64. [CONF-ID 1-3]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

(1980) The Notifying Party argues that […]'s assertion that Three is a competitive wholesaler contradicts […]'s other statement in […]'s response to the Commission's investigation that Three is capacity constrained.[1728] There is however no contemporaneous evidence from the 2012/2013 tender process that indicates that either […] or indeed Three considered Three to be capacity constrained. In fact, […] is informed for the very first time of Three's alleged capacity constraints by Three itself, when […] approached Three in 2015 to ask for a proposal for a wholesale contract. It would be impossible for […] to have sufficient insight into Three's network architecture to determine for itself whether Three is in fact capacity constrained.

(1981) […][1729]

(1982) In relation to the most recent […] negotiations in 2015, the Notifying Party also argues in its Reply to the Statement of Objections[1730] that the fact that […]. The Commission notes, however, […].[1731]

(1983) In any event, […], does not mean that Three is unable to host non-MNOs in general or that Three is not a credible competitor in wholesale.

<u>Three is sometimes absent from the negotiation process for reasons that are not systematic</u>

(1984) The Commission notes that MNOs in some cases refrain from participating in some bidding or less formal competitive processes.

(1985) The Notifying Party argues in its Reply to the Statement of Objections and its Reply to the Letter of Facts of 17 March 2016[1732] that the examples of tenders in which Three ultimately did not bid point to […]. The Notifying Party argues that it did not participate in several mass-market tender processes, such as the Post Office (2012), BT (2013), TalkTalk (2014), Sky (2014) and Scottish and Southern Energy (SSE) (2015). The Notifying Party also claims that Three was not even invited to participate in the tenders of Asda (2013) or Sainsbury's (2013).

(1986) The Commission considers that absence from tender processes is not necessarily an indicator of unwillingness or inability to compete and must be interpreted carefully. For example, an MNO may face short-run internal resource constraints after a sudden but temporary increase in the number and/or complexity of non-MNO tender processes. Alternatively, an MNO may expect that a given tender is not sufficiently likely to proceed to warrant incurring the costs associated with engaging in a bid or similar process (for example, because the non-MNO may simply be testing the market or using other MNOs as a *"stalking horse"* to negotiate a better deal with their incumbent host).

(1987) The Commission reviewed these tenders and considered Three's involvement in them and the reasons why Three did not participate. The Commission notes that Three sometimes withdraws from the tender process or refrains from participating, for reasons similar to those described in recital (1986), namely perception of the tender's

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1728 Reply to the Letter of Facts of 17 March 2016, paragraphs 147-148.
1729 Three's internal documents, […].
1730 Reply to the Statement of Objections, paragraph 1084 and 1142.
1731 Three's internal documents, […].
1732 Reply to the Statement of Objections, section 12.1.3; Reply to the Letter of Facts of 17 March 2016, section 11.1.1.

likelihood of proceeding and short-term internal resource constraints. Therefore, Three sometimes excludes itself from competing for reasons which do not reflect Three's ability to compete for that tender. Examples relating to tenders for large customers are described below in recitals (1988) to (2007).

TalkTalk

(1988) According to the Notifying Party's response to RFI 56, Three did not participate in the TalkTalk tender, as Three considered that […].[1733]

(1989) The Commission also considers that the CMA's Final Findings Report notes that with respect to TalkTalk's 2014 tender, Three decided not to bid as in Three's view it was unlikely TalkTalk would switch away from its incumbent MNO host (Vodafone).[1734]

(1990) The Commission notes that, as it transpired, TalkTalk did change MNO host and in the end moved to O2 (rather than to EE). […]. It is not possible to determine what the outcome would have been had Three decided to participate in the tender. Given the specific context giving rise to Three's non-participation in the tendering process, it cannot be inferred from this example that Three would not represent a competitive constraint on other MNOs for a customer like TalkTalk in the future.

(1991) […],[1735] […].

(1992) In relation to the exclusivity request, the Notifying Party argues in the Reply to the Statement of Objections[1736] that Three asked TalkTalk for exclusivity […].

(1993) Three claims that it considered that exclusivity was the necessary indication from TalkTalk that it was prepared to treat Three credibly. The Commission disagrees with that notion. It is standard practice for non-MNOs to negotiate with multiple potential host MNOs either informally or through formal tender processes. Three's non-participation reflects a distrust of TalkTalk's intentions as to whether TalkTalk would in fact switch hosts and an unwillingness of Three to incur the cost of bidding. It does not reflect Three's credibility as a wholesale host.

(1994) The reaction of Three in relation to TalkTalk's announcement that it had signed up with O2 is reflected in Three's internal documents.[1737] […]. The fact that Three decided to prioritise one non-MNO over another is no sign that Three is not credible. It is very common for MNOs to focus on specific tenders and forego the opportunity to participate in others. This is the case with all MNOs in the United Kingdom, including the ones with the highest market share, such as EE and O2.

Sky

(1995) Similarly, in relation to the Sky contract, Three responded to several Sky requests that did not proceed to RFP. […].[1738]

(1996) The Commission also notes that the CMA's Final Findings Report considers that Sky's 2014 RFP went unanswered due to resource constraints on the part of Three and the fact that Three had responded to several of Sky's previous RFIs which did not

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1733 Notifying Party's response to RFI 56, question 2.
1734 CMA, Final Findings Report, Annex 1, paragraph 44 [ID4112].
1735 […].
1736 Reply to the Statement of Objections, paragraph 1071-1072.
1737 Three's internal documents, […].
1738 Notifying Party's response to RFI 56, question 1(a) to (m).

proceed to RFPs. Three assumed that this would likely again be the case so discussions did not progress beyond initial engagements.[1739]

(1997) However, as it transpired, Sky proceeded by signing a wholesale access agreement with O2, thus demonstrating its commitment in the non-MNO space by launching its non-MNO business.

(1998) The Commission notes that […]. The Commission notes that […]. Secondly, the Commission notes […].[1740] Further evidence is provided in the Commission's file.[1741]

(1999) Finally, the Commission does not accept that Three's decision not to participate in the tender amounts to evidence showing that Three is not a credible competitor. Three's considerations and decisions reflect Three's views on Sky and the likelihood that it would proceed with the tender process rather than on its own limitations and therefore cannot be considered as indicative of any lack of credibility on Three's part.

BT

(2000) In relation to the BT contract, […]. According to Three, […]. In addition, BT did not […].[1742]

(2001) That Three's decision not to bid for BT […].[1743] […].[1744] […].

Asda

(2002) In relation to the Notifying Party's arguments that Asda […], this is in direct conflict with […].[1745] In its Response to the Letter of Facts the Notifying Party admits that […].[1746] More details are provided in the Commission's file.[1747]

Sainsbury's

(2003) In its Reply to the Letter of Facts of 17 March 2016 the Notifying Party stated that […], Three argues that […].[1748] The Commission notes that this was during the period when the Transaction was in contemplation and […]. Three also considered that […].[1749]

(2004) The Commission notes that [..]. Details are provided in the Commission's file.[1750]

SSE

1739 CMA, Final Findings Report, Annex 1, paragraph 44 [ID4112].

1740 […].

1741 Letter of Facts of 17 March 2016, paragraphs 46-64. Vodafone's response to RFI 55 [ID2558] and EE's response to RFI 54 [ID2491]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1742 Notifying Party's response to RFI 56, question 1(a) to (m).

1743 Three's internal documents, […] [ID 010903020.00001].

1744 Three's internal documents, […] [ID 010902155.00001]

1745 […].

1746 Reply to the Letter of Facts of 17 March 2016, paragraphs 155-156.

1747 [CONF-ID 14 and 15]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1748 Reply to the Letter of Facts of 17 March 2016, paragraphs 154.

1749 Reply to the Letter of Facts of 17 March 2016, paragraphs 155-156.

1750 Vodafone's response to RFI 55 [ID2558], EE's response to RFI 54 [ID2491], and [CONF-ID 4]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

(2005) In relation to the SSE, the Notifying Party submitted that […].[1751] […]. Details about the other MNOs' participation in the SSE tender process are provided in the Commission's file.[1752]

The Post Office

(2006) The Notifying Party did not participate in the tender process for the Post Office wholesale access contract which was launched in July 2012.[1753] According to O2's response to RFI 57, […]. The contract was awarded to EE. Details about the other MNOs' participation in the Post Office tender process are provided in the Commission's file.[1754]

(2007) […][1755] […].

(2008) In recitals (2009) to (2022), the Commission considers the two main factors that influence Three's decision not to participate in a tender process or to withdraw from an ongoing process.

Lack of resources in relation to the tender participation

(2009) […]

(2010) The Commission considers that it is not clear that an MNO with a good chance of winning non-MNO contracts will invest in sufficient internal resources to enable it to compete for every tender or otherwise engage informally with every customer approaching it. The Commission notes that Three's resource constraints arose during a period when the size of the contestable market was extremely large relative to the overall size of the market, including tenders for large existing customers with incumbent hosts and new entrant customers with substantial projected growth and technical requirements. Hiring sufficient resources to respond to every tender during a period where tender activity is above average would result in incurring expenses for surplus resources during times when tender activity is at or below average levels, which may not be efficient. Moreover, the Commission notes that in the case of BT, […].

(2011) The Commission notes that O2 refrained from bidding due to a lack of internal resources following a series of bids. In its response to RFI 57, O2 submits that O2 […]. O2 submits that this was because of a combination of capacity considerations and resourcing as a result of the non-MNO agreements reached with TalkTalk and Sky. Additional examples in relation to other MNOs are provided in the Commission's file.[1756] The CMA's Final Findings Report also notes that all MNOs considered the necessary internal resources required when deciding whether or not to bid.[1757] While this does not imply that MNOs would necessarily win the relevant customers if they were present, it suggests that the absence of a given MNO for a

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[1751] Notifying Party's response to RFI 56, question 1.

[1752] Vodafone's response to RFI 55 [ID2558] and EE's response to RFI 54 [ID2491]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

[1753] Notifying Party's response to RFI 56, question 1.

[1754] Vodafone's response to RFI 55 [ID2558] and EE's response to RFI 54 [ID2491]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

[1755] Notifying Party's response to RFI 56, Annex 33, […].

[1756] Vodafone's response to RFI 55 [ID2558] and EE's response to RFI 54 [ID2491]. Letter of Facts of 17 March 2016, paragraphs 46-64. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

[1757] CMA, Final Findings Report, paragraphs 14.37 [ID4112] given customer does not in all cases imply that they would not participate in future tenders as a credible host and represent an important competitive constraint for the same customer or similar customers in the future.

(2012) The Commission considers that even if an MNO has the ability to host new non-MNOs entering the market, it may nevertheless not be optimal to continuously retain sufficient internal resources to engage in every non-MNO opportunity that may arise. Therefore, if a high level of bids occur in a short time period, it would be expected to observe some rationing and prioritisation of customers MNOs are bidding for. […].[1758]

(2013) […].[1759, 1760]

(2014) The Commission notes that a number of significant competitive processes took place around Q2-3 2014, including the Sky tender, the TalkTalk tender, the Dixons negotiations and the Gamma negotiations. According to Three's response to RFI 66 the timing of the tender processes or informal negotiations was between Q1 2014 – Q3 2014 for Dixons, Q2 2014 – Q1 2015 for Airwave, Q3 2014 – Q1 2015 for Gamma, Q2 2014 – Q4 2014 for Sky and Q4 2013 – Q2 2014 for TalkTalk.

(2015) According to O2's response to RFI 57, the negotiations in relation to […].

(2016) The Commission notes that other MNOs make similar business decisions when there are several wholesale negotiations running in parallel. An example is provided in the Commission's file.[1761] This does not signify that an MNO such as EE is not a credible competitor for wholesale.

(2017) On this basis, the Commission does not consider that non-participation in some competitive processes is an indicator of lack of credibility of a wholesale competitor to host non-MNOs.

[…]

(2018) Three is sometimes unwilling to participate in tender processes[…].

(2019) This approach is reflected in Three's explanation why it did not bid for certain wholesale contracts and in a number of Three internal documents. […].[1762] […].[1763][…].[1764][…].[1765]

(2020) […].[1766]

(2021) […]. The Commission considers that this reason does not reflect on Three's credibility. In fact, it is only if Three is viewed in the market as a credible host that its participation can be used as leverage by non-MNOs. Otherwise, such leverage would not have any effect.

1758 Three's internal documents, […].
1759 Three's internal documents, […].
1760 Three's internal documents, […].
1761 […]. Letter of Facts of 17 March 2016, paragraphs 46-64. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.
1762 Three's internal documents, […] [ID 002204895.00001].
1763 Three's internal documents, […] [ID 002204895.00001].
1764 Three's internal documents, […][ID 009009336.00001].
1765 Three's internal documents, […][ID 004304064.00001].
1766 Three's internal documents, […] [ID 006801431.00001].

(2022) On the basis of the above, the Commission concludes that the reasons why Three did not participate in certain tender negotiations and auctions are n[…]. Therefore, the lack of participation in these competitive processes cannot be a good basis for making inferences regarding Three's current or future competitive strength.[1767] Moreover, given the absence of some MNOs from individual bidding processes, whether for context-specific or structural reasons, the importance of each remaining competitor may be significantly higher than its market share would suggest.

Three's presence in the negotiations has a competitive impact, even in situations where Three is not successful

(2023) The Commission considers that, even if there were cases where Three did not secure a winning bid on a particular tender process, Three's presence on the wholesale market and its participation in the tender processes and negotiations has a beneficial effect on the market, allowing tendering non-MNOs to negotiate better wholesale access terms.

(2024) In its Reply to the Statement of Objections and the Reply to the Letter of Facts of 17 March 2016, the Notifying Party seems to question the validity of this argument.[1768] The Notifying Party argues that only credible providers with a serious chance of winning can exercise competitive pressure […].[1769]

(2025) The Notifying Party misinterprets the Commission's wording in the Statement of Objections.[1770] The Commission stated that Three's presence on the market and participation in a tender process had a competitive impact, even in cases where Three *"could not secure a winning bid"*, meaning even in those cases where Three had participated to the tender process, but ultimately failed to win the bid. The Commission's statement is not about Three's overall credibility or ability as a competitor to win a bid.

(2026) […]. […]. [1771]

(2027) […].[1772][…].[1773]

(2028) The Commission considers that precisely because of the bidding nature of this market and the limited number of potential bidders (the four MNOs), the fact that a player, such as Three, actively participates in at least some of the largest bids, even if to date did not win them (and therefore without a noticeable impact in its market shares) is an important element in the competitive dynamics of the wholesale market. Three's competitive threat to other MNOs during the contract negotiations for wholesale access is much higher than its historical market share would indicate and therefore, its presence on the market is important even when Three does not succeed in securing the tender.

1767 Notifying Party's response to RFI 56, question 1(a) to (m).

1768 Reply to the Statement of Objections, section 12.1.5; Reply to the Letter of Facts of 17 March 2016, section 11.1.12.

1769 Reply to the Statement of Objections, section 12.1.5; Reply to the Letter of Facts of 17 March 2016, section 11.1.12.

1770 Statement of Objections, paragraph 1551.

1771 Reply to the Statement of Objections, section 12.1.5; Reply to the Letter of Facts of 17 March 2016, section 11.1.12.

1772 Three's internal documents, […].

1773 Three's internal documents, […].

(2029) With respect more specifically to the argument that any bidder that faces at least two more credible rivals will exercise zero competitive constraint, in part because bidders care only about what the second-best bid might look like as it is that bid alone that could cost them the contract,[1774] the Commission considers that bidders face considerable uncertainty as to (i) which other firms will submit a bid, (ii) the price and non-price terms that other bidders will offer and (iii) the weighting each customer will attach to different price and non-price factors. Under such uncertainty, bidders face a trade-off between increasing prices and reducing expected profitability and, moreover, for a given increase in price, the reduction in expected profitability will be greater the more credible bidders may be participating in the tender. In these circumstances, the bids of each MNO may cost the others the contract and each MNO therefore provides an additional competitive constraint.

(2030) The Notifying Party also refers to a submission by Vodafone in relation to the CMA's Final Findings Report.[1775] Vodafone submitted in response to the CMA's Provisional Findings Report that even if there were only one or two bidders, the MNOs would not know this fact and that the belief that there is one other serious bidder would be sufficient to ensure that competitive terms would be offered.[1776] The Commission notes that this reflects the views of Vodafone, rather than the CMA's findings.

(2031) The Commission considers that in the wholesale market, MNOs face considerable uncertainty along each of the dimensions outlined in recital (2029), namely whether and which other firms will submit a bid, what terms they will offer and how the customer will weigh them. In fact, often MNOs are not even made aware of who actually won the contract. […].

(2032) The recent analysis by the CMA of the BT/EE transaction sets out that *"We [the CMA] found that the wholesale bidding market was not transparent. In any given negotiation, the MNOs involved in the process would not always be aware of which other MNOs were bidding. For example, the perception of an MNO's involvement has been referred to by some MVNOs as important in obtaining competitive outcomes".*[1777]

(2033) This view is also supported by Ofcom. Ofcom submits that even though non-MNOs on Three's network account for only a small share of subscribers, this does not necessarily mean that Three has little influence on wholesale access terms that non-MNOs can obtain.[1778] This is because Three's presence may influence the terms of other MNOs' wholesale offers. According to Ofcom, if Three has negotiated to provide wholesale access but has ultimately been unsuccessful, its participation in the bidding process may nevertheless have still enabled the non-MNOs to obtain better terms than it may otherwise have obtained.

(2034) The Notifying Party argues in its Reply to the Letter of Facts of 17 March 2016[1779] that in order to support the Commission's claim that Three's presence has exerted

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[1774] Reply to the Statement of Objections, Section 12.1.5.
[1775] Reply to the Statement of Objections, paragraph 1193.
[1776] Vodafone, Response to the CMA's Provisional Findings, 19 November 2015, paragraph 6.1(ii) [ID4157].
[1777] CMA, Final Findings Report, paragraphs 14.56-59 [ID4112].
[1778] Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraphs 4.8 to 4.13 [ID2069].
[1779] Reply to the Letter of Facts of 17 March 2016, section 11.1.2.

competitive pressure on other MNOs, the Commission would have to show that the assumptions of Three's involvement actually led the competing MNOs to adjust their pricing or their terms.

(2035) The Commission, in its market investigation has examined the bidding information received from the four MNOs and the views of the non-MNOs which contract for wholesale access. The Commission notes that MNOs are not aware of which MNOs participate in the tender negotiations. MNOs submit that the non-MNOs inviting tenders either do not indicate who are the rival bidders or that they indicate that all MNOs are bidding.[1780] Often MNOs assume wrongly that one MNO is participating in the tender, when in fact, that MNO was not involved. […].

(2036) Non-MNOs often misdirect their MNO bidders as to the extent of competition. An example is provided in the Commission's file.[1781] This indicates that non-MNOs believe that even only alluding to having more participants in the tender would bring about a more competitive process and result in lower rates and better overall terms.

(2037) The Notifying Party, in its Reply to the Letter of Facts of 17 March 2016,[1782] argued that […].[1783] […]. In fact, it is not unusual for each MNO to be informed by the non-MNO of the best terms which are supposedly being offered by its competitors, and for it to be given the opportunity to improve its own offer to match or better these competing bids.[1784]

(2038) […] argues that what is important as part of any bidding process is for there to be a number of credible alternative MNOs which can and will participate in the bidding process.[1785] […].[1786]

(2039) […] reflects on its experience of considering switching in […] and commented that Three was important to that process in introducing a competitive element to the negotiations. This was despite the fact that Three did not ultimately win the contract.[1787] More details are provided in the Commission's file.[1788] […].[1789]

(2040) The Notifying Party argued in its Reply to the Letter of Facts of 17 March 2016 that […].[1790] However, […], in its submissions refers specifically to the potential loss of Three and its effects. According to […].[1791]

(2041) […].[1792] The Notifying Party notes in its Reply to the Statement of Objections[1793] that Three did not compete for […] and that therefore […]'s view is an unsubstantiated view rather than its experience. The Notifying Party makes a similar

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1780 Letter of Facts of 17 March 2016, paragraph 50. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1781 Letter of Facts of 17 March 2016, paragraphs 46-51. […] and [CONF-ID 16] Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1782 Reply to the Letter of Facts of 17 March 2016, paragraph 161.

1783 […].

1784 […].

1785 […].

1786 […].

1787 […].

1788 Letter of Facts of 17 March 2016, paragraphs 46-51. […]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1789 Three's internal documents, […].

1790 Reply to the Letter of Facts of 17 March 2016, paragraph 161.

1791 […].

1792 […].

1793 Reply to the Statement of Objections, paragraph 1092.

argument in relation to other tenders to which Three did not participate. The Commission notes that the fact that Three did not participate in the tender and the impact that this had on the competitive process is a relevant experience to which non-MNOs can attest. Secondly, as the negotiations for wholesale access are not transparent, it is sometimes the case that non-MNOs imply that all MNOs are active in the tender, where this is not the case.[1794] Therefore, even when an MNO is not participating in the tender, the credible threat that it might be participating is often seen as sufficient to drive the competitive process forward.

(2042) In conclusion, given the lack of transparency of the wholesale market, all the perceived credible bidders are important to determine the final outcome of the tender process. For the reasons set out above in recitals (2023) to (2041), Three is perceived as a credible bidder by non-MNOs. Three itself considers that it is a credible competitor, as it is concerned that it is used as leverage in relation to certain tenders. Therefore, Three's presence in the wholesale market and participation in tender processes is an important element of the market's competitiveness.

Three provides competitive rates for 4G

(2043) Three is considered very competitive in relation to the terms offered in its wholesale access contracts both in terms of price and quality. Three is rapidly rolling out its 4G network and has access to a fully developed 3G network.

(2044) The Commission notes that the provision of 4G services seems to be a critical point in wholesale negotiations as, over the past two years, there has been a significant increase in consumers' adoption of 4G services as their data usage increases. The Commission considers that Three's willingness to offer 4G services is a sign of Three's competitiveness and willingness to be considered as a credible competitor in commercial negotiations for wholesale access.

(2045) The Commission rejects the Notifying Party's argument that […]. The Commission draws its conclusions from a large pool of evidence which includes internal documents from the Parties and from the other two MNOs (Vodafone and EE) as well as numerous submissions from non-MNOs who experienced difficulties in receiving 4G from other MNOs. […] for example had to switch hosts (to O2) in order to receive 4G services and the same applied for […] (which switched to Three).

(2046) Three's internal documents demonstrate […].[1795][…].[1796]

(2047) […].[1797] […],[1798][…].

(2048) […].[1799] […].[1800]

(2049) […] submits that through its wholesale relationship with iD, Three has also demonstrated its current willingness to offer 4G services on terms that enable a non-MNO to compete effectively in the retail mobile market.[1801] To date, […] argues, this

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1794 Letter of Facts of 17 March 2016, paragraph 50. [CONF-ID 17] and […]. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.
1795 Three's internal documents, […].
1796 […].
1797 Three's internal documents, […].
1798 Three's internal documents, […].
1799 Annex 133 to the Form CO, […].
1800 Annex 133 to the Form CO, […].
1801 […].

is the only example of such an arrangement, […]. […] also launched 4G when it was in the process of acquiring an MNO.

(2050) […] (as set out in more detail in recitals (1940) to (1952)) […].

(2051) The Notifying Party argues[1802] that Three is not unique in offering 4G to wholesale customers and that […]'s claim in recital (2049) is not accurate. In its Reply to the Statement of Objections,[1803] the Notifying Party […]. The Notifying Party submits that Lycamobile launched 4G in March 2014, Tesco Mobile launched in October 2013 and Sky and TalkTalk will have 4G access upon their launch in 2016.

(2052) Firstly, the Commission does not seek to argue that Three is the only MNO offering 4G to wholesale customers. The Commission simply considers that Three has established itself as an important competitor by providing 4G to non-MNOs and has made a reputation of offering 4G services as a standard and not charging differentially for 4G as against 3G for data on a wholesale basis. The Commission notes that the wholesale terms of the 4G access are particularly important in determining a non-MNO's ability to offer 4G services to its retail customers.

(2053) Secondly, the Commission notes that a number of non-MNOs have not yet launched 4G services and are still waiting to launch their 4G capability. In its Reply to the Statement of Objections,[1804] the Notifying Party submitted a list of non-MNOs indicating whether they have launched 4G services. The Commission considers that the list submitted by the Notifying Party confirms the Commission's findings. At the moment, the only two MNOs which offer 4G "as a standard" or on an "equivalence principle" are […]. The only mass-market non-MNO unlinked to an MNO which currently offers 4G services is iD, based on its wholesale contract with Three. BT, following its merger with EE, is no longer considered as an independent non-MNO. […]. The Commission notes that a number of years after the MNOs have started offering 4G services to their own retail customers most of the important mass-market non-MNOs still do not offer 4G.

(2054) Thirdly, the Commission notes […].[1805][…].[1806]

(2055) […], the Commission's investigation found that Vodafone's policy for 4G access is much more restrictive. Vodafone does not usually provide 4G to its wholesale customers. As a result, […] cannot offer 4G to its own retail customers. Similarly, […] and […] did not receive 4G when they were hosted by […] and it was only when they switched providers and after they will have migrate their customers to the new host network that they will be able to start offering 4G.

(2056) A number of non-MNO operators have submitted that Vodafone does not usually provide 4G wholesale access. […].[1807] Further evidence on the importance of 4G access to non-MNOs is provided in the Commission's file.[1808]

1802 Reply to the Statement of Objections, section 12.1.7; Reply to the Letter of Facts of 17 March 2016, section 11.1.5.
1803 Reply to the Statement of Objections, paragraph 85-86.
1804 Reply to the Statement of Objections, section 12.1.7.
1805 Reply to the Statement of Objections, paragraph 1148; Reply to the Letter of Facts paragraph 193, Notifying Party's response to RFI 56, Annex 25 "Virgin bid response".
1806 O2's internal documents, […] [ID 000056975.00001].
1807 […].

(2057) […].[1809] […].[1810]

(2058) Vodafone's selective strategy in providing wholesale access in relation to 4G services is further evidenced in […] internal documents in the Commission's file.[1811]

(2059) The final MNO on the market, EE, allows for the provision of 4G services but at terms and conditions which are restrictive. Further evidence in relation to EE's terms is provided in the Commission's file.[1812] The Commission notes that […] does not currently offer 4G services to its customers. […].[1813]

(2060) […]:

(a) […];

(b) […]

(c) […].[1814]

(2061) [...].[1815] Details about the importance of 4G terms for […]'s viability is provided in the Commission's file.[1816]

(2062) The Notifying Party, in its Reply to the Statement of Objections,[1817] contests the importance of access at competitive terms to 4G to wholesale players and argues that […] did not select Three despite its favourable 4G rates. The reasons why […] are explained in recitals (2038) to (2040). In particular, […]. This cannot be held to mean that […], as the Notifying Party suggests, or does not value them now.

(2063) […] in order to be able to compete effectively for 4G customers […]. Howver, […]. In particular, in the case of higher data tariffs, […].[1818]

(2064) On this basis, the Commission considers that Three's competitive wholesale access terms for 4G have built Three's reputation as an important provider of wholesale access services. With the increasing importance of data and 4G, Three's reputation as a favourable host for 4G access-seeking non-MNOs is a sign of Three's growing position in wholesale.

<u>Three is investing in wholesale access</u>

(2065) The Commission notes that in the last three years, Three has been taking strategic steps to ensure its growth in the wholesale market for access and call origination services on public mobile networks.

1808 Letter of Facts of 17 March 2016, paragraphs 46-51 and 61-64 [CONF-ID 18-20]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1809 […].

1810 […].

1811 Letter of facts of 17 March 2016, paragraphs 63-64. [CONF-ID 9-12] Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1812 Letter of facts of 17 March 2016, paragraphs 61-62 [CONF-ID 21-23 and 24]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1813 […].

1814 […].

1815 […].

1816 Letter of facts of 17 March 2016, paragraphs 46-51 and 61-64. [CONF-ID 25-27]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1817 Reply to the Statement of Objections, section 12.1.7.

1818 […].

(2066) The Commission's view is in line with the CMA's Final Findings Report. Contrary to the Notifying Party's view, the CMA considered that while having a small share of the wholesale market, Three has recently improved its market position, for instance by acquiring spectrum in the 1400 MHz band (which improves Three's network and increases its capacity, as set out in Annex C of this Decision, enabling Three to host additional non-MNOs) and winning Dixons as a non-MNO customer with a plan to grow to one million subscribers within three years. […].[1819] In these ways, Three is expected to act as a disruptive force in the wholesale market. The Transaction would reduce the incentives for Three to compete aggressively to win customers from the competing wholesale operators. The CMA found that, absent the Transaction, and depending on how the retail mobile market develops in the future (including in relation to the potential growth of fixed-mobile bundles), Three may become an even more important wholesale competitor in future.[1820]

(2067) Three's willingness to invest in its wholesale business is demonstrated by the fact that CKHH launched in April 2015 its own global MVNE platform, HGES (also known as "Hue"), a wholesale platform to provide services to non-MNOs in the United Kingdom and internationally. HGES (Hue) will facilitate the entry of small non-MNOs onto the market for retail mobile telecommunications services by providing intermediary services.[1821]

(2068) Since HGES' launch in April 2015, it has already been involved in a number of competitive tendering processes or informal commercial discussions […].[1822] In each of these negotiations, the provision of wholesale access on Three’s network was included as part of the services offered by HGES to the potential customer. Access to Three’s network would have been provided to these customers indirectly by HGES.

(2069) In 2011, Three […].[1823][…].

(2070) […].[1824] […].

(2071) The Commission notes that an internal document of Three […].[1825] In fact, the Notifying Party does not dispute the Commission's findings about the fact that Three is investing in its wholesale business. The Notifying Party disputes the fact that these investments have made a difference to Three's credibility and market position in wholesale.[1826] In recital (2072) below and (2074) to (2090), the Commission examines the steps that Three took to address its lack of capabilities and how it has overcome its weaknesses.

(2072) In Three's response to the Commission's investigation,[1827] Three refers to the historical issues that affected its credibility as a wholesale access host. Following the Commission's RFI 56 and RFI 60 Three referred to all steps that Three has taken to address them.[1828]

1819 CMA Final Findings Report, paragraph 14.170 [ID4112].
1820 CMA Final Findings Report, paragraph 14.170 [ID4112].
1821 See: http://hueglobalsolutions.com/ [ID4111].
1822 Notifying Party's response to RFI 85, question 5.
1823 Notifying Party's response to RFI 56, Annex 30 - […].
1824 Three' internal document, […] [ID 027100123.00001].
1825 Three's internal documents, […] [ID 010802969.00001].
1826 Reply to the Statement of Objections, section 12.1.6.
1827 Notifying Party's response to RFI 60, question 24.
1828 Notifying Party's response to RFI 56, question 3 and RFI 60, question 24.

(a) […]

(b) […]

(c) […]

(d) […]

(e) […]

(f) […]

(g) […]

(h) […]

(2073) On the basis of the above, the Commission concludes that Three's investments in its network overall and in wholesale services in particular have enhanced Three's capability to provide wholesale access to non-MNOs. Recitals (2074) to (2091) below set out how these investments enabled Three to overcome its perceived weaknesses in providing wholesale access and to build its credibility and reputation in the wholesale market.

Three's perceived weaknesses in providing wholesale access have been overcome

(2074) The Notifying Party submits that Three has a number of weaknesses as a wholesale host which render it less able to provide wholesale access services to non-MNOs. In its Reply to the Statement of Objections[1829] the Notifying Party argues that […]. Three argues that it continues to lack the capability, […] to service mass-market non-MNOs.

(2075) […].[1830] […].

(2076) The Commission has considered Three's investments in the past few years and its efforts in overcoming these weaknesses. As described in recitals (2065) to (2073) the Commission has considered all steps that Three has taken to address its historical weaknesses, which were submitted by the Notifying Party in response to the Commission's RFI 56 and 60.[1831]

(2077) The Commission has also examined Three's internal documents in order to establish how Three's key personnel perceives these alleged weaknesses.

(2078) The success in securing the Gamma contract in 2015 is a sign of Three's ability to grow as a wholesale provider and overcome technical, commercial and reputational concerns that rendered it weaker in the past. The Commission notes that Gamma had switched away from Three to Vodafone in 2011.[1832] According to the press, in 2011, Gamma had quit Three, because its partners were finding it difficult to sell on Three's network. The reason reported was that the non-MNO partners had customers on 2G devices which made it difficult to sell contracts to end customers without offering 2G. The fact that Gamma has now switched back to Three indicates that Three's network has improved sufficiently for Gamma to consider it appropriate for its non-MNO partners and that the lack of a 2G network may no longer be considered an important obstacle for the provision of MVNA services.

1829 Reply to the Statement of Objections, section 12.1.8.

1830 Notifying Party's response to RFI 56, Annex 29 – […].

1831 Notifying Party's response to RFI 56, question 3 and RFI 60, question 24.

1832 See: http://www mobiletoday.co.uk/news/industry/10678/Gamma-Telecom-quits-3-for-Vodafone.aspx#.ViT8LkbsTvE [ID4110].

(2079) In relation to Three's lack of 2G network, the Commission notes that whilst Three does not have a 2G network, this does not restrict its ability to conclude agreements with non-MNOs, as the majority of non-MNOs do not require provision of 2G services. 2G technology is required by only a small number of non-MNOs which have a high proportion of 2G-only devices in their basis. These are typically non-MNOs operating in specific, niche segments, such as specialising in lower-prices for international calls and some supermarkets.[1833]

(2080) According to […], the majority of non-MNOs do not require access to 2G technology and so do not consider this to be an important factor in choosing a host MNO.[1834]

(2081) […]. In particular, the Notifying Party argues […].[1835][…]

(2082) […].[1836]

(2083) Finally, there has been a shift in Three's approach to wholesale access, which has been noted within the Three organisation. […].[1837]

(2084) […].[1838]

(2085) […][1839] […].[…].

(2086) […][1840] […].

(2087) […].[1841]

(2088) […].[1842]

(2089) In its Reply to the Statement of Objections,[1843] the Notifying Party argues that […]. In the Commission's view, the two statements show that Three is well placed to provide services both to full non-MNOs which have their own core network and to light non-MNOs which can benefit from Three's improvements.

(2090) In relation to the Notifying Party's comments that HGES is an MVNE solution available to all CKHH subsidiaries, the Commission notes that the establishment of HGES is still an improvement in the United Kingdom, even if that improvement goes beyond one Member State. In fact, it is because of HGES that CKHH was able to establish links with […], as set out in recitals (1957) to (1958).

(2091) Based on the results of its market investigation and on the analysis of Three's internal documents, the Commission concludes that the Notifying Party's argument that Three's alleged weakness would prevent it from effectively competing on the wholesale market is not founded.

1833 See […].
1834 See […].
1835 Notifying Party's response to RFI 56, question 2.
1836 Three's internal documents, […].
1837 Three's internal documents, […].
1838 Three's internal documents, […].
1839 Three's internal documents, […].
1840 Three's internal documents, […].
1841 Three's internal documents, […].
1842 […].
1843 Reply to the Statement of Objections, section 12.1.6.

Capacity constraints

(2092) The Notifying Party argues that its network is capacity constrained and that therefore, among other things, it currently does not have sufficient ability to host large non-MNOs. The Commission addresses Three's claims in relation to capacity constraints in Annex C to this Decision. The Commission has summarised its findings in relation to Three's allegations that it is currently capacity constrained in recitals (764) to (774).

(2093) […].[1844]

(2094) […].[1845]

(2095) […]. Three has won a host of independent industry awards for the quality and speed of its network, whilst carrying […]% of the United Kingdom's mobile data traffic. […].[1846]

(2096) […].[1847]

(2097) On this basis and the basis of the Commission's assessment in Annex C to this Decision, the Commission concludes that Three is not capacity constrained and that therefore its ability to compete effectively on the wholesale market is not restricted.

Three itself considers that it is a credible and willing competitor for all non-MNO contracts

(2098) It is particularly relevant that Three itself considers that it is a credible competitor on the market and that it can compete on equal terms with other MNOs. The Notifying Party's internal documents reveal a strategic interest of Three in hosting non-MNOs. For example, in one of these documents,[1848] […].

(2099) […][1849] […].

(2100) The Notifying Party argues that […][1850] The Notifying Party also submits […][1851] which the Commission notes is more up-to-date than […] used to underpin the Notifying Party's submissions in relation to capacity and efficiencies.[1852] […].[1853][…].[1854]

Figure 131 […]

[…]

Source: […]

(2101) A Three internal document states Three's wholesale strategy. […].[1855]

(2102) Three's internal documents […],[1856][…].[1857][…].[1858]

1844 Notifying Party's response to RFI 56, Annex 11b – […].
1845 Notifying Party's response to RFI 56, Annex 22 – […].
1846 Notifying Party's response to RFI 56, Annex 23 – […].
1847 Three's internal documents, […]; Reply to the Statement of Objections, Annex C1.5.
1848 Annex 7.052 to the Form CO, […].
1849 Notifying Party response to RFI 93, Annex 7.
1850 Reply to the Statement of Objections, paragraphs 1129 and 1130.
1851 Notifying Party's response to RFI 81 of 23 December 2015, Annex 28.4.
1852 Section 8.4.1 and Annex C, Section 1.2.3 to this Decision.
1853 Notifying Party's response to RFI 3 of 17 June 2015, template 03.
1854 The Commisison notes that […].
1855 Three's internal documents, […].

(2103) […].[1859] […].[…]. As the only United Kingdom network designed from the ground up for the mobile internet, Three is the network of choice in the United Kingdom and is consistently scored number 1 by a number of Independent Surveys including YouGov number 1 for Mobile Broadband: YouGov Dongle Tracker (July 2012) and YouGov number 1 for Tablets (July 2012).[1860]

(2104) […]..[1861] […]..[1862]

(2105) Similarly, Three in its […].[1863]

(2106) […],[1864] […].

(2107) […].[1865] […].[1866]

(2108) The Notifying Party argues that it is not able to compete for certain non-MNO wholesale access contracts, such as the contracts with Virgin Media and Sky. The Commission's investigation has found that Three's internal documents show that […].

(2109) […].[1867]

(2110) […].[1868] […].[1869]

(2111) […].[1870] […].

(2112) […].[1871] […].

(2113) On this basis, the Commission concludes that Three perceives itself to be a credible competitor for wholesale access.

<u>Market participants perceive Three as an important competitor</u>

(2114) Market participants also perceive Three as a competitor that exercises an important competitive constraint in the wholesale market for access and call origination on public mobile networks.[1872] The results of the market investigation indicate that a number of non-MNOs consider Three as a valid option when considering host MNOs for the provision of wholesale access services.[1873] Some non-MNO respondents consider Three to be the second most aggressive host MNO, following O2, in terms of pricing, network reliability, average and peak download speeds, and access to 4G and 3G technology. Some non-MNO respondents list both Three and O2 as the most

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1856 Notifying Party's response to RFI 56, Annex 11a – […].
1857 Notifying Party's response to RFI 56, Annex 11a – […].
1858 Notifying Party's response to RFI 56, Annex 11a – […].
1859 Notifying Party's response to RFI 56, Annex 17 – […].
1860 Notifying Party's response to RFI 56, Annex 17 – […].
1861 Notifying Party's response to RFI 56, Annex 29 – […].
1862 Notifying Party's response to RFI 56, Annex 29 – […].
1863 Annex 7.101 to the Form CO, […].
1864 Three's internal documents, […].
1865 Notifying Party's response to RFI 56, Annex 29 – […].
1866 Notifying Party's response to RFI 56, […].
1867 Three's internal documents, […].
1868 Three's internal documents, […].
1869 Three's internal documents, […].
1870 Three's internal documents, […].
1871 Three's internal documents, […].
1872 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 75, 76 and 78.
1873 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 75, 76 and 78.

competitive in terms of price.[1874] The majority of respondents to the market investigation[1875] also argue that Three's competitive position on the wholesale market has improved in terms of price, network quality and access to 4G and has remained stable in most of the other parameters (such as solution design, billing, non-MNO support and customer service to end users).

(2115) According to some respondents,[1876] Three is considered to be a credible and active competitor in the wholesale mobile market enabling it to win significant non-MNO contracts, such as the Dixons' iD wholesale access contract. This is because market perception of Three's network has improved significantly in recent years, and for the last two years Three has been seen as having a credible network, as reflected by Three's high rankings in surveys conducted by Ofcom and Rootmetrics.[1877] These improvements are noted in relation to coverage, average and peak download speeds and access to 4G technologies.

(2116) The CMA in its Final Findings Report refers to a number of third parties which comment on Three's competitiveness. EE submitted that the notion that Three did not or could not compete was false and contrary to recent evidence. EE considered that Three had always been in the race and noted that Three had recently won Dixons, which was a major player in the mobile market.[1878] EE also submitted that Three was an active wholesaler.[1879] BT emphasised that Three announced that it was launching a London-based MVNE platform to provide services to non-MNOs both in the United Kingdom and internationally, stating that it expected Three to announce partnership with a number of non-MNOs in the coming month.[1880]

(2117) […] submits that whilst O2 is currently the clear leader by share of subscribers (with a share of approximately [50-60]% of subscribers in the wholesale mobile market), […] considers Three to be an increasingly competitive provider of wholesale access services, despite its low market share. […] submits that Three did not focus on its wholesale mobile business until 2009, when it began to expand its mobile wholesale strategy, and more recently it launched a new wholesale platform in order to attract more non-MNOs. Since then, […] claims, Three has developed an extensive 3G and 4G network and its network coverage has improved significantly. […] submits that this has already had a significant positive influence on Three’s ability and incentive to attract additional non-MNO customers: Three has made significant recent strides, such as signing a new non-MNO agreement with Dixons, and has stated that it is aiming to double or triple the growth of its wholesale arm over the next four years.[1881]

(2118) The Notifying Party's claims[1882] […]. However, according to internal documents, […].[1883] The Notifying Party submits[1884] […].[…].[1885][…].

[1874] Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 75, 76 and 78.

[1875] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 92 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 78.

[1876] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 92 and Questionnaire Q27 to non-MNOs of 11 September 2015, question 78.

[1877] See […].

[1878] CMA, Final Findings Report, Annex 1, paragraph 42 [ID4112].

[1879] CMA, Final Findings Report, paragraph 14.4 [ID4112].

[1880] CMA, Final Findings Report, Annex 1, paragraph 43 [ID4112].

[1881] […].

[1882] Notifying Party's presentation at the oral hearing, Comments on the Wholesale Market, 7 March 2016, slide 13.

(2119) […].[1886]

(2120) […] submits that presently Three is considered to be the disruptive innovator.[1887] Further evidence of Three's aggressive behaviour is provided in the Commission's file.[1888]

(2121) […].[1889] […].[1890] […].[1891]

(2122) […] considers that Three does exert some competitive constraint in the wholesale mobile market as is demonstrated by (i) its participation in recent wholesale non-MNO tender processes, (ii) its success in relation to certain bids (for example the Dixons wholesale mobile contract) and (iii) the fact that Three appears willing to provide terms that allow independent wholesale partners to offer 4G services, (for example, Dixons' iD which currently offers attractive 4G propositions, the only example of such an arrangement).[1892]

(2123) […].[1893]

(2124) A number of other third party respondents submitted that Three is an important competitor in wholesale.[1894, 1895] […] argues that Three is a fairly good provider, cheap and with a good time to market. […] believes that Three got better during this year (2015) simply because they increased the numbers of customers on their platform, pushing them to develop new features that were still missing.[1896] […] considers Three to be a credible alternative wholesale provider in the market. Its network quality and reach is good enough to play at a national level, particularly in big centres, its rates are not considered excessive and it is willing to get new non-MNOs signed up.[1897] […] submits that while it has not had any commercial dealings with Three, it was intending to include Three in its next selection process.[1898] […].[1899]

(2125) On this basis, the Commission concludes that third parties and in particular non-MNOs seeking access consider Three to be a credible competitor and an important competitive constraint on the market.

Conclusion on Three as an important competitive force

(2126) In light of the above, the Commission concludes that pre-Transaction Three constitutes an important competitive force on the wholesale market for access and

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1883 O2's internal documents, […].

1884 Notifying Party's presentation at the oral hearing, Comments on the Wholesale Market, 7 March 2016, slide 14.

1885 O2's internal documents […].

1886 O2's internal documents, […].

1887 […].

1888 Letter of facts of 17 March 2016, paragraphs 46-62. [CONF-ID 28-31]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1889 […].

1890 […].

1891 […].

1892 […].

1893 […].

1894 […].

1895 […].

1896 […].

1897 […].

1898 […].

1899 […].

call origination services on public mobile networks in the United Kingdom pursuant to paragraph 37 of the Horizontal Merger Guidelines.

c) Likely competitive constraint to be exerted by Three absent the Transaction

i. Notifying Party's view

(2127) The Notifying Party argues that, absent the Transaction, Three's capacity constraints would further undermine its ability to be a credible competitor in the wholesale segment.

ii. Commission's assessment

(2128) Under paragraph 8 of the Horizontal Merger Guidelines, the assessment of the competitive effects of a merger is undertaken by comparing the competitive conditions that would result from the notified merger with the conditions that would have prevailed without the merger. According to the same paragraph, in most cases the competitive conditions existing at the time of the merger constitute the relevant comparison for evaluating the effects of a merger. Nonetheless, in some circumstances, the Commission may take into account future changes to the market when such changes can reasonably be predicted. The Horizontal Merger Guidelines mention as example of those changes the likely entry or exit of firms absent the merger.

(2129) Within this framework, the Commission has investigated whether the competitive constraint currently exerted by Three in the wholesale market for access and call origination services on public mobile networks in the United Kingdom, illustrated in Section 8.3.1.2(b) of this Decision, is viable and therefore constitutes the relevant comparison for the assessment of the Transaction.

<u>Capacity constraints</u>

(2130) The Commission has addressed Three's claims in relation to future capacity constraints in Annex C to this Decision. The Commission has summarised its findings in relation to Three's allegations that it will be even more capacity constrained in the future in recitals (764) to (774).

(2131) On the basis of the analysis in those sections the Commission concludes that absent the Transaction Three will not be capacity constrained and that its ability to compete effectively on the wholesale market will therefore not be restricted in the future.

<u>Three's future growth</u>

(2132) As discussed in recitals (2114) to (2124) above, Three's presence in the market has been growing and Three's commitment to secure wholesale access contracts has started to pay off.

(2133) As set out in recital (1868), Three won [10-20]% of the total value of wholesale business contested since November 2012 when based on projections of those customers' wholesale value in 2018, a share that is considerably greater than its historical share. The Commission considers, therefore, that Three's position in the wholesale market (absent the Transaction) is likely to continue to grow.

(2134) This is reflected in the Notifying Party's analysis and internal documents. In particular, […].[1900]

[1900] Annex 7.052 to the Form CO, […].

(2135) Absent the Transaction, Three's plans are […].[1901] Another document mentions […].[1902] In the long term, Three's plans are […].

(2136) An internal document of the Notifying Party states that, […].[1903][…],[1904][…].

(2137) Three also has […].[1905]

(2138) A Three internal document states that […].[1906]

(2139) The CMA, in its submission to the European Commission[1907] considers that Three, while having a small share of the wholesale market, has recently improved its market position, for instance by acquiring spectrum in the 1400 MHz band and winning Dixons as a non-MNO customer with a plan to grow to one million subscribers within three years.

(2140) The CMA recognised that Three had exercised a competitive constraint in the market. This contrasts with its observations of Vodafone's activities, which were limited to an acknowledgement that Vodafone would likely maintain a presence on the market but the CMA was unable to conclude on the extent of its competitiveness.[1908] This shows that the CMA actually thought that Three could be stronger than Vodafone in the future, despite the fact that in terms of historical market shares, Vodafone is the number three competitor in the market while Three is the number four.

(2141) Therefore, absent the Transaction, the Commission considers that Three would continue to grow its wholesale access business, gain new contracts with non-MNOs and increase its market share.

(2142) In relation to the Notifying Party's argument that absent the Transaction Three would become increasingly capacity constrained, the Commission refers to its assessment in recitals (764) to (774) above and in Annex C to this Decision.

Conclusion on the likely competitive constraint exerted by Three absent the Transaction

(2143) On this basis, the Commission considers that, absent the Transaction, Three would continue to exert at least the same competitive constraint it exerts on the relevant market pre-Transaction (if not a stronger one), and that this is the relevant comparison for the assessment of the Transaction pursuant to paragraph 8 of the Horizontal Merger Guidelines.

d) The competitive constraints exerted by O2 on Three and on other competitors

i. Notifying Party's view

(2144) The Notifying Party argues that […].[1909] The Notifying Party argues […].

1901 Three's internal documents, […].
1902 Three's internal documents, […].
1903 Annex 7.101 to the Form CO, […].
1904 Annex 7.101 to the Form CO, […].
1905 Three's internal documents, […].
1906 Three's internal documents, […].
1907 CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraph 33 [ID4116].
1908 CMA Final Findings Report, paragraph Para 14.60 and 14.71 respectively [ID4112].
1909 Reply to the Statement of Objections, section 12.1.9.

ii. *Commission's assessment*

O2's market share and market position

(2145) O2 (excluding Tesco Mobile) is the second largest MNO host in the wholesale market for access and call origination on public mobile networks in the United Kingdom. O2's market share (excluding Tesco Mobile) is [30-40]% for January to May 2015 and has increased from [20-30]% in 2013 and [30-40]% in 2014. On the basis of the Commission's bidding analysis, O2's projected value in 2018 is also very high, at [30-40]%.[1910]

(2146) O2 currently hosts a number of important non-MNOs. One of them is Lycamobile, a niche non-MNO which focuses on ethnic customers, which launched on O2's network in 2006 and has remained with O2 since. More recently, O2 secured the wholesale hosting arrangement with TalkTalk, one of the largest mass-market non-MNOs, which is currently in the process of migrating its customers from Vodafone to O2 and Sky, one of the leading providers of television and fixed voice and broadband services in the United Kingdom who is seeking to launch a complementary non-MNO service.

(2147) The Commission notes that the Notifying Party does not dispute O2's description as an important competitor in the wholesale market for access and call origination services on public mobile networks.

O2 is very active in participating in tenders for large mass-market MNOs

(2148) O2 is also a very active MNO in terms of participating in formal bids and informal negotiations. O2 prepared formal bids for […].[1911] O2 engaged with all these competitive processes. O2 and was successful in winning three of these contracts, namely Sky, TalkTalk and SSE.[1912] The Commission describes in recitals (2150) to (2152) below, O2's participation in the most important recent tender and informal negotiation processes.

(2149) O2's strong competitive position is recognised by O2 itself. O2's internal documents reflect the fact that O2 had a total of […] non-MNO enquiries.[1913] Moreover, O2's strength is also recognised both by non-MNOs (recital (2153)) and its competing MNOs (recitals (2154) to (2155)).

(2150) In relation to O2's participation in tenders and informal negotiations, O2 participated in the Sky tender process and was awarded the contract. O2 submits that the reasons for being awarded the Sky contract were:

(a) […].

(b) O2 offered […].

(c) O2 offered […].

(d) […].[1914]

1910 On the basis of the Notifying Party's submitted market shares (which include Tesco Mobile) O2 is the market leader with 50%.

1911 O2's response to RFI 57, question 1.

1912 […].

1913 O2's response to RFI 57, Annex 5 - […].

1914 O2's response to RFI 57, Attachment 1.

(2151) O2 also participated in the TalkTalk tender process and was awarded the contract. O2 submits that the reasons for being awarded the TalkTalk contract were:

(a) […].

(b) […].

(c) O2 offered […].[1915]

(2152) O2 also participated in the SSE tender process and was awarded the contract. O2 submits that the reasons for being awarded the SSE contract were:

(a) O2 offered […].

(b) O2 offered […].[1916]

Competitors and non-MNOs view O2 as an important competitor in wholesale

(2153) Non-MNO respondents to the market investigation state that O2's position in the wholesale market has improved in relation to network quality and access to 4G technology and remained largely stable in relation to other elements (such as solution design, billing, non-MNO support and customer support). For example […] refers to O2 as the most aggressive competitor for wholesale access, followed by Three as the second most aggressive competitor.[1917] TalkTalk submits that O2 entered into a non-MNO agreement with TalkTalk in November 2014, replacing TalkTalk's previous supplier Vodafone. The agreement includes the provision of 4G services.[1918] […], O2 signed a new non-MNO agreement with Sky that will enable Sky to launch a mass-market non-MNO […]. Some non-MNO respondents[1919] also indicate that non-MNOs consider O2's network to be reliable and to have strong credentials. O2 is also considered highly competitive in terms of wholesale rates.[1920]

(2154) According to […], O2's network is considered to be reliable, with sufficiently high average and peak download speeds to meet non-MNOs' needs. O2 offers 4G access to non-MNOs and is continuing to roll out additional LTE-enabled spectrum to meet its licence obligation to extend indoor coverage to 98% of the population of the United Kingdom by 2017.[1921]

(2155) BT submitted to the CMA that O2 *"has a strong position in the wholesale mobile market. This is supported by the fact that O2 has recently won two large MVNO contracts […] O2 also hosts a number of other significant MVNOs such as Tesco Mobile and Lycamobile."*[1922]

Conclusion on O2's current competitive constraint on Three and the other MNOs

(2156) In light of the above, the Commission concludes that pre-Transaction O2 exerts an important competitive constraint on Three as well as on the other players in the

1915 O2's response to RFI 57, Attachment 1.
1916 O2's response to RFI 57, Attachment 1.
1917 […].
1918 TalkTalk, Phase 2 submission, "Harm to Competition due to H3G's acquisition of O2", 10 December 2015, paragraph 3.7 [ID3627].
1919 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 75.
1920 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 75.
1921 […].
1922 BT, "BT/EE Merger Inquiry – Phase 2 Initial Submission", 30 June 2015, page 13. Available at https://assets.digital.cabinet-office.gov.uk/media/55a6230040f0b61560000009/BT-EE_-_BT_Group_plc_initial_submission.pdf (provided with the access to file on 4 February 2016).

wholesale market for access and call origination services on public mobile networks in the United Kingdom.

e) Likely competitive constraint to be exerted by O2 absent the Transaction

i. Notifying Party's view

(2157) As set out in recital (2144), […].[1923] The Notifying Party argues that absent the Transaction, because of O2's […] challenges, O2's competitive position would significantly deteriorate in the near future. The Notifying Party argues […].

ii. Commission's assessment

(2158) The Commission considers that absent the Transaction, O2 would continue to have the ability and the incentive to compete for wholesale access contracts.

[…]

(2159) The Commission has assessed the Notifying Party's claims […] in Annex C to this Decision. The Commission has summarised its findings […] in the future in recitals (859) to (868).

O2's future growth

(2160) Three considers O2 […].[1924]

(2161) Similarly in its internal documents O2 […].[1925]

Conclusion on the likely competitive constraint exerted by O2 absent the Transaction

(2162) On this basis, the Commission concludes that, absent the Transaction, O2 would continue to exert the same competitive constraint it exerted on the relevant market pre-Transaction. The Commission considers that this is the relevant comparison for the assessment of the Transaction pursuant to paragraph 8 of the Horizontal Merger Guidelines.

f) Likely behaviour of the merged entity post-Transaction

i. Notifying Party's view

(2163) The Notifying Party argues[1926] that after the Transaction both the merged entity and the remaining MNOs would continue to have the ability and incentives to host new non-MNOs.

(2164) The Notifying Party argues that post-Transaction the merged entity would have an increased ability to compete on the wholesale market and that its incentives would remain unaltered. According to the Notifying Party, any new non-MNO entrant or existing non-MNO seeking to re-negotiate its terms of wholesale access post-Transaction will have the choice between three network operators, each with the ability and incentive to compete actively for this business. For large scale non-MNOs, the Notifying Party argues that there are currently three MNOs with the ability to form these relationships and there would remain three credible MNOs for these customers post-Transaction.

[1923] Reply to the Statement of Objections, section 12.1.9 and 12.2.
[1924] Notifying Party's response to RFI 56, Annex 29 – […].
[1925] O2's internal documents, […].
[1926] Form CO, Section 6, paragraphs 960 to 969.

Ability to compete

(2165) The Notifying Party argues that its network capacity would be materially enhanced through the Transaction[1927] and, post-Transaction, the merged entity's increased capacity would […]. This argument is addressed in the efficiencies section, Section 8.4.

Incentives to compete

(2166) The Notifying Party argues that the incentives of the network operators to host a non-MNO remain unchanged. According to the Notifying Party, each MNO contracted by a potential new entrant non-MNO has to take into account that the non-MNO might enter into an agreement with another MNO if the first non-MNO refuses to provide it with attractive wholesale access. The Notifying Party argues that this would be the worst case for the MNO: on one hand the MNO would face the additional competition and customer losses generated by the non-MNO entry, on the other hand it would not have any additional revenue streams and its competitor MNO would be strengthened by enjoying the wholesale access revenues. Therefore, (the larger) non-MNOs have significant buying power which manifests itself at the end of each contractual period, when non-MNOs are able to exercise significant bargaining power in terms of wholesale prices and other conditions.[1928]

(2167) In addition, the Notifying Party argues that the cannibalisation effect of hosting a new non-MNO is no higher for the merged entity than for Three or O2 on a standalone basis.[1929] The Notifying Party claims that in other countries with a developed non-MNO presence (such as Germany), market leading network operators each continue to host a number of non-MNOs.

(2168) The Notifying Party argues that O2's acquisitions of Sky and TalkTalk as non-MNO customers demonstrate that this area remains a priority. O2 will *"retain an incentive to offer wholesale terms that allowed those providers* [fixed non-MNOs] *to remain competitive against the merged entity [BT/EE] in the downstream market."*[1930]

(2169) The Notifying Party argues that the increasing prevalence of full non-MNOs, which are able to switch relatively easy between network operators, provides further incentives to MNOs to continue to compete aggressively.

(2170) In addition, the Notifying Party argues that the merged entity's incentives (and those of their competitors) will be further influenced by the increasing prevalence of full non-MNOs in the United Kingdom. In particular, it submits that the associated lower barriers to switching will incentivise MNOs to continue to offer competitive wholesale terms.

(2171) The Notifying Party refers to […]'s submission in the market investigation that post-Transaction with three remaining MNOs […] did not expect O2's competitive position to change.[1931]

(2172) Finally, the Notifying Party cites the CMA's Provisional Findings Report suggesting suggest that the CMA supports the finding that the merged entity's incentives will be unchanged post-Transaction. According to the CMA, both Three and O2 have

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1927 Reply to the Statement of Objections, paragraph 1170.
1928 Reply to the Statement of Objections, paragraph 1181.
1929 Reply to the Statement of Objections, section 13.1.2.
1930 CMA Provisional Findings Report, 28 October 2015, paragraph 14.61 [ID2206].
1931 Reply to the Statement of Objections, paragraph 1177.

"strong incentives to bid for fixed-MVNO contracts", following BT's acquisition by EE.[1932]

ii. *Commission's assessment*

Incentives to compete

Introduction

(2173) In this section the Commission assesses whether the incentives of the merged entity to compete on the wholesale market will be lower than those of each of Three and O2 absent the Transaction.[1933] As further explained in Section 8.3.1.4.b to 8.3.1.4.c, lower incentives to compete on the wholesale market could result in the merged entity either deciding to completely terminate providing access to non-MNOs on the wholesale market (total foreclosure) or worsen the conditions for such access (by providing higher prices or restricting access to some technologies) (partial foreclosure).

(2174) The Commission considers that, for the reasons set out in recitals (2175) to (2209) below, the merged entity will have lower incentives to compete than each of the Parties in a standalone scenario.

Reduced incentives from loss of competition between the Parties

(2175) First, the Transaction would eliminate competition between the Parties on the wholesale market. According to the Horizontal Merger Guidelines, the loss of competition between merging parties is likely to provide the merged entity with the incentives to compete less aggressively on the market and to raise prices, in particular because some of the customers who would have been lost to the other Party pre-Transaction would be recaptured by the merged entity post-Transaction.[1934]

(2176) Many non-MNO respondents to the market investigation[1935] expressed concerns that post-Transaction, due to the reduction of potential wholesale hosts in an already concentrated market, the merged entity will have lower incentives to give wholesale access.

(2177) […] submits that even prior to the Transaction the MNOs have significant market power, and the proposed consolidation would only exacerbate the problem. […] expects that the Transaction would lead to increased market dominance, higher wholesale prices, and potentially limited access (if any) to new technology, such as 5G. This would pose a direct threat to the […]'s ability to compete in the market.[1936]

(2178) […].[1937]

(2179) […].[1938] […].[1939] […].[1940]

1932 CMA, Provisional Findings Report, 28 October 2015, paragraphs 14.82 and 14.100 [ID2206].

1933 As regards the Notifying Party's claim that the merged entity will have a greater ability to compete than Three and O2 separately, the Commission notes that this is an efficiency claim and as such it is separately discussed in Section in Section 8.4.

1934 Horizontal Merger Guidelines, paragraph 24.

1935 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, question 82.

1936 […].

1937 […].

1938 […].

1939 […].

1940 […].

(2180) […] submits that currently both Three and O2 are active in the wholesale access market. […] submits that the reduction in the number of MNOs from four to three will remove competition between MNOs and will have a consequential effect on the ability of non-MNOs to compete in the market given the highly probable increase in wholesale charges.[1941] […]'s ability to switch to an alternative MNO network will be more limited, given that there will only be two alternative MNOs post-Transaction.[1942]

(2181) […].[1943] The CMA, in its submission to the Commission,[1944] considers that the Transaction would reduce the incentives for Three to compete aggressively to win customers from the competing wholesale operators. The CMA also notes that absent the Transaction, if fixed-mobile bundles become an important means of selling mobile services, Three (as a mobile only provider) would have a stronger incentive to serve non-MNOs that also sell fixed services.

(2182) In its Reply to the Statement of Objections, the Notifying Party argues that the CMA supports the notion that mobile only providers such as the merged entity will be incentivised to compete following the BT/EE transaction.[1945] The Commission notes that the CMA's assessment in its Final Findings Report is predicated on a competitive market where there remain three non-MNO hosts to compete with the merged BT/EE. The CMA found that after the BT/EE transaction, there will be three other alternative MNO hosts (namely Three, O2 and Vodafone) and the CMA assessed the competitive strength of each of those MNOs as part of its assessment on the ability to foreclose.[1946] In fact, the CMA in its Final Findings Report refers approximately ten times to the fact that the BT/EE entity would face three remaining MNOs (namely, Three, O2 and Vodafone) as a relevant factor. The CMA undertook its analysis based on each MNO in turn.[1947] Three and O2 had very different profiles before the BT/EE transaction. No part in the CMA's assessment considers their behaviour as a single entity. On this basis, the Commission considers that the CMA's findings in relation to the BT/EE merger, including on the future incentives of mobile only players, reflect the CMA's views on what would have happened following the BT/EE merger in a market where each of Three and O2 continue to operate and compete as distinct entities as they currently do. The CMA has not assessed a competitive situation in which two of these three remaining competitors would merge, thus consolidating the market further.

(2183) The Notifying Party suggested in its Reply to the Statement of Objections[1948] that the CMA has taken factors such as future consolidation in the industry into account as part of its competitive assessment.[1949] The Commission notes that in the section on counterfactual of the CMA's Final Findings Report the CMA simply states that it has taken a number of issues into account, including future consolidation in the industry, where relevant, as part of its competitive assessment rather than as part of the counterfactual. There is no reference in the competitive assessment of the CMA's

1941 […].
1942 […].
1943 […].
1944 CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraphs 33-34 [ID4116].
1945 Reply to the Statement of Objections, section 13.1.1.
1946 CMA, Final Findings Report, paragraph 14.17 [ID4112].
1947 CMA, Final Findings Report, paragraphs 14.183 and 14.204 [ID4112].
1948 Reply to the Statement of Objections, paragraph 1192.
1949 CMA, Final Findings Report, paragraph 7.21-22 [ID4112].

Final Findings Report to situations of consolidation that are pertinent to the assessment of the wholesale market. The CMA makes it explicit that it considers the *status quo ante*, that is the competitive conditions before the BT/EE transaction with four MNOs on the market, as the appropriate framework for the analysis.[1950]

(2184) Conversely, the CMA notes in its submissions to the Commission during the course of the present investigation that, regardless of how strongly Three competes at the wholesale level, the Transaction will reduce competition in the wholesale market by reducing O2's incentives to offer wholesale access on reasonable terms.[1951]

(2185) The Commission considers therefore that the CMA Final Findings Report do not contain any element supporting the Notifying Party's claim that the merged entity will not have lower incentives to compete on the wholesale market compared to the merging parties in the standalone scenario.

(2186) On the basis of the above, the Commission concludes that the reduction of competition between the Parties on the wholesale market is likely to provide the merged entity with incentives to compete less aggressively on the market (for instance by raising prices or worsening conditions, such as access to new technologies), as some of the customers who would have been lost to the other Party pre-Transaction would be recaptured by the merged entity post-Transaction.

Loss of competition because of simultaneous (expanded) presence in wholesale and retail market

(2187) In view of both the Notifying Party's and O2's presence in the retail and wholesale markets, the Commission has considered whether the Transaction reduces the merged entity's incentive to compete on the wholesale market because (i) the Transaction increases the merged entity's retail business and therefore the losses that arise from cannibalisation (whoever hosts the non-MNO) and/or (ii) increases the extent to which any such cannibalisation effect is avoidable (that is, if the merged entity does not host the MNO or worsens the terms it offers).

(2188) In particular, the Commission considered whether any such change in incentives arising from the Transaction would result in the merged entity restricting wholesale access or worsening wholesale access terms and conditions (such as access to new technologies) in comparison with the rates and terms they would offer absent the Transaction, thereby raising downstream non-MNOs' costs.

(2189) As set out in recitals (1837) to (1845), MNOs face a trade-off when bidding for contracts to supply non-MNOs. On the one hand, hosting non-MNOs generates wholesale margins for the host MNO. On the other hand, in particular mass-market non-MNOs tend to cannibalise the retail business of the host MNO by attracting potential subscribers from the host MNO.

(2190) The Transaction increases the merged entity's retail business, making it more sensitive to cannibalisation from a non-MNO. Therefore, a greater proportion of the business acquired by a mass-market non-MNO will be from the merged entity and the retail losses resulting from the non-MNO finding a host will be higher. Hence, wholesale terms which were profitable (when taking into account the cannibalisation effect at the retail level) in a stand-alone scenario for either party will be less

[1950] CMA, Final Findings Report, paragraph 7.16 [ID4112].

[1951] CMA, Phase 2 Submission to the European Commission, Third Submission 11 March 2016, paragraph 6(g) [ID5251].

profitable for the merged entity post-Transaction. This would reduce the incentives to offer commercially competitive non-MNO terms to such operators (mainly in terms of wholesale rates, but also in terms of access to new technologies etc.). Hence, the different market position of the merged entity at the retail level compared to the Parties on a standalone basis may induce the merged entity to compete less aggressively at the wholesale level.

(2191) The Notifying Party submits that an internal document of […].[1952] The Commission notes that it has not argued that a larger retail business will result in negative net service revenue gains from hosting in all cases. Greater cannibalisation implies that a given set of wholesale terms will be less profitable and therefore, the merged entity may be less incentivised to offer the same wholesale rates it would have offered prior to the Transaction.

(2192) The relationship between the size of the merged entity at the retail level and its incentive to compete at the wholesale level is supported by comments submitted by the Commission's market investigation.

(2193) […] submits that in a market with a smaller number of MNOs, each one has a lower incentive to sell wholesale access services on competitive terms, or at all, since, on average, a larger percentage of the wholesale customers their non-MNOs would acquire would be their own customers, leading to a reduction in margins. For example, an MNO with a 10% market share may be prepared to accept that one in ten of the customers gained by a non-MNO it hosts will be one of its own, but an MNO with a 40% market share would be making a very different calculation. The retail margins sacrificed as a result of the customers lost are much less likely to be outweighed in this second scenario by the wholesale margins gained, making wholesale contracts much less attractive, except perhaps in specialised areas or niche markets.[1953]

(2194) […] submits that presently Three has strong incentives to compete. Its relative market share in the residential market also means that it loses the least from a wholesale arrangement as there is substantially more wholesale revenue to be gained compared to losing direct revenue. These synergies do not exist in the same magnitude, if at all, when O2 merges with Three. The merged entity would have the same incentive to aggregate direct revenue (both business and consumer) at the expense of wholesale revenue. This is similar, […] submits, to the considerations that have influenced Vodafone's decision to effectively exit the wholesale access market.[1954] […] has expressed concerns that Three's cooperative and supportive approach in relation to its wholesale partners might change with the acquisition of O2.[1955] […].[1956]

(2195) […].[1957] This is because, as a result of the Transaction, the merged entity will become the largest retail mobile provider in the United Kingdom, with

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1952 Response to Statement of Objections, paragraphs 1184-1187.
1953 […].
1954 […].
1955 […].
1956 […].
1957 […].

approximately 40% of total mobile connections serving over 30 million customers in the United Kingdom. […].[1958, 1959]

(2196) […] argues that the increased market share of the combined business means that supporting non-MNOs will generate increasing levels of cannibalisation.[1960] Similarly, […] submits that, with the Transaction, Three might have less need to continue to be as competitive as today given the newly acquired base, thus being less aggressive on price and focusing on increasing business profitability.[1961] […] expresses the concern that the wholesale price will get less competitive after O2 and Three become the largest MNO in the United Kingdom, as Three will have less incentive to be as competitive as they are today regarding rates in order to gain market share.[1962] […].[1963]

(2197) […] argues that the merged entity will have very different incentives post-Transaction. As the market leader in retail, wholesale will be less attractive. The merged entity will take into account the number of its own customers that the wholesale partner will cannibalise in building its user base. In addition O2 has a successful strategy of having a wholly owned second brand (giffgaff), a joint venture (Tesco Mobile) to cover the areas it might think it needs to reach beyond its main brand. It is entirely possible that the merged entity will look at just having niche non-MNOs which are active in the international calling space.[1964] […].[1965]

(2198) The Notifying Party argues that the potential to earn wholesale revenues from a non-MNO that may be hosted by another non-MNO implies that there is always an incentive to host non-MNOs, given the risk that it will be hosted by another MNO.[1966] However, the Commission notes evidence that (i) this purported 'inevitability' of the cannibalisation effect does not appear to drive MNOs to host mass-market non-MNOs in all cases and (ii) that the Transaction reduces the probability that the cannibalisation effect will arise (or will be as strong) even if the merged entity does not host it.

(2199) The Commission notes a number of instances where MNOs have refrained from competing for certain non-MNOs on the basis that they compete too closely with them, or one of their existing non-MNOs, at the retail level. For example, […].[1967] O2's internal documents also demonstrate that […].[1968]

(2200) Similarly, the Commission notes evidence that non-MNOs appear to anticipate that the quality of wholesale hosting may be affected by potential conflicts arising from their cannibalisation of hosts' markets. As noted in recitals (2011) to (2016), O2

1958 […].
1959 […].
1960 […].
1961 […].
1962 […].
1963 […].
1964 […].
1965 […].
1966 Response to the Statement of Objections, section 13.1.2.
1967 O2's response to RFI 57, Annex 5 - […]
1968 Annex 133 to the Form CO, […]

notes in its response to the Commission's RFI 57 that […].[1969] Another example in relation to another MNO is provided in the Commission's file.[1970]

(2201) Moreover, the Commission considers that, post-Transaction, the merged entity will be more able to influence the wholesale terms non-MNOs can achieve by refraining from hosting them (or offering them worse wholesale terms) and, therefore, the quality of their retail offerings. This is because by eliminating Three, the Transaction removes an important competitive force in the wholesale market, as concluded by the Commission in recital (2126), and reduces the probability non-MNOs will be able to find any alternative host to the merged entity or an alternative host that provides wholesale terms that allow it to compete effectively (notwithstanding non-MNOs' limited ability to compete). As such, the Transaction increases the extent to which cannibalisation effects are avoidable and, therefore, reduces the incentive of the merged entity to compete.

(2202) The Commission recognises that the reasoning set out in recital (2201) above suggests that the ability of the merged entity to worsen non-MNOs' retail offering depends on the impact of worsened wholesale terms on non-MNOs' retail offerings generally. In this regard, the Commission notes, as set out in (1032) to (1079)that non-MNOs' retail margins are extremely narrow, especially in relation to data, and therefore any increase in wholesale price would have a very significant impact, further reducing the limited competitive impact of non-MNOs. This is supported by the Commission's market investigation.[1971, 1972] The Commission also notes that access costs represent a significant proportion of the non-MNOs' costs and are the largest cost per user for a non-MNO is the wholesale access cost.[1973] Moreover, wholesale access is an essential input for non-MNOs to provide mobile services. The Commission also notes that the wholesale market for access and call origination services is not regulated and thus non-MNOs are dependent upon effective wholesale competition to achieve wholesale terms which allow them to be competitive on the retail market. Therefore, a possible total or partial foreclosure strategy implemented by the MNO would significantly and negatively impact non-MNOs' ability to compete with the MNOs on the downstream retail market.

(2203) The Commission considers that the increased size of the merged entity at the retail level as well as an increased ability to influence wholesale prices would result in an incentive to increase prices or otherwise worsen terms at the wholesale level. This is a concern that is shared by many respondents in the market investigation, including by non-MNOs of different sizes, including mass-market non-MNOs.

(2204) Ofcom shares the Commission's view that the merged entity's incentives regarding the terms on which it provides access are likely to be significantly different to those of O2 and Three pre-Transaction.[1974] In line with the Commission's analysis, Ofcom concludes that the Transaction would make it less attractive to provide wholesale access to non-MNOs, as this would result into the cannibalisation of a larger

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1969 O2, response to RFI 57.

1970 […]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

1971 […].

1972 […].

1973 […].

1974 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 4.6 onwards [ID2069].

customer basis (the merged entity's customer basis, which includes both O2 and Three) on the retail market. Ofcom further points out that the incentives of O2 to offer attractive wholesale terms would therefore be reduced by the Transaction even if Three would not otherwise offer wholesale access.

(2205) In addition, a great number of respondents to the market investigation support the Commission's findings that due to Three's position on the retail market the merged entity would have lower incentives to compete than each of the Parties in a standalone scenario.[1975]

(2206) Finally, […] argues that the merged entity will have incentives to engage in vertical exclusionary behaviour when the expected additional profits made in the retail market, from engaging in exclusionary behaviour, are greater than the expected lost profits in the wholesale market from failing to supply.[1976] […].[1977] It submitted that this reduced incentive for the merged entity to compete would arise because both the merged entity and BT/EE would benefit from reduced cannibalisation if neither hosted (in light of their view that Vodafone was absent), and the profits from not hosting were sufficiently high that neither would have the incentive to deviate from the non-hosting equilibrium. The latter implies that the monitoring and discipline necessary for coordination would not be necessary and therefore that this would be a stable equilibrium.[1978]

(2207) With regard to the Notifying Party's argument that O2's success in winning Sky and TalkTalk demonstrates its incentive to compete in wholesale, the Commission notes that these customers were won prior to the Transaction and that O2's incentives do not necessarily reflect the future incentives of the merged entity post-Transaction.

(2208) Moreover, the Commission considers the reaction of the remaining MNO hosts, namely BT/EE and Vodafone in section 8.3.1.3.

(2209) On the basis of the above, the Commission concludes that, given that both Parties are present in the retail and the wholesale markets, the Transaction would reduce the merged entity's incentive to compete on the wholesale market because (i) the Transaction would increase the retail customer base of the merged entity which would mean that the merged entity granting wholesale access to non-MNOs would lead to higher cannibalisation of said increased customer base and (ii) the Transaction would increase the extent to which any such cannibalisation effect is avoidable because of the reduction of competitors from four to three.

Conclusion on the merged entity's incentives

(2210) As a result of the Transaction, the merged entity would have lower incentives to compete aggressively for the provision of wholesale access and call origination services on public mobile networks. This reduction in the merged entity's incentives to compete on the wholesale market for access and call origination on public mobile networks reflects the fact that the merged entity would benefit from a larger customer base and an increased brand portfolio at the retail level as well as an increased ability to affect wholesale prices given the removal of one competitor.

1975 Responses to Questionnaire Q67 to non-MNOs of 4 December 2015, question 27 [ID3193] [ID3949].

1976 […].

1977 […].

1978 […].

8.3.1.3. Assessment of the competitive position of the Parties' competitors

a) Notifying Party's view

i. BT/EE

(2211) According to the Notifying Party, post-Transaction EE will continue to compete actively on the wholesale market. EE has positioned itself as an important player on the wholesale market. EE provides a full range of services to its non-MNO customers. This enhances EE's attractiveness as a host for wholesale customers. The Notifying Party argues that the BT/EE entity will become even more aggressive on the wholesale market. This is, according to the Notifying Party due to the fact that (a) the merged BT/EE will have significant spare capacity on the basis of EE's larger spectrum holdings and the combination of the additional BT spectrum and (b) BT has significant expertise in providing wholesale access on the fixed telecommunications market.

(2212) The Notifying Party argues that the Transaction will not have an effect on BT/EE's incentives to compete.[1979] The Notifying Party claims[1980] that the CMA concluded in its investigation into the acquisition of BT/EE that the merged entity's incentives are likely to remain unchanged post the BT/EE merger.[1981] According to the Notifying Party, the CMA's extensive foreclosure analysis with respect to fixed non-MNOs resulted in the conclusion that BT/EE would be unlikely to gain economically from a total or partial foreclosure strategy.[1982] The Notifying Party argues that the market dynamics upon which the CMA based its conclusions would be in play after completion of the Transaction and are not predicated on a four-player market.

ii. Vodafone

(2213) The Notifying Party argues that,[1983] while Vodafone has publicly announced that it intends only to enter into non-MNO relationships where the wholesale customer is willing to pay the full price of its services, this statement is an independent commercial decision that has no relationship to the Transaction.[1984] The Notifying Party argues that Vodafone is host to a number of significant non-MNOs on its network, including Lebara and Amazon Kindle. Vodafone also partners with MVNE Cognatel which offers enabling and aggregator services to support the successful entry of non-MNOs into the market in the United Kingdom. The Notifying Party also argues that Vodafone has significant spare capacity, which will also ensure that it would continue to exercise considerable pricing discipline upon the other non-MNO hosts.

(2214) Post-Transaction, the Notifying Party argues that Vodafone will continue to compete actively for wholesale customers. In its Reply to the Article 6(1)(c) Decision[1985] and

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1979 Reply to the Article 6(1)(c) Decision, section C.I.4.4.3.
1980 Reply to the Statement of Objections, paragraph 1190.
1981 CMA Final Findings Report, paragraphs 14.7 [ID4112].
1982 CMA Final Findings Report, paragraphs 14.148 [ID4112].
1983 Reply to the Article 6(1)(c) Decision, section C.I.4.4.4.
1984 See https://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/preliminary_results_31march2014/t_prelim2014.pdf [ID1868], http://www.mobiletoday.co.uk/news/industry/28803/vodafone-to-focus-on-larger-mvnos.aspx#.VhtkQ0YwDjs [ID1867].
1985 Reply to the Article 6(1)(c) Decision, section C.I.4.4.4.

the Statement of Objections[1986]the Notifying Party argues that the Transaction will not have an effect on Vodafone's incentive to compete. According to the Notifying Party,[1987] Vodafone will continue to be incentivised to fully utilise its network and to compete in wholesale where the alternative would be to face the erosion of its own retail sales from a non-MNO that is hosted on another MNO without the corresponding reward of wholesale revenues recouped by winning that non-MNO business.

(2215) The Notifying Party concludes that it would not be in Vodafone's commercial interests to initiate a withdrawal strategy.[1988] As the merged entity and BT/EE retain their incentives to compete strongly in wholesale, it would be commercially irrational for Vodafone to withdraw.

(2216) The Notifying Party argues that the CMA notes that Vodafone may have greater incentives to retain a presence in wholesale, on the basis that fixed-mobile bundles are expected to grow in prevalence in the United Kingdom, putting pressure upon Vodafone either to grow its fixed telecommunications business organically or to generate wholesale revenues in partnership with a fixed non-MNO to offset expected lost revenues from customers switching to fixed-mobile offerings.

(2217) Finally, the Notifying Party argues that […]'s foreclosure analysis (submitted by […])[1989] is speculative and methodologically flawed.[1990] Frontier Economics reviewed the […] model and concluded that the model proceeds from the incorrect assumption that Vodafone is not an active participant in the wholesale market. Moreover, the model only shows that two possible post-Transaction equilibria exist – either foreclose or no-foreclose. At best, the […] model can be taken to show that if both Vodafone and BT/EE were to exit the wholesale market, then the merged entity might have an incentive to foreclose non-MNOs. The Notifying Party argues that the […] model is of no material relevance to the Commission's assessment of the Transaction. According to the Notifying Party, any establishment of a "foreclosure equilibrium" would require a coordinated move post-Transaction that would not be possible to achieve, for all the same reasons that it is not possible to sustain coordinate effects theory of harm in the wholesale market.

b) Commission's assessment

(2218) In this section, the Commission sets out the competitive position of the remaining MNOs pre-Transaction and their competitive position absent the Transaction. Then, the Commission examines whether the remaining MNOs would have the ability and the incentives to counter the anticompetitive non-coordinated effects of the Transaction.

(2219) The Notifying Party in its Reply to the Statement of Objections argues that the activity of the remaining competitors (such as Vodafone) in the wholesale market for access and call origination services in the United Kingdom is not related to the Transaction.[1991] The Commission agrees that the current competitive position of the

1986 Reply to the Statement of Objections, section 13.3.
1987 Reply to the Statement of Objections, section 13.3.
1988 Reply to the Statement of Objections, paragraph 1207.
1989 […].
1990 Reply to the Statement of Objections, section 13.4.
1991 Reply to the Statement of Objections, paragraph 1165, Reply to the Letter of Facts of 17 March 2015, paragraph 197.

remaining MNOs is not related to the Transaction but is a relevant assessment of the current ability and incentives of the remaining MNOs to compete on the market which shapes the Commission's view of the competitive situation absent the Transaction. Having established these, the Commission can assess how the Transaction will impact the ability and incentives of the remaining MNOs to compete.

i. Competitive position pre-Transaction

BT/EE

(2220) As shown in Figure 126, EE is currently the largest MNO host by subscribers in the wholesale market for access and call origination. EE's market share is [40-50]% for January to May 2015 and has increased from [30-40]% in 2013 and [40-50]% in 2014.[1992]

(2221) EE currently offers access to a number of non-MNOs. In particular, EE grants access to the largest mass-market non-MNO, Virgin Media, which in turn has approximately [0-5]% market share on the retail market (by revenue). EE also has relationships with two strong MVNEs, Transatel and ViaCloud.

(2222) The BT/EE transaction was approved by the CMA on 15 January 2016.[1993] The CMA, in its Final Findings Report concluded that EE was perceived to have a high quality network, have spare capacity on that network for potential non-MNO deals and be a willing provider of wholesale mobile services. The CMA found that EE was considered by fixed non-MNOs to be an important competitor to other MNOs.[1994]

(2223) The CMA in its Final Findings Report considered the potential impact of the BT/EE transaction in relation to the supply of wholesale mobile services. The CMA investigated the extent to which the merged entity had the ability and incentive to harm one or more fixed non-MNOs at the wholesale level. The CMA found that the extent to which the merged BT/EE could foreclose non-MNOs by refusing to bid or by worsening its wholesale offer (for example increase the price ultimately paid by them and/or cause a degradation in quality) would be limited by the fact that the other three MNOs, Vodafone, O2 and Three, would continue to exert a significant competitive constraint on the merged entity (and each other).[1995] The CMA's finding that harm was unlikely to arise in the wholesale market in relation to fixed non-MNOs other than Virgin Media were expressely stated to be on the basis of the maintenance of a four player market.

(2224) Respondents to the market investigation consider that EE is currently able to compete effectively in the wholesale market. Many respondents to the market investigation submitted that EE is considered an important competitor in offering access to non-MNOs. EE is perceived to have a very good quality network but is also considered not to be as competitive on price as Three.[1996] […] submits that in […]'s experience, EE tends to favour larger contracts.[1997]

1992 On the basis of the Notifying Party's submitted market shares (which include Tesco Mobile) […].

1993 CMA, Final Findings Report, [ID4112].

1994 CMA, Final Findings Report, paragraph 14.45 [ID4112].

1995 CMA, Final Findings Report, paragraph 14.28 and 14.45 [ID4112].

1996 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 74 and 75.

1997 […].

(2225) In light of the above, the Commission considers that, in line with the Notifying Party's submission, BT/EE is currently able and willing to compete in the wholesale market.

Vodafone

(2226) Vodafone is the third MNO host in size on the wholesale market in the United Kingdom. Vodafone's market share is [20-30]% for January to May 2015 and has increased significantly from [30-40]% in 2013 and [20-30]% in 2014.[1998]

(2227) Vodafone currently hosts Lebara, a niche non-MNO which focuses on international calls. Vodafone used to host BT (which switched to EE), TalkTalk (which switched to O2), Gamma (which switched to Three) and had a mobile joint venture with Sainsbury's which was terminated in October 2015.

(2228) Between November 2012 and November 2015, […].

(2229) Vodafone participated in a number of tenders and informal negotiations between November 2012 and November 2015. Examples of Vodafones' participation in tenders are provided in the Commission's file.[1999]

(2230) Respondents to the market investigation consider that Vodafone is currently able to compete effectively in the wholesale market.[2000]

(2231) In light of the above, the Commission considers that, in line with the Notifying Party's submission, Vodafone is currently able to compete in the wholesale market.

(2232) The question whether Vodafone is currently willing to compete for non-MNO contracts is disputed. On one hand Vodafone and the other MNOs (the Parties and EE) present a united view in their submissions to the market investigation that Vodafone is still active on the market. Vodafone participates in tenders and informal negotiations and hosts a number of non-MNOs, including Lebara. On the other hand, a number of public statements and internal documents indicate that Vodafone's strategy in hosting non-MNOs is selective. Vodafone has publicly stated that it only wants to partner with non-MNOs who are willing to pay *"the full price of the services"*.[2001] Its selective policy is also reflected in relation to […]. Vodafone's […] are set out in detail in the Commission's file.[2002] The Commission notes that a large number of non-MNOs argue that Vodafone is not active and has withdrawn from the market as set out below in recitals (2242) to (2257). Some third parties claim that Vodafone's inactivity in the market means that the Transaction is not a "four to three" but in fact a "three to two" merger.[2003]

1998 On the basis of the Notifying Party's submitted market shares (which include Tesco Mobile) Vodafone has [12-20]% market share.

1999 […]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

2000 Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 87-97 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 75-77.

2001 Available at: https://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/preliminary_results_31march2014/t_prelim2014.pdf [ID1868].

2002 […]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

2003 See […].

(2233) The Commission notes Vodafone's arguments that it has not withdrawn from the market and that it is not attempting to engineer the withdrawal of others.[2004] In its comments on the Statement of Objections, Vodafone argues that […]. Vodafone argues […]. According to Vodafone, […]. Vodafone argues that, […]. Vodafone argues that […].[2005]

(2234) […].[2006] […].[2007] […].[2008]

(2235) Similarly, […], argues that Vodafone is still an active competitor.[2009] […] refers to the fact that Vodafone maintains a wholesale bidding team and participated in recent tenders and discussions.

(2236) On the other hand, there are indications that Vodafone may have a selective policy in relation to the supply of non-MNOs and especially of mass-market non-MNOs.[2010] According to a public comment by Vodafone's CEO Vittorio Colao *"... our choice to, it's not to cut out MVNOs, but to keep MVNOs who are not willing to pay the full price of the services, is the right one, because you avoid the direct comparison and direct disintermediation. If others make different choices and they want to give away their 4G, 2GB, 4GB, for whatever, €5, then that's their choice, but eventually I can guarantee you, they will be cannibalized by their own MVNOs, which is fine if it's part of their strategy. We are not willing to do that."*[2011]

(2237) Vodafone argues that […].[2012] The Commission notes that the question was formulated in relation to Germany, however the answer is framed in wider terms in relation to Vodafone's approach to granting wholesale access and the purpose of consolidation in a market. In fact, when pressed further in relation to Vodafone's wholesale strategy in the next question, Vodafone's CEO gives an example referring to Poste Italiane, indicating that the strategy he is referring to is wider than Germany and does not only relate to countries where there is consolidation. In addition, this strategy, when it relates to the United Knigdom, is evidenced also by Vodafone's approach towards non-MNOs and the way it is perceived in the market.

(2238) Internal documents from the Parties show […].*"*[2013]

(2239) O2, in its internal documents […].[2014]

(2240) Three acknowledges, in an internal document, […].[2015][…].[2016] […].[2017]

2004 […]. Vodafone Response to Provisional Findings, 19 November 2015", paragraph 6.1. Available at https://assets.digital.cabinet-office.gov.uk/media/564f4973ed915d566d00003b/Vodafone_response_to_PFs.pdf [ID4157].

2005 […].

2006 […].

2007 […].

2008 […].

2009 […].

2010 See https://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/preliminary_results_31march2014/t_prelim2014.pdf, [ID1868] http://www.mobiletoday.co.uk/news/industry/28803/vodafone-to-focus-on-larger-mvnos.aspx#.VhtkQ0YwDjs [ID1867].

2011 Available at: https://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/preliminary_results_31march2014/t_prelim2014.pdf [ID1868].

2012 […].

2013 Three's internal documents, […].

2014 O2's response to RFI 57, Annex 1 […].

(2241) […].[2018] […].

(2242) An important element indicating Vodafone's inactivity in relation to wholesale access is […].[2019] […].[2020]

(2243) […].[2021]

(2244) […].[2022] […].[2023]

(2245) Vodafone's policy in relation to […] is known to the other MNOs. An O2 internal email states that […][2024][…].[…]. Similarly, an internal email of Three states that […].[2025] Three acknowledges […].[2026]

(2246) A report by […] cites Vodafone's selective policy in the non-MNO market: *"[...]."* [2027]

(2247) Analyst CCS Insight submits that Vodafone appears to be pulling away from non-MNOs and states that Vodafone recently ended its non-MNO joint venture with Sainsbury's.[2028]

(2248) Many non-MNOs perceive Vodafone as an inactive competitor on the market for wholesale.[2029] They argue that Vodafone is not an aggressive competitor and note that Vodafone has not made any recent announcements that it has granted wholesale access to its network to any non-MNOs. Non-MNOs refer to the fact that a number of non-MNOs have actively moved away from Vodafone, such as BT, TalkTalk and Gamma. Some respondents to the market investigation have indicated that Vodafone has withdrawn from the market and should no longer be considered to be an active competitor.[2030] Others go as far as to claim that the market is moving from three to two competitors post-Transaction, discounting Vodafone from the wholesale market.[2031] Similar views were also expressed to the CMA in its review of the BT/EE transaction.[2032]

(2249) […].[2033] In its comments on the Statement of Objections,[2034] TalkTalk argues that there is no evidence that Vodafone is any longer an active market participant.

2015 Annex 7.052 to the Form CO, […].

2016 Annex 7.052 to the Form CO, […]; Notifying Party's response to RFI 56, Annex 29 – […].

2017 Three's internal documents, […].

2018 Three's internal documents, […].

2019 […].

2020 [CONF-ID 32-35]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

2021 […].

2022 […].

2023 [CONF-ID 36]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

2024 O2's internal documents, […].

2025 Three's internal documents, […].

2026 Three's internal documents, […].

2027 […].

2028 CCS Insight, "Mobile Operator Trends and Key Development in the UK", Kester Mann, December 2015, page 5 [ID2724].

2029 Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 76, 77 and 88.

2030 […].

2031 […].

2032 CMA, Final Findings Report, paragraph 14.30 [ID4112].

2033 […].

2034 TalkTalk, comments on the Statement of Objections, paragraphs 1.12 onwards [ID5183].

[…].[2035] […].[2036] TalkTalk expressed similar views to the CMA in the context of the BT/EE proceedings.[2037]

(2250) […].[2038] […].

(2251) […].[2039] More details are provided in the Commission's file.[2040]

(2252) […].[2041]

(2253) […].[2042] […] submits that Vodafone cannot be considered as a competitive constraint for the proposed merged entity in the market for wholesale access and call origination services.[2043] […].[2044]

(2254) Other non-MNOs submit that Vodafone is not a very active and aggressive competitor in wholesale. […].[2045] […] submits that Vodafone has withdrawn from the market in the United Kingdom.[2046] […] submits that Vodafone is significantly less aggressive on bringing new retail focused non-MNOs to its network, with an apparent strategy on focusing more on its MNO / existing non-MNO businesses.[2047] […] submits that Vodafone was not interested from the beginning to cooperate with […].[2048] […] argues that Vodafone has already indicated that it is unwilling to offer competitive services in the wholesale access market in the United Kingdom.[2049] The Commission notes that the reason for this view might be the fact that Vodafone withdrew from the […] tender process. Vodafone's explanation for the withdrawal is set out in the Commission's file.[2050]

(2255) […] also comments on Vodafone's "*inability to launch Sainsbury, along with the deaths of many smaller; more innovative MVNOs over the past 12 months […]. In addition to this bloodbath; Vodafone also saw the exit of another major retail MVNO, Asda Mobile, who switched host MNOs from Vodafone to EE, all of this following a quick dismantling of their London-based MVNA, Cognatel in mid-2014.*"[2051] […] comments that Vodafone's CEO has spoken publicly about his lack of interest in wholesale and comments that those with particular indicia of reliability do not consider Vodafone a viable option in the wholesale market.

(2256) Many non-MNO respondents to the Commission's investigation also comment on Vodafone's perceived refusal to provide 4G services. […] notes that Vodafone has not entered into a single non-MNO agreement which provides 4G services to that

2035 […].
2036 […].
2037 CMA, Final Findings Report, paragraph 14.56 [ID4112].
2038 […].
2039 […].
2040 [CONF-ID 37-39]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.
2041 […].
2042 […].
2043 […].
2044 […].
2045 […].
2046 […].
2047 […].
2048 […].
2049 […].
2050 […]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.
2051 […].

non-MNO.[2052] It considers that, given the evolution of the market, there is no realistic prospect that in two to three years a non-MNO will be able to offer a mass-market retail mobile proposition without access to 4G. […] submitted that around half of EE's retail customers are already on 4G and within two to three years well over half of all United Kingdom retail customers should be expected to be using 4G technology. […] submitted that any MNO which will not offer 4G capacity to non-MNOs cannot be said to be an active competitor on the wholesale mobile market.

(2257) […].[2053] […] submitted that it has heard that Vodafone is not intending to offer 4G to any non-MNO partners.[2054] Finally, […].[2055]

(2258) The Commission has considered the public views of Vodafone as well as the views expressed in Vodafone's internal documents. The Commission considers that these provide strong evidence that Vodafone has a selective policy in choosing its wholesale partners. This impacts Vodafone's commercial decisions in relation to wholesale, such as a decision not to participate in a tender or the decision not to offer access to 4G services (or to offer such access at a premium).

(2259) The Commission considers that the fact that Vodafone is absent from certain tenders or negotiation processes is not in itself evidence that Vodafone has withdrawn from the market. However, depending on the reasons for not participating in a competitive process, however, Vodafone's decision not to participate might reflect its selectiveness. Vodafone's rationale for the withdrawal is provided in the Commission's file.[2056]

(2260) Moreover, the Commission considers that the fact that it has not won certain contracts is not in itself evidence that Vodafone has withdrawn from the market. In fact, Vodafone, similar to Three, is adding to the competitive landscape through its presence on the market as a competitor and its participation in tender processes, as set out in Section 8.3.1.2.b(ii).

(2261) The Commission has considered the views of the respondents to the market investigation in its competitive assessment of Vodafone's position on the market. The Commission does not consider that Vodafone has fully withdrawn from the market. Vodafone is still active in wholesale, as is evidenced by Vodafone's participation in tenders and informal negotiations, but has adopted a highly selective policy in relation to wholesale access, meaning that it may not be willing to host certain non-MNOs at all or not at certain terms and conditions.

(2262) In relation to 4G, the Commission considers that Vodafone does not have a policy of outright refusal of 4G access. However, Vodafone considers that […]. This is another indication of Vodafone's selective policy to partner only with non-MNOs which are willing to pay the full price of the services.

(2263) On the basis of the results of its market investigation and of the analysis of Vodafone's and third parties' internal documents and correspondence, the Commission concludes that Vodafone, while remaining active in the wholesale market, has adopted a highly selective policy with respect to its wholesale partners

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2052 […].

2053 […].

2054 […].

2055 […].

2056 Vodafone's response to RFI 55 [ID2558]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

and the terms and conditions for offering wholesale access services to non-MNOs (including 4G access). Therefore, it will only seldom be willing to compete vigorously for non-MNO deals.

ii. Competitive position absent the Transaction

(2264) On the basis of the overall evidence in its file, the Commission considers that there is no reason to believe that, absent the Transaction, the competitive position of EE and Vodafone would change.

(2265) The Commission considers that this finding does not change also as a result of BT's acquisition of EE. Indeed, in its Final Findings Report the CMA has not found any concerns as regards an increased ability of BT/EE to foreclose non-MNOs.[2057]

(2266) On this basis, the Commission concludes that, absent the Transaction, BT/EE would be both able and willing to host non-MNOs. In relation to Vodafone, the Commission concludes that Vodafone, absent the Transaction, would remain able to host non-MNOs but would continue its selective approach in terms of choosing which non-MNOs to host and determining the contractual terms (such as access to new technologies).

iii. Likely reaction post-Transaction

(2267) A merger is unlikely to harm competition where the reaction of the remaining competitors would discipline the behaviour of the merged entity. On the other hand, the remaining competitors may not be willing or able to compete sufficiently post-Transaction so as to compensate for the loss of competition.

(2268) For this purpose, the Commission assessed the likely reaction of the remaining competitors post-Transaction. In particular the Commission examined whether BT/EE and Vodafone would have sufficient ability and incentives to compensate for the degree of competition lost due to the Transaction.

<u>Ability to compete</u>

(2269) It is undisputed between the Commission and the Notifying Party that BT/EE and Vodafone would be able to compete effectively with the merged entity post-Transaction.

(2270) Nonetheless, concerns have been raised in relation to the merged entity's ability to marginalise post-Transaction the other two MNOs. Indeed, while EE and Vodafone appear to be two strong competitors today, their ability to compete effectively with the merged entity post-Transaction significantly depends on the future development of the MBNL and Beacon network sharing agreements. Post-Transaction Three would hold a stake in both network sharing agreements and would have the ability and incentive to frustrate one of the two network sharing agreements. This would have the effect of weakening and/or marginalising one or both of the two other MNOs (namely Vodafone or BT/EE) and therefore reduce their ability to compete post-Transaction in particular with respect to the network performance related parameters of competition. The effect of the Transaction on the ability to compete of Vodafone and EE is further discussed in Section 8.2.2.

(2271) Overall, taking into account the concerns raised in Section 8.3.1.3(b) in relation to the merged entity's ability to marginalise the other two MNOs, the Commission

[2057] CMA, Final Findings Report [ID 4112].

concludes that post-Transaction BT/EE and/or Vodafone are unlikely to have the ability to compete against the merged entity as effectively as prior to and in the absence of the Transaction.

Incentives to compete

(2272) Even if the Commission were to consider that the merged entity does not have the ability to marginalise the other two MNOs, as described above, and therefore assuming BT/EE's and Vodafone's ability to compete be fully preserved post-Transaction, the Commission considers that, in any event, they would not have the incentives to do so.

(2273) According to the Horizontal Merger Guidelines, "*non-merging firms in the same market can also benefit from the reduction of competitive pressure that results from the merger, since the merging firms' price increase may switch some demand to the rival firms, which, in turn, may find it profitable to increase their prices*".[2058] Furthermore, recital 25 of the Merger Regulation and paragraph 25 of the Horizontal Merger Guidelines state that "*mergers in oligopolistic markets involving the elimination of important competitive constraints that the merging parties previously exerted upon each other* together *with a reduction of competitive pressure on the remaining competitors may […] also result in a significant impediment to effective competition.*"

(2274) The Commission considers that the principles of the Horizontal Merger Guidelines are applicable to the assessment of the Transaction and that the Parties' MNO competitors would not have the incentive to compete vigorously post-Transaction.

(2275) When competition on the wholesale level is oligopolistic, a decision of the merged entity to restrict access to its network reduces the competitive pressure exercised on the remaining MNOs which may allow them to raise the wholesale price they charge to non-MNOs. Any MNO remaining active on the wholesale market will choose its strategy as a best response to its competitors' strategies. That is, taking into account the incentives of the other MNOs on the market, BT/EE's and Vodafone's strategy on the wholesale market will be a best response to the strategy of the merged entity, while the merged entity's strategy will be its best response to the strategy of BT/EE and Vodafone.

(2276) In its Final Findings in relation to the BT/EE merger, the CMA notes[2059] that BT/EE's ability and incentives to foreclose non-MNOs in the wholesale market will be constrained by the fact that there will be three other MNOs (Three, Vodafone and O2) remaining in the market. The CMA found that the continued role of O2 and Three post-Transaction, with strong incentives to bid for fixed-MVNO contracts, would be likely to undermine such a strategy.[2060] According to the CMA, this was an important part of the CMA's reasoning in concluding that BT was not expected to have sufficient ability and incentive to foreclose fixed-MVNOs in the wholesale market. The CMA has expressed its concerns to the Commission that this constraint will be significantly impacted by the Transaction.[2061]

2058 Horizontal Merger Guidelines, paragraph 24.
2059 CMA, Phase 2 Submission to the European Commission, 11 March 2016, paragraph 6(g) [ID5251].
2060 CMA, Final Findings Report, paragraph 14.30 [ID4112].
2061 CMA, Final Findings Report, paragraphs 14.181,14.183,14.190,14.195,14.202,14.204 and 14.206 [ID4112].

(2277) Many non-MNO respondents to the Commission's market investigation have expressed their concerns that following the Transaction, the incentives of the remaining MNOs to compete will be reduced.

(2278) […] submits that the Transaction is likely to further reduce the incentive of EE and Vodafone to compete in the provision of mobile capacity at the wholesale level due to the loss of competitive pressure at the retail level.[2062] […] submits that, post-Transaction there will be a stable coordinated equilibrium where no MNO supplies mass-market non-MNOs, from which no MNO has an incentive to deviate, meaning that Vodafone would not want to re-enter unless there were a significant shift in market dynamics.[2063] […] argues that EE and Vodafone are likely to welcome the removal of one of the MNOs from the market, as it limits competition in retail and wholesale market. They are likely to react by increasing prices and withdrawing supply from competitive mass-market non-MNOs.[2064]

(2279) […] submits that, following the announcement of the Transaction (and the BT/EE transaction), Vodafone's position has worsened; in other words the *"effective withdrawal from the market by Vodafone"*, according to […], was more acute when the two transactions became public domain information.[2065]

(2280) […].[2066] […].[2067]

(2281) […].[2068]

(2282) […] also considers that post-Transaction BT/EE and/or Vodafone are unlikely to have the ability or the incentive to compete against the merged entity as effectively as before the Transaction since they have demonstrated that they are mostly focused on customer retention and revenue increases than on gaining new customers.[2069] […] submits that as a result of this reduction in the number of alternative suppliers in the wholesale supply market, MNOs will feel less pressure to reduce wholesale charges or offer improved terms to their existing non-MNOs.[2070] […] submits that there is a risk that post-Transaction Vodafone and EE will seek to squeeze non-MNOs to improve their own margins and market shares.[2071] […] submits that EE's incentives to provide wholesale access are likely to reduce as the number of providers reduces from four to three.[2072]

(2283) Similarly, […] submits that after the Transaction, with the merged entity offering less aggressive rates than Three usually offers pre-Transaction, EE and Vodafone might see an opportunity to be less aggressive as well and aim to recuperate a bit of the value lost in their tariffs. […] does not necessarily see a tariff increase, but a slower tariff reduction throughout time.[2073] […] argues that Vodafone has already indicated that it is unwilling to offer competitive services in the wholesale access

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2073 […].

market in the United Kingdom. The reaction of BT/EE will as a result be that of a typical participant in a duopoly market - prices will rise, and wholesale margins will be squeezed.[2074]

(2284) […] submits that if the Transaction were to take place, Vodafone would become the smallest operator. Nevertheless, its retail market share in 2015, at [20-30]%, would be substantially in excess of the current market share of Three ([10-20]%). Furthermore, Vodafone's recent behaviour in the wholesale market, and approach to non-MNOs generally, do not provide confidence that it would emerge as a new challenger in this space. Vodafone's public statements in other markets[2075] do not indicate that Vodafone's global strategy places any great priority on the development of the non-MNO market. In the absence of an obvious challenger in the non-MNO market, and with the number of MNOs reducing to three, it is not clear to […] what drivers would exist for the other two MNOs to become or remain enthusiastic wholesale suppliers.[2076]

(2285) […].[2077]

(2286) The Commission has considered the potential impact of the Transaction on cannibalisation and thus the incentives of BT/EE and Vodafone to compete in the wholesale market. The ability of non-MNOs to compete for retail customers is determined by the strength of the wholesale terms offered by their host. Both BT/EE and Vodafone may choose to compete less vigorously (or not at all) for a non-MNO in order to minimise any cannibalisation of their retail revenues but this effect may be offset by the threat that the non-MNO will be hosted by another MNO. This threat will be reduced by the elimination of Three as an important competitive force as concluded in recital (2126) and, therefore, the incentives of BT/EE and Vodafone to compete will also be reduced, aggravating the loss of incentives to compete arising from the pure loss of competition at the wholesale level.

(2287) […] argues that considering the total exclusion of fixed-mobile non-MNOs, the expected profits lost upstream depend upon the likelihood that the merged entity will win the wholesale contract to supply, and the margins which will be made if the merged entity wins the supply contract. The expected profits gained downstream depend upon (i) the end-to-end margins (or direct recapture margins) for retail customers (taking into account both wholesale and retail margins); (ii) whether the foreclosure of each non-MNO from the market if the merged entity does not supply is full or partial; and (iii) the proportion of customers of the non-MNO who will switch to the merged entity if the non-MNO is fully or partially excluded from the market.[2078]

(2288) […] argues that in case of full foreclosure by all non-MNOs, the non-MNO is forced to exit the market and its subscribers have to switch to another MNO if they want to continue using a mobile service. In the case of partial foreclosure, a wholesale price increase is passed through to retail prices and some subscribers switch in response to higher prices.

2074 […].

2075 See http://www.techradar.com/news/phone-and-communications/mobile-phones/mvnos-won-t-be-around-much-longer-says-vodafone-australia-ceo-1175622 [ID3784].

2076 […].

2077 […].

2078 […].

(2289) […].[2079] It submitted that this reduced incentive for BT/EE to compete would arise because both BT/EE and the merged entity would benefit from reduced cannibalisation if neither hosted, and the profits from not hosting were sufficiently high that neither would have the incentive to deviate from the non-hosting equilibrium. The latter implies that the monitoring and discipline necessary for coordination would not be necessary and therefore that this would be a stable equilibrium.[2080]

(2290) In light of the above, the Commission concludes that both the ability and the incentives of the merged firm's competitors to grant wholesale access to non-MNOs will be negatively impacted by the Transaction.

c) Conclusion on the competitive position of the Parties' competitors

(2291) In summary, the Commission considers that, post-Transaction, it is unlikely that BT/EE and Vodafone will have the same ability to compete than pre-Transaction due to network sharing concerns. In any event, should their ability to compete be fully preserved post-Transaction, it is likely that they would not have a strong incentive to compete vigorously.

8.3.1.4. Commission's assessment of the impact of the Transaction

a) General assessment

(2292) As stated in Section 8.1., according to paragraph 25 of the Horizontal Merger Guidelines mergers in oligopolistic markets involving the elimination of the important competitive constraint that the merging firms previously exercised on each other and on the remaining competitors with a reduction of competitive pressure on the remaining competitors may, even in the absence of coordination between the members of the oligopoly, also result in a significant impediment to effective competition.

(2293) In addition paragraph 37 of the Horizontal Merger Guidelines states that a merger involving an important competitive force, that is to say a firm having an influence on the competitive dynamics greater than its market share would suggest, may change the dynamics in a significant anticompetitive way, in particular when the market is already concentrated.

(2294) As set out in Sections 8.3.1.2.a and 8.3.1.2.b, in the present case the Commission considers that Three's ability to influence the competitive process on this market is not reflected by its current market share. The Commission found that Three is a credible player on this market, that it is perceived as such by both its customers, including mass-market non-MNOs, and competitors on this market, that it has in the past offered competitive terms, notably in relation to 4G access, and that its participation in a tender exerted an important influence on the final outcome of the bids even when it ultimately failed to secure the customers. The Commission found also that Three demonstrated its strengthened position on this market recently by acquiring important non-MNOs such as Dixons. In addition, Three has more generally implemented a number of steps to overcome its weaknesses on the wholesale market. Whilst the Commission did not find any evidence that the ability to compete of Three would decrease as a result of the Transaction, it found evidence

2079 […].

2080 […].

that Three's significance on this market will not decrease, but possibly increase in the future absent the Transaction.

(2295) Based on the above, the Commission considers that Three constitutes an important competitive force, pursuant to paragraph 37 of the Horizontal Merger Guidelines, on the wholesale market for access and call origination services on public mobile networks in the United Kingdom. The Commission considers that, while Three is not a recent entrant on the wholesale market, it has recently significantly expanded its wholesale capabilities and it is expected to exert significant competitive pressure in the future on the other firms in the market, as set out in paragraph 37 of the Horizontal Merger Guidelines. The removal of such an important competitive force will lead to anticompetitive concerns, in particular taking into account the very concentrated nature of the wholesale market for access and call origination services on public mobile networks in the United Kingdom.

(2296) In addition, in Section 8.3.1.2.d, the Commission described why it considers that O2 currently plays a very important role in influencing the competitive dynamics of the wholesale market. The Commission has found no evidence that absent the Transaction O2 would change its strategy or would lack the ability to continue influence to a significant extent the competitive dynamics on this market and has explained in Section 8.3.1.2.e why, on the contrary, it considers that O2 would continue to be an important player on this market in the future, in the absence of the Transaction.

(2297) On this basis the Commission found that both Three and O2 exert important competitive constraints upon each other and on the remaining competitors in the market within the meaning of paragraph 24 and 25 of the Horizontal Merger Guidelines.

(2298) The Transaction would combine two of the four potential hosts for wholesale access and call origination services, thus increasing the level of concentration in a highly concentrated market, depriving the customers of the possibility of turning to a very competitive and aggressive player, such as Three, and eliminating the competitive constraints individually exerted by the Parties pre-Transaction upon each other and reducing the competitive pressure upon the other players.

(2299) In Section 8.3.1.2.f, the Commission has also explained why the incentives to compete of the merged entity will be lower than those of each of the Parties pre-Transaction.

(2300) Finally, the Commission considers that the negative effects of the Transaction would be amplified given that it will reduce the overall competition on the market. As described in the previous section, the Transaction will decrease both the remaining Parties' competitors ability and incentives to compete on this market and to defeat a possible price increase implemented by the merged entity.

b) Effects on the overall wholesale market

i. Introduction

(2301) The Commission considers that, as a result, the competitive conditions on this market will materially deteriorate. The reduction of competition resulting from the Transaction in this already concentrated market may make it even more difficult than it already is today for non-MNOs to obtain wholesale access on commercially attractive terms and to all technologies.

(2302) The Commission's findings are also supported by the results of its market investigation. Some non-MNOs are concerned by the reduction in available options available to non-MNOs and of reduced competition in the wholesale mobile market, which was already very limited. In particular, some non-MNOs express the view that the market was already highly concentrated pre-Transaction, with non-MNOs having very few potential hosts, dysfunctional and very fragile, even with the pre-Transaction level of competition.[2081] These market conditions, according to some non-MNOs were barely sufficient to ensure reasonably competitive outcomes with any reduction leading to an almost total collapse of the market.[2082]

(2303) The CMA shares this view. In particular, the CMA in its submission to the European Commission[2083] considers that the reduction in the number of national wholesalers risks having a direct and significant impact on wholesale prices and quality due to reduced competitive constraints. In particular non-MNOs may obtain poorer commercial terms as a result of the reduced competition at MNO level, or may not find any access at all.

ii. Price increase effects

(2304) The Commission considers that the Transaction may lead to an increase in the wholesale rates offered by the merged entity to non-MNOs, or to a lower rate of decrease. As discussed in recital (1039), most non-MNO agreements are based on unit pricing and therefore the wholesale unit rate impacts the non-MNOs' ability to construct competitive retail tariffs and compete effectively on the retail market.

(2305) The Commission's concerns are supported also by the results of its market investigation. […] claims that it is likely that all non-MNOs will face increased wholesale costs for mobile capacity as a result of the Transaction.[2084] […] submits that by reducing the number of independent MNOs, it would expect the position for non-MNOs to negotiate acceptable wholesale terms to become more difficult following the Transaction.[2085]

(2306) Thus, the Commission considers that an increase in the level of wholesale rates would impact the growth of the non-MNO business downstream. This could limit even further the ability of non-MNOs to compete in the retail market against the MNOs and might lead to delays or blocks in the development of new and innovative non-MNO business models.

(2307) The respondents to the market investigation support these Commission's concerns. […] submits that, as the wholesale mobile market is not regulated, non-MNOs such as […] are dependent upon effective wholesale competition prevailing between the MNOs in order to achieve reasonable wholesale terms (price and/or quality). In short, the ability of non-MNOs to compete with MNOs crucially depends on the access conditions that they obtain at the wholesale level and therefore, any deterioration of these conditions following the Transaction will also have an impact on competition at the retail level.[2086] Moreover, […].[2087] […].[2088]

2081 CMA, Final Findings Report, paragraph 14.30 [ID4112].

2082 CMA, Final Findings Report, paragraph 14.30 [ID4112].

2083 CMA, Phase 2 Submission to the European Commission, 25 January 2016, paragraph 36 [ID4116].

2084 […].

2085 […].

2086 […].

2087 […].

iii. *Quality decrease*

(2308) The Commission considers that the Transaction will deteriorate the competitive conditions not only in relation to price but also in relation to the possibility for non-MNO to access the most recent technologies (currently 4G). This will further reduce their already limited ability to compete against the MNOs, which is set out in recitals (1080) to (1106).

(2309) These concerns are also expressed by market respondents such as […][2089] and […].[2090, 2091] Further evidence is provided in the Commission's file.[2092]

c) Effects on specific types of non-MNOs

(2310) The Commission considers the Transaction will have stronger effect in relation to certain types of non-MNOs:

(a) **Non-MNOs with growth opportunities:** The Transaction will eliminate Three as the main provider of wholesale access which specifically targets small, new entrant non-MNOs with growth opportunities. As discussed in recitals (1969) to (1974) and (2226) to (2262), both O2 and Vodafone have a selective approach in deciding to grant access to non-MNOs. Three on the other hand often bids for providers that others do not consider large enough, credible enough, or niche enough.

(b) **Supermarket non-MNOs:** In relation to non-MNOs with a retail (for example, supermarket) affiliation (such as Asda and Sainsbury's), the reduction in the number of potential MNO hosts considered is particularly problematic, as these non-MNOs, in order to be more competitive, do not consider any MNO hosts who already have a commercial wholesale access relationship with another supermarket non-MNO, as they view this relationship as a commercial conflict. As set out in recital (2200), non-MNOs appear to anticipate that MNOs' willingness to host may be affected by conflicts arising from their cannibalisation of the MNO host's market.

(2311) The Notifying Party argues that the concerns described by non-MNOs about sharing wholesale hosts with their competitors are misplaced because non-MNOs can differentiate their retail offerings and because any issues are derived from commercial policies and not from competitive effects of the Transaction.[2093] The Commission considers that the concerns raised by non-MNOs are not strictly related to an ability to differentiate their offer at the retail level. Rather, the concerns of non-MNOs about potential hosts that already have a wholesale relationship with their competitors arise from concerns about the incentive of the wholesale host to support them given that they may cannibalise existing wholesale revenues (or the retail revenues of an important wholesale customer), for example by continuing to be cooperative with respect to terms not adequately contracted for in their wholesale agreement. With regard to the relevance of non-MNOs' commercial policies, the Commission considers that non-MNOs' commercial policies are likely to be set with

2088 […].
2089 […].
2090 […].
2091 […].
2092 Letter of Facts of 17 March 2016, paragraphs 46-51 and 61-62. Access to this data was provided to the Notifying Party in the course of the proceedings under the data room procedure.
2093 Reply to the Statement of Objections, paragraph 1152.

regard to their impact on profitability. That supermarket non-MNOs are observed deciding not to make wholesale agreements with MNOs that host their retail level competitors is consistent with those non-MNOs' comments that MNOs may not be suitable as a host as long as they host a competing supermarket.

d) Conclusion on anti-competitive effects

(2312) On the basis of the above, the Commission concludes that the Transaction will have anti-competitive effects in the wholesale prices and quality.

8.3.1.5. Overall conclusion on horizontal non-coordinated effects arising from the elimination of important competitive constraints

(2313) On this basis, the Commission concludes that the Transaction is likely to give rise to non-coordinated anti-competitive effects on the wholesale market for access and call origination services on public mobile networks in the United Kingdom. The anti-competitive effects would arise from a reduction of the number of MNOs from four to three, the elimination of Three as an important competitive force pursuant to paragraph 37 of the Horizontal Merger Guidelines and the elimination of important competitive constraints that the Parties previously exercised upon each other and a reduction of competitive pressure on the remaining players in the market. In addition, competing MNOs would have neither the ability, nor the incentives to counter the anticompetitive non-coordinated effects of the Transaction.

(2314) Since such effects cannot be offset by buyer power (as discussed in Section 8.3.2.1), entry (as discussed in Section 8.3.2.2) or efficiencies (as discussed in Section 8.4), the Transaction would significantly impede effective competition in the wholesale market for access and call origination services on public mobile networks in the United Kingdom.

8.3.2. Countervailing factors

8.3.2.1. Buyer power

a) Notifying Party's view

(2315) The Notifying Party submits that successful non-MNOs have significant bargaining power and that all MNOs have incentives to attract non-MNO customers. The Notifying Party further points out that non-MNOs have the possibility of switching which would leverage their negotiating position.

(2316) According to the Notifying Party, each MNO contracted by a potential new entrant non-MNO has to take into account that the non-MNO might enter into an agreement with another MNO if the first non-MNO refuses to provide it with attractive wholesale access. The Notifying Party argues that this would be the worst case for the MNO: on one hand the MNO would face the additional competition and customer losses generated by the non-MNO entry, on the other hand it would not have any additional revenue streams and its competitor MNO would be strengthened by enjoying the wholesale access revenues. Therefore, (the larger) non-MNOs have significant buying power which manifests itself at the end of each contractual period, when non-MNOs are able to exercise significant bargaining power in terms of wholesale prices and other conditions.[2094]

[2094] Reply to the Statement of Objections, paragraph 1181.

(2317) The Notifying Party argues that this bargaining power is the reason why the Transaction would not change the incentives of the merged entity to enter into wholesale access agreements. The Notifying Party states that, while it is true that with a higher customer base the cannibalisation effect of non-MNO entry might be higher, this cannibalisation effect would occur irrespective of whether the combined business itself or one of the two other MNOs were host to the new market entrant non-MNO.

b) Commission's assessment

(2318) In the market for wholesale access and call origination on public mobile networks, which is characterised by high concentration, limited credible alternatives and high barriers to entry for new MNOs, the buyer power of non-MNOs is limited. Following the Transaction, a current or new entrant non-MNO will have a limited choice between the merged entity, Vodafone and BT/EE.

(2319) The Commission considers that currently pre-Transaction, non-MNOs enjoy very limited bargaining power. As discussed in recitals (1014) to (1079), non-MNOs' reliance on wholesale access conditions limits the non-MNOs ability to compete and creates difficulties to designing attractive retail tariffs because of the per unit pricing at the wholesale level. The difficulties of non-MNOs in designing competitive tariffs are more prominent when it comes to data plans. The Commission considers that non-MNOs are unable to offer attractive data packages which significantly reduces their competitive strength given the steadily increasing demand for data following the launch of 4G.

(2320) If non-MNOs had strong bargaining power vis-a-vis their MNO hosts, they would be in a position to negotiate wholesale tariff structures which would give non-MNOs more pricing freedom and flexibility. The Commission notes that the third and final set of commitments proposed by the Notifying Party on 6 April 2016 (see Section 9.5) contains different commitments to offer wholesale access on capacity based terms rather than unit pricing. To date, such terms have not been offered by Three or any other MNO in the United Kingdom on a commercial basis.

(2321) A number of respondents to the market investigation contradict the Notifying Party's description of the degree of negotiating power enjoyed by non-MNOs.[2095] […] has indicated that the margins between the wholesale rates and retail prices are very low, which signifies that non-MNOs are not able to exercise strong competitive pressure in order to obtain reduced wholesale prices.[2096]

(2322) Even now, pre-Transaction, sometimes a non-MNO finds it difficult to engage the interest of potential MNO hosts. Examples of this are provided in the Commission's file.[2097]

(2323) The Commission considers that post-Transaction, the reduced number of potential hosts and the reduced incentives of the merged entity and the other remaining MNO hosts to compete, will significantly outweigh any countervailing buyer power of the non-MNOs.

[2095] Responses to Questionnaire Q27 to non-MNOs of 11 September 2015, questions 71, 72 and 74.

[2096] […].

[2097] Letter of facts of 17 March 2016, paragraphs 46-51 and 61-62. [CONF-ID 40-43]. Access to this evidence was provided to the Notifying Party in the course of the proceedings under the data room procedure.

(2324) On the basis of the above, the Commission concludes that possible buyer power exercised by non-MNOs does not constitute a countervailing factor such as to offset the possible anti-competitive effects of the Transaction.

8.3.2.2. Entry

(2325) According to the Horizontal Merger Guidelines, a merger is unlikely to pose any significant anti-competitive risk if entering a market is sufficiently easy. For entry to be considered a sufficient competitive constraint on the merged entity, it must be likely, timely and sufficient to deter or defeat any potential anti-competitive effects of the merger.[2098]

(2326) Entry on the wholesale market for access and call origination on public mobile networks is limited, as MNOs are the only ones with a mobile network which they can give access to. The Commission notes that non-MNOs are not active on the supply side, but on the demand side of this market.

a) Notifying Party's view

(2327) The Notifying Party does not make any submissions in relation to a new MNO entry in the United Kingdom.

b) Commission's assessment

(2328) As explained in recital (1798) the Commission considers that the investment requirements to enter the United Kingdom market as an MNO (such as spectrum availability and infrastructure) constitute a serious barrier to entry. Barriers to entry as an MNO are very high, given the major investments required.

(2329) This view is supported by the results of the market investigation. First, respondents to the market investigation explained that entry as an MNO is very difficult. This requires significant investment and time. As one respondent explained, there are a number of elements in which a new entrant would need to invest into: acquisition of spectrum, construction of an initial greenfield radio access network with national or near to national coverage, establishing a backbone, core network and IT environment for the networks, establishing marketing, customer service and support and implementing interfaces for mobile number portability, legal interception, data retention and information services. It is estimated that such investments would require several billion pounds.[2099]

(2330) Secondly, respondents to the Commission's market investigation indicated that they do not expect any new MNO entrant in the near future.[2100]

(2331) In more detail, the Commission notes that a new MNO entrant would need to obtain access to spectrum of the right quantity and nature in order to be able to deliver national services. For example, in Ofcom's competition assessment for the 4G auction in 2012, Ofcom considered that, to be a credible competitor at that time, a new entrant would need, at a minimum, 60-100 MHz of spectrum (depending on the

[2098] Horizontal Merger Guidelines, paragraph 68.

[2099] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 48 and to Questionnaire Q27 to non-MNOs of 11 September 2015, question 50.

[2100] Responses to Questionnaire Q26 to MNOs of 11 September 2015, question 49.

composition by frequency band).[2101] Such spectrum is scarce and expensive. Access to sub 1 GHz spectrum may be especially important for a new entrant as part of its spectrum portfolio to be able to deploy a national network quickly and without excessive cost.[2102]

(2332) The new entrant would build out its radio access network with national coverage, which involves significant sunk costs. Acquiring access to new sites is a lengthy and complex process because of the existence of a limited number of suitable locations for optimised outdoor coverage, the need for negotiations with landlords, potential planning requirements, potential works to host the network equipment and site engineering for interference management.[2103] While network sharing arrangements may reduce such costs, the entrant would still have to make a significant investment.

(2333) Moreover, it may be difficult for a new entrant to be able to negotiate a network sharing agreement with an established operator, as the established MNOs would have little incentive to facilitate the entry of a new competitor.[2104] A new entrant would probably also need a national roaming agreement with an existing operator while it builds its network, and again existing MNOs may have little incentive to provide contract with it.

(2334) In addition, the ability to build a customer base, typically involving a network of stores and investments in customer acquisition, is limited.[2105] A new entrant would have to win customers in a mature market which might involve significant costs to develop a brand and a retail presence.

(2335) The Commission therefore considers that the necessary investments and time required to enter as an MNO constitute a serious barrier to entry. Furthermore, any new entrant would have to start its network operations despite the competitive pressure exercised by the three established MNOs that already benefit from existing network infrastructure. In light of the above, the Commission preliminarily considers that the entry of an MNO in the next few years is unlikely.

(2336) On this basis, the Commission concludes that the likelihood of MNO entry does not constitute a countervailing factor such as to offset the possible anti-competitive effects of the Transaction on the wholesale market for access and call origination services on public mobile networks in the United Kingdom.

8.4. Efficiencies

(2337) According to the Notifying Party the Transaction will lead to significant network and scale efficiencies.

(2338) In summary, network efficiencies would arise as RAN consolidation would lead to densification of sites, increased use of spectrum (by deploying the combined

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2101 Ofcom, "Assessment of future mobile competition and award of 800 MHz and 2.6 GHz", 24 July 2012, page 52, Figure 4.5. Available at http://stakeholders.ofcom.org.uk/binaries/consultations/award-800mhz/statement/statement.pdf (provided with the access to file on 4 February 2016).

2102 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015, paragraph 8.3 [ID2069].

2103 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015 [ID2069].

2104 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015 [ID2069].

2105 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, 5 October 2015 [ID2069].

spectrum on a denser grid), and more efficient use of spectrum (in particular through carrier aggregation). These technical benefits would bring an increase in network capacity, network quality and speed compared to the sum of Three and O2 absent the Transaction. They would also lower network costs. These effects would benefit consumers as: (i) the merged entity would refrain from price increases the Parties would implement absent the Transaction to […]; (ii) reductions in incremental network costs would be passed on to consumers by the merged entity in terms of lower price; and (iii) the merged entity would exert greater competitive pressure on Vodafone and EE which would lead to lower prices by these rivals. Although these network efficiencies under Three's "[Plan B]" could not start to materialise before […], the Notifying Party submits that they nevertheless should be considered to satisfy the Commission's timeliness criterion as they are not subject to uncertainty.

(2339) Moreover, the scale economies and fixed cost savings brought by the Transaction would facilitate the merged entity's ability to make future investments, in particular in spectrum.

(2340) In this section, the Commission assesses these efficiency claims. The assessment is based on the Notifying Party's claims under its "[Plan B]" which the Notifying Party considers to be the relevant scenario for the assessment of the Transaction. As discussed further below, the burden of proof on showing efficiencies rests with the Notifying Party. The Commission is therefore limited in its analysis of the efficiency claims by the information and the assumptions submitted by the Notifying Party. Should these assumptions change, the assessment of efficiencies might be different. However, the Commission is not in a position to assess any alleged efficiencies arising under scenarios and plans other than the "[Plan B]" put forward by the Notifying Party.

(2341) After setting out the analytical framework for the assessment of efficiencies (Section 8.4.1), the Commission assesses the Notifying Party's claimed network efficiencies (Section 8.4.2). The assessment of network efficiencies is split into a discussion of the timeliness of the claimed network efficiencies and the surrounding uncertainty (Section 8.4.2.1), the assessment of verifiability and merger specificity of the technical benefits and resulting cost and quality benefits (Section 8.4.2.2) and the assessment of benefit to consumers from such efficiencies (Section 8.4.2.3). Then the Commission assesses the Notifying Party's claimed scale efficiencies (Section 8.4.3). The assessment of scale efficiencies is divided into the Notifying Party's claims on fixed cost efficiencies (Section 8.4.3.1) and claims on the increased incentives and ability by the merged entity to acquire spectrum (Section 8.4.3.2). Section 8.4.4 concludes.

8.4.1. Analytical framework

(2342) For the Commission to take account of efficiency claims in its assessment of the merger and be in a position to weigh such efficiencies against anticompetitive effects of a merger, the efficiency claims must be substantiated and satisfy the three cumulative criteria defined in the Horizontal Merger Guidelines.[2106]

(2343) *Benefit to consumers*: efficiencies have to benefit consumers in the sense that they should be substantial and timely. Such benefits should in principle arise in those

[2106] Horizontal Merger Guidelines, paragraph 78.

relevant markets where it is otherwise likely that competition concerns would occur.[2107]

(2344) *Merger specificity*: efficiencies have to be a direct consequence of the merger and cannot be achieved to a similar extent by less anticompetitive alternatives.[2108]

(2345) *Verifiability*: efficiencies have to be verifiable such that the Commission can be reasonably certain that the efficiencies are likely to materialise and be substantial enough to counteract a merger's potential harm to consumers.[2109]

(2346) The burden of proof for showing that efficiencies fulfil the above criteria lies with the merging parties as most of the information is solely in the possession of the merging parties. It is, therefore, incumbent upon the merging parties to provide, in due time, all the relevant information necessary to demonstrate that the claimed efficiencies are merger specific and likely to be realised. Similarly, it is for the merging parties to show to what extent the efficiencies are likely to counteract any adverse effects on competition that might otherwise result from the merger, and therefore benefit consumers.[2110] Furthermore, evidence relevant to the assessment of efficiency claims should include, in particular, internal documents used by the management to decide on the merger, statements from the management to the owners and financial markets about the expected efficiencies, historical examples of efficiencies and consumer benefit, and external experts' pre-merger studies on the type and size of efficiency gains, and on the extent to which consumers are likely to benefit.[2111]

8.4.2. Assessment of claimed network efficiencies

8.4.2.1. Timeliness of network efficiencies

a) Notifying Party's view

(2347) The Notifying Party's network efficiency claims are made under its [Plan B] for network consolidation. Under this scenario, preparatory work for network consolidation by the merged entity start as of 2016 but the claimed benefits of network consolidation do not start to materialise until […]. […].[2112]

(2348) Even though the efficiencies would not start to materialise before […], the Notifying Party claims that the Commission should consider them as timely in the sense of the Horizontal Merger Guidelines and should not discount them.

(2349) First, according to the Notifying Party, the rationale set out in the Horizontal Merger Guidelines why the Commission will put less weight on efficiencies the further they are claimed to occur in the future is that such efficiencies are more uncertain. The Notifying Party argues that in the present case, there is no uncertainty regarding the realisation of efficiencies. The delay is rather caused by […]. In the Notifying Party's views, there should be no doubt that the plan will be realised as indicated by the [Plan B] for a number of reasons: (i) there are strong commercial imperatives to achieve efficiencies and consequently relieve the capacity constraints and such

2107 Horizontal Merger Guidelines, paragraph 79.
2108 Horizontal Merger Guidelines, paragraph 85.
2109 Horizontal Merger Guidelines, paragraph 86.
2110 Horizontal Merger Guidelines, paragraph 87.
2111 Horizontal Merger Guidelines, paragraph 88.
2112 See Statement of Objections, section 6.5.1.6.

incentives remain independently of uncertainty around market developments;[2113] and (ii) the economic case for fully integrating the two standalone networks is compelling because limited or no consolidation plans would imply similar costs to the [Plan B] but deliver significantly lower capacity uplifts.

(2350) Moreover it is claimed that preparatory work on almost 80% of the consolidated network's sites will be carried out before […].[2114]

(2351) The Notifying Party further claims that the delay in achieving efficiencies would not limit their effectiveness. This is because the efficiencies are expected to be substantial so that any harm in the interim period would be outweighed by efficiencies […].

(2352) Moreover, the Notifying Party considers that there will be no harm to consumers in the period before network efficiencies materialise, because pricing during this interim period will still be determined by the existence of capacity constraints […] instead of by any incentives to increase price resulting from the elimination of competition between the Parties.

b) Commission's assessment

(2353) The Commission does not agree with the Notifying Party's arguments.

(2354) First, the Commission considers that the timeliness of claimed efficiencies or the delay with which such efficiencies would arise is not only relevant for the assessment of the uncertainty surrounding efficiency claims. Efficiencies that arise later leave, all else being equal, greater scope for harm following a merger even if there was no uncertainty as to whether they arise. This is in line with the Horizontal Merger Guidelines which note that *"In general, the later the efficiencies are expected to materialise in the future, the less weight the Commission can assign to them."*[2115] The assessment of timeliness of efficiencies is hence not limited to issues of uncertainty but also the delay with which they arise.

(2355) In the present case the Notifying Party's efficiency claims only relate to the period starting from […] therefore, that is to say to a period starting more than […] years after the date of this Decision. The Commission considers that efficiency claims that, if accepted, would only arise with a delay of more than […] years must be appropriately discounted in assessing whether such claimed efficiencies can be sufficient to outweigh harm in particular if such harm arises already in the short term.[2116]

(2356) Second, the Commission considers that in the present case the efficiencies claimed by the Parties are subject to significant uncertainty as a result of uncertainty regarding the timing and the extent of network integration and investments.

(2357) In the Statement of Objections, the Commission noted that there was significant uncertainty about how the situation regarding the implementation of the [Plan B] in particular and the network sharing agreements in general will evolve post-

2113 The Notifying Pary claims that even if demand turned out to be lower than expected, Three would still have an incentive to achieve the extra capacity available because (i) this would allow differentiating its retail product offering for instance by offering large data packages and (ii) the extra capacity gained would in any event increase the average user speed.

2114 Frontier Efficiency Paper, paragraph 3.32.

2115 Horizontal Merger Guidelines, paragraph 83.

2116 See Statement of Objections, paragraph 1854.

Transaction. Even in the absence of uncertainty relating to network sharing agreements, the Commission noted that there was no guarantee that network integration will occur as described under the Alternative scenario (or the Preferred scenario) presented by the Notifying Party. The Commission also noted that there is uncertainty regarding the extent and the timing of post-Transaction network integration.

(2358) The Commission acknowledges that the Third Commitments submitted by the Notifying Party (discussed in Sections 9.5 and 9.6) address some of this uncertainty, in so far as the Notifying Party commits to creating a site grid following its [Plan A] and which ultimately consists of […] CTIL sites and at least […] MBNL sites. The Notifying Party further commits to deploying […] MHz of downlink spectrum […]. The Commitments have hence reduced the uncertainty regarding what sites the merged entity will ultimately use.

(2359) Nevertheless, the Commission considers that there remains significant uncertainty regarding the timing and the extent of network integration and investments and hence whether claimed efficiencies would be achieved. There is uncertainty as to how the market will develop in the coming years, in particular regarding the evolution of demand and, consequently, the evolution of network congestion. Network plans and investments in sites are likely to change depending on market developments both with and without the Transaction.[2117] This may affect the timing of integration and claimed efficiencies. It may also affect the extent of network integration for which the Third Commitments only provide a set of minimum criteria with no guarantee that integration will be completed to the extent claimed. Moreover, the uncertainty regarding predicted market developments and hence efficiencies increases the further such predictions are made into the future. Consequently, the uncertainty over the extent of any efficiencies that would otherwise meet the criteria of the Horizontal Merger Guidelines increases with the delay with which such efficiencies are expected to occur. The fact that network efficiencies are not claimed to materialise before […] gives rise to significant uncertainty relative to the situation where such efficiency claims would materialise earlier.

(2360) The Notifying Party argues that the economic case for fully integrating the two standalone networks would be compelling. The Notifying Party illustrates this point by comparing the costs and benefits (in terms of total network capacity, cost per Gbps and incremental cost of additional sites) of the full consolidation scenario against two partial integration scenarios[2118] and a no consolidation scenario. The Notifying Party argues that the full consolidation scenario would be preferred because it provides significant capacity benefits over the other scenarios at little additional cost.

(2361) In the Commission's view, the Notifying Party's analysis does not address the issue of uncertainty with respect to the timing and extent of integration. The scenarios

[2117] For example, Section E of Annex 2 to the Third Commitments notes that the network capacity upgrade process depends on capacity and […]. Moreover upgrades are prioritised in proportion to the scale of customer impact and can be targeted at specific sites or can be large scale programmes. In the Commission's view, the upgrade process as described in the Annex to the Commitments hence illustrates that the timing on extent of upgrades will depend on market developments and may be modified in response to changes in market developments.

[2118] One partial integration scenario would be based on only building out on Beacon sites and the other partial integration scenario would be based on only building out on MBNL sites.

provided by the Notifying Party compare costs and benefits of a small number of alternatives, each of which is assumed to be carried out to a specific timetable and without any constraints but using a different set of sites for the integration. Such analysis can at most show that it would make more sense for Three to eventually fully integrate the two networks as opposed to choosing a partial consolidation or no consolidation. In any event, the Commission considers that the uncertainty regarding what site grid the merged entity will ultimately use has been removed through the Third Commitments.

(2362) However, the Notifying Party's analysis does not show that consolidation would occur following the timing indicated by the Notifying Party. For instance, an internal document of Three shows that among many alternative timelines for integration the one marked as "Current Business Plan" foresees only […]%[2119] of integration to have occurred by end of […] and the full network integration to be achieved by […], that is, […] years after the closing of the Transaction.[2120]

(2363) Moreover, the Commission considers that there are a number of external constraints which may prevent the Notifying Party from carrying out network integration as planned. In particular, unlike in typical mergers, the merged entity has contractual links to third party competitors that would be considerably affected by the integration plans. The merged entity's network sharing partners may not agree with the integration plans and may, for example, challenge the compatibility of such plans within their respective network sharing agreements. Such complications may provide reasons for the Notifying Party to change the integration plans or to pursue them according to a different timetable than currently envisaged.

(2364) The Commission therefore considers that the extent and timing of integration remains subject to significant uncertainty.

(2365) Third, the Commission rejects the Notifying Party's argument (in the Efficiencies Paper and in the Reply to the Statement of Objections) that there can be **no harm during the period** before efficiencies materialise because in this interim period the merged entity's pricing would be driven by congestion and capacity constraints[2121] rather than by the elimination of competition between the Parties. As explained in Annex C, the Commission considers that […] that the Parties would face absent the Transaction (and hence also by the merged entity prior to network consolidation) is likely significantly overstated by the model submitted by Three for the purpose of supporting its efficiencies claims in this proceeding ("Three's Capacity Model").[2122] [*Changes in strategy by the Parties*] does not invalidate this analysis. Moreover, the Notifying Party's argument that the Commission's quantitative analysis would break down and that unilateral merger effects would need to be very substantial for there to be harm in the short run is based on an implicit assumption that capacity cannot be expanded absent the Transaction. The Commission considers this assumption to be incorrect. As discussed in Annex C, the Commission considers that absent the Transaction, the Parties have cost effective means to expand their capacity […] and

2119 Although the Commission agrees that the 10% of consolidated sites could possibly generate more than 10% of the overall claimed efficiency gains, that is, it is conceivable that efficiencies would not materialise in a linear way (see Reply to the Letter of Facts of 17 March 2016).

2120 Three's internal document titled […].

2121 The same as those affecting Three and O2 pre-Transaction.

2122 Three's Capacity Model is contained in the file "M.7612 - Frontier Economics - Capacity-related efficiencies model - 11-11-2015".

this is accounted for in the Commission's analysis by recognising that the short run incremental network costs affect the operators' pricing incentives. In the period prior to the completion of network consolidation, the merged entity would be in a similar situation as Three and O2 pre-Transaction. Consequently, all else being equal, there would still be an incentive to raise price post-Transaction relative to the situation absent the Transaction, even during the period pre-consolidation, due to the internalisation in the merged entity's pricing decisions of the fact that the customers that Three would lose to O2 absent the Transaction (or vice versa) are no longer lost in the post-Transaction scenario. The Commission therefore considers it likely that the Transaction would lead to significant harm in the short term.

(2366) Fourth, the Notifying Party's argument that benefits from efficiencies […] would **outweigh harm prior** to […] is a question of balancing of the extent of anticompetitive effects on the one hand and consumer benefit from efficiencies on the other hand (to the extent that these efficiencies meet the criteria of the Horizontal Merger Guidelines). As discussed in the following subsections, the Commission considers that the efficiency claims do not meet the criteria of the Horizontal Merger Guidelines and therefore cannot be considered to offset the anticompetitive harm from the Transaction identified in Section 8.2.1. In any event, all else being equal, the existence of a period of more than […] before efficiencies could start to materialise (and […] before they materialise in full) substantially decreases the likelihood that such benefits can outweigh the competitive harm that occurs already in the short term. In this respect, the Commission notes that the Notifying Party has not provided any evidence showing that the pro-competitive effects generated by the alleged efficiencies […] offset the short term harm generated by consolidation in the […] period other than the claim that there would be no short term harm.

(2367) In light of all of the above, even if the network efficiencies claimed by the Notifying Party satisfied the three criteria of the Horizontal Merger Guidelines (which, for the reasons set out in Sections 8.4.2.2 and 8.4.2.3, is not the case) the Commission considers that the delay of more than […] with which any network efficiencies would start to materialise (and […] before they materialise in full) would, in any event, significantly reduce the weight that the Commission can place on such claims.

8.4.2.2. Verifiability and merger specificity of technical benefits of RAN consolidation

a) Technical benefits of site densification, increased spectrum holdings and carrier aggregation

i. Notifying Party's view

<u>Network densification</u>

(2368) According to the Notifying Party, RAN consolidation will allow Three and O2 subscribers to access a larger number of sites than CTIL or MBNL sites alone, particularly in high traffic areas. Deploying the combined spectrum holding across the denser grid will lead to greater spectrum use and allow more capacity to be delivered.

(2369) Three plans to consolidate the two RANs by […]. Three submits that this will result in a combined network consisting of approximately […] sites, compared to Three having […] and O2 having […] sites on a standalone basis in […]. The merged entity would have […] sites in high traffic areas.

(2370) The Notifying Party considers that [*there are limitations on the ability of Three and O2 to access additional sites in the counterfactual*].

Carrier aggregation

(2371) Carrier aggregation ("CA") is an LTE-Advanced feature which allows MNOs to aggregate spectrum across the same (intra-band carrier aggregation) or multiple bands (inter-band carrier aggregation). Carrier aggregation enables faster headline peak speeds to be offered than would be possible with contiguous spectrum alone.[2123] This is because data packets are scheduled efficiently across the entire carrier-aggregated spectrum.[2124]

(2372) According to the Notifying Party, the merged entity will be able to utilise its combined spectrum portfolio to aggregate additional carriers, providing incremental capacity and speed benefits. Three argues that its enhanced carrier aggregation capabilities (coupled with site density and spectrum re-farming) will result in significant capacity and speed benefits. Carrier aggregation is an effective tool to enhance capacity and speed across the entire network. In addition, the Parties argue that CA is also an effective contributor to improving capacity including a mix of 'bursty' and 'non-bursty' traffic.[2125]

(2373) The Notifying Party submits that in the standalone scenario, [*Three would be able to aggregate less carriers across fewer spectrum bands than the merged entity*].

(2374) In Three's Capacity Model, the values used for capacity uplifts generated by CA are […]% for 2-CA, […]% for 3-CA, […]% for 4-CA and […]% for 5-CA onwards. Three notes that its previously submitted modelling has utilised a conservative approach to assessing CA’s capacity benefits, assuming only a […]% benefit despite Qualcomm’s claims that 2-carrier aggregation provides 100% capacity uplift under full bursty mid data load.

Spectrum benefits from refarming and increased spectral efficiency

(2375) The Notifying Party submits that having a larger and more balanced spectrum portfolio will facilitate a more efficient re-farm of existing spectrum to 4G because a lower proportion of spectrum will be needed to provide legacy support for devices which do not support current technology. For example, a single carrier of 3G (that is, 5 MHz in each of downlink and uplink) could be used by the merged entity to provide legacy support compared with both O2 and Three having to provide one carrier each for legacy support in the absence of the Transaction. This will subsequently lead to an increase in capacity, due to the higher spectral efficiency of newly deployed technologies.

(2376) The Notifying Party furthermore assumes in Three's Capacity Model which forms the basis of Three's efficiency claims that the Transaction allows increasing the spectral efficiency of its 800 GHz spectrum. Although this benefit is not explicitly highlighted in the Notifying Party's submissions, as set out in more detail in Annex C, the Notifying Party assumes that Three in a stand-alone scenario assumes

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2123 Ofcom, Phase 1 submission to the European Commission, Anticipated acquisition by Hutchison 3G UK Limited of Telefónica Europe Plc, Confidential version for Hutchison 3G UK Limited, 5 October 2015, paragraph 6.26 [ID2069].

2124 The analogy is 1 single queue at the post office feeding multiple tills (that is to say CA) rather than 2 queues, one for each till (that is to say simply using two bands of contiguous spectrum), where one till may occasionally have no-body being served if there are 2 queues.

2125 "Bursty" traffic refers to traffic that occurs in short, intermittent bursts, punctuated by periods of low activity or inactivity.

that […]. In contrast, Three assumes that […]. Hence, the Notifying Party effectively assumes that […].

ii. Commission's assessment

Network densification

(2377) The Commission has verified the Notifying Party's claim that the network consolidation allows the merged entity to operate […] sites in high traffic areas. Three's estimate of the merged entity's number of sites in high traffic areas is based on the imperfect information available to Three on the location of O2's sites. Specifically, of the […] sites that according to Three each operator has in high traffic areas, Three assumes that […] are co-located or are too close and therefore cannot provide a capacity benefit after network consolidation.[2126] Three plans to retain the remaining sites in high capacity areas to densify its network and maximise capacity. In other words, Three finds that approximately […]% of the acquired sites in high traffic areas are redundant.

(2378) The Commission agrees with the Notifying Party that there may be potentially a large number of redundant sites which will have very limited use to increase the capacity of the merged entity. Sites which are positioned too close to each other cannot be used due to the potential interference they would create. There are also some sites on which O2 and Three are already both present, which are clearly redundant.

(2379) In the Statement of Objections, with Ofcom's support, the Commission has analysed the distribution of sites of the merged entity. The analysis considers […] O2 macro sites[2127] and […] Three macro sites. The number of Three's sites in High and Medium Traffic areas is circa […], whereas O2 has around […] sites in the same areas.[2128]

(2380) Figure 132 shows the percentage of O2 sites within 25, 50, 100, 150, and 200m of a Three site for each geographical type. The results show that nearly […]% of O2's sites are within 50m of Three's sites in high traffic areas and are most likely redundant.[2129]

Figure 132 O2's sites within reach of Three's sites

[…]

(2381) However, the Commission notes that around […]% of O2's sites in High Traffic areas and […]% in Medium Traffic areas are within 200m of Three's sites. This

2126 Form CO, Section 6, paragraph 606.

2127 These are obtained by removing the sites with the same coordinates from the total number of sites provided by O2 in response to RFI 51.

2128 These numbers diverge from the […] sites estimated by Three because the Commission has defined "High Traffic" and "Medium Traffic" differently than Three's high-traffic areas. Moreover, whereas Three relied on an estimated number of O2 sites, the Commission relied on the site information as provided by O2. See Annex C for further details.

2129 For the purpose of this assessment, the Commission has defined Traffic areas as each 10km x 10km area of the United Kingdom as High, Medium, Low and Very Low depending on the total amount of monthly data traffic across all operators in the area: Very High refers to total monthly data above 500TB, High to data between 100 and 500TB, Low between 5 and 100TB and Very Low below 5TB. The Commission notes that due to the number of sites considered by Three in paragraph 606 of the Form CO, Section 6 ([…] sites in high traffic areas), the High and Medium Traffic areas correspond roughly to Three's definition of high traffic areas.

indicates that approximately […]% of the O2 sites in high-traffic areas as defined by Three are within 200m of a Three's site. Based on the submitted evidence from the Notifying Party and in light of the above findings, the Commission is unable to verify whether Three's estimate of […]% redundant sites discussed in paragraph (2377) is effectively correct or the number of redundant sites rather amounts to a higher proportion.

(2382) In the Reply to the Statement of Objections, the Notifying Party argues that the Commission's analysis is not sufficiently robust because it is not uncommon for mobile networks to locate sites within a 200m radius of each other. The Notifying Party submits some results showing that approximately […]% of Three Hong Kong's sites are located between 50-200m apart. Three intends to densify the network within major urban areas in order to achieve the maximum capacity gain. As such it estimates that the merged entity will have approximately […]% of its sites within a 200m radius of another site of the merged entity in major cities in the United Kingdom.[2130]

(2383) The Commission notes that the same analysis submitted in Table 30 of the Reply to the Statement of Objections displays Three's proportion of sites in major cities in the United Kingdom split by site distance ranges. The analysis shows that Three currently has […]% of sites located between 50-200 metres.[2131] The submitted network design of the merged entity changes considerably in this respect with the proportion of sites between 50-200m in urban areas increasing more than […] times (from […]% for Three to […]% for the merged entity). In contrast to Three's network in Hong Kong (where the location of the sites has presumably been optimized to form part of a single network), the locations of the sites of each of the merging parties are not optimised for a single dense grid. Hence, there may still be a risk that sites within a distance of 50-200m are redundant.

(2384) The Commission considers that there remains a risk that the merged entity will be able to keep a lower number of sites in high traffic areas than currently envisaged by the Notifying Party.

(2385) In the Statement of Objections, the Commission furthermore pointed out that there could be issues in relation to space, power and cooling available on the sites when consolidating the radio networks. For example, if the O2 sites have 2G and 3G legacy equipment and Three wants to install 4G equipment, this requires a significant site upgrade with potential issues in relation to space available for the new radio equipment, the power and cooling requirements, potential new antennas requiring the masts to be changed etc. Depending on the site, this may not be possible or require new site contracts with landlords and new planning permissions.

(2386) The Commission takes account of the three points made in this respect by the Notifying Party in the Reply to the Statement of Objections.[2132] First, the Notifying Party submits that Three's consolidation plan […]; each operator will already have excluded sites on which they expect to encounter deployment costs that are sufficiently large to outweigh the corresponding benefits of roll-out. Second, […].

[2130] Reply to the Statement of Objections, paragraph 1277.

[2131] Major cities are Birmingham, Edinburgh, Glasgow, Leeds, Leicester, Liverpool, London, Manchester, Nottingham and Sheffield, see Table 30 of the Reply to the Statement of Objections.

[2132] Reply to the Statement of Objections, paragraphs 1279-1281.

Third, Three has also extended its consolidation timeframe by […] to allow it to address site-specific deployment issues.

(2387) The Commission accepts that single RAN deployment will reduce the space, power and cooling needed at each site.

(2388) However, the Commission maintains its concern that a more intensive deployment of spectrum, in particular if done by two legally distinct companies (as potentially the case in the alternative scenario)[2133] could trigger the need to renegotiate contracts with landlords, which may render uneconomical the use of some sites, which are currently included in the total site count of the consolidated network.

(2389) Moreover, in Annex C the Commission discusses the reasons why it believes that in the standalone scenario both Three and O2 have the ability to densify their network to some degree absent the Transaction.

(2390) In particular, Three has potential access to additional sites in order to densify its mobile network, also in dense urban areas. First, Three can access additional […] sites […]. Second, Three can obtain additional sites by sharing with other operators through the Framework Agreement FA. The Commission accepts that cross-operator sharing has proven difficult so far. It however notes that according to CTIL […] but Three may soon benefit from a different sharing agreement, currently being negotiated: the Master Service Sharing Agreement (MSSA). Third, a significant number of sites are run by independent infrastructure operators with a clear incentive to give access to all MNOs, including Three. In its Reply to the Statement of Objections, Three finds that Arqiva and WIG alone may potentially provide access to […] sites in high demand areas. This alone represents a […]% increase over Three's current number of sites in high dense urban areas, estimated by Three to be […].

(2391) The Commission believes O2 has similar options to densify its network if this is needed in the future. It could obtain access through the existing FA and in the near future through the MSSA. O2 can also acquire more sites from the independent infrastructure operators with a clear incentive to give access to all MNOs. The Commission notes […].

(2392) For the above-mentioned reasons, although the Commission considers that the Transaction may allow the merged entity to significantly expand the number of sites and the spectrum deployed on them, the Commission considers that alternative means of densifying the network would allow the Parties to further densify their networks at least to some extent in case this is needed to expand the capacity.

(2393) The Commission therefore concludes that it is a realistic alternative for both Parties to further densify to a certain degree their respective networks, to the extent further capacity through network densification would be required. In particular, based on the evidence submitted by the Notifying Party, the Parties have access to a large number of sites […]. The Commission considers that only access to sites in addition of those that can be accessed in the absence of the Transaction can be considered to be merger specific.

(2394) To the extent the Transaction potentially allows the merged entity to deploy more spectrum on a combined network consisting of more sites that can be realistically operated by each of the Parties in the standalone scenario, this results in verifiable increase in the capacity in the post-Transaction scenario. However, the Commission

[2133] Notifying Party's response to RFI 64, question 1. According to the [Plan B] there would be a […].

points out that in light of many alternative means to expand capacity, the implications on costs and quality of any increased capacity due to merger-specific network densification must be verified separately as discussed in section b) of this subsection (see recitals (2421) et seq.)

Carrier aggregation

(2395) The Commission considers that Three can already aggregate more carriers than submitted by the Notifying Party in the stand-alone scenario and that the incremental benefit from adding more than five carriers is limited and not yet standardised. In any event, the Commission considers that the benefits of carrier aggregation may be lower than estimated by the Notifying Party.

(2396) In Annex C, the Commission sets out its view that the assumption that Three […] does not appear to be justified in light of the technical feasibility and the benefits of aggregating spectrum.

(2397) Aggregation between sub-1 GHz and above 1 GHz is entirely practical and provides benefits since the sub-1 GHz spectrum would offer additional coverage to the higher frequency bands whilst the above 1 GHz spectrum would provide more capacity to the sub-1 GHz band. The Commission has gathered evidence from MNOs which confirms that aggregating the 800 MHz and 1 800 MHz is technically feasible. Carrier aggregation between spectrum below 1 GHz and above 1 GHz is practical and the Commission has found that MNOs in the United Kingdom have concrete plans to aggregate bands above 1 GHz (e.g. 1 400 MHz, 1 800 MHz and 2 100 MHz) with either their 800 MHz or 900 MHz in the future.[2134]

(2398) In Annex C, the Commission also explains why it rejects the argument submitted in the Reply to the Statement of Objections that aggregating the capacity and the coverage layer is not commercially attractive.

(2399) The Commission considers that Three will likely carrier aggregate its entire 4G spectrum to the extent this creates benefits in the medium to long run. More precisely, […], the Commission expects that Three could also aggregate in addition its 800 MHz and its 1 400 MHz spectrum to the extent such CA will have become industry standard and will be sufficiently supported by user equipment by then.[2135] Hence, in the standalone scenario Three will be able to aggregate at least […] carriers (and possibly even more to the extent that it acquires additional spectrum) in the medium to long run.

(2400) Moreover, according to the Notifying Party's submission, O2 is assumed to be able to aggregate […] carriers by […].

(2401) The Commission further notes that […], the benefits of carrier aggregation do not substantially increase any more when adding five or more carriers.[2136] This appears to be broadly in line with the view of another firm operating in the United Kingdom,

[2134] Access to this piece of information was provided to the Notifying Party in the course of the proceedings under the data room procedure.

[2135] File M.7612 - Frontier Economics - Capacity-related efficiencies model - 11-11-2015.xlsm, sheet "Capacity and spectrum".

[2136] According to […], the Capacity gain from carrier aggregation increases in the number of aggregated carriers, but once 5 or more carriers are aggregated the capacity gain remains constant at factor […].

according to which the additional benefits from aggregating 4 or more carriers are very limited.[2137]

(2402) Furthermore, the Commission has reviewed a number of technical papers submitted by the Notifying Party regarding the capacity benefits of carrier aggregation.[2138] In the Commission's view, these papers indicate that capacity benefits of carrier aggregation are lower during the busy hour and in cells where demand is very high (that is to say higher number of users/higher demand per user), as well as in areas with denser network deployment. For example:

(a) The Nokia study submitted by the Notifying Party notes: "*Thus, for highly loaded cells, one may as well configure a single CC per user to save on terminal power consumption*."

(b) Qualcomm notes that "*the typical bursty nature of usage, such as web browsing, means that aggregated carriers can support more users at the same response (user experience) compared to two individual carriers, given that carriers are partially loaded which is typical in real networks. The gain depends on the load and can exceed 100% for fewer users (less loaded carrier) but less for many users. For completely loaded carrier, there is limited capacity gain between individual carriers and aggregated carriers.*"

(c) The 2015 DySPAN paper mentioned in the Article 6(1)(c) Decision points out that a CA system will have better performance than an Independent Carriers system but finds that these gains are more significant when the user density is low and the system is not crowded.

(2403) In the Reply to the Statement of Objections, the Notifying Party considers that the evidence submitted by a single firm used by the Commission to assess the benefits of aggregating four or more carriers is not sufficient to conclude that these benefits are "very limited". According to the Notifying Party, the Commission should not dismiss the extensive range of evidence that it has submitted in relation to this issue, which includes the results of a number of simulations carried out by both vendors and independent researchers.[2139]

(2404) In light of the evidence submitted by the Parties in this respect[2140] the Commission notes that the only relevant paper providing an estimate of the capacity uplifts when aggregating more than two carriers (three carriers, four carriers etc.) is the research

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2137 Access to this piece of information was provided to the Notifying Party in the course of the proceedings under the data room procedure.

2138 "LTE-Advanced Carrier Aggregation Optimization", White paper from Nokia Networks 2015; Qualcomm, "LTE Advanced – evolving and expanding into new frontiers", August 2014, available at https://www.qualcomm.com/documents/lte-advanced-evolving-and-expanding-new-frontiers (provided with the access to file on 4 February 2016); K. I. Pedersen, F. Frederiksen, C. Rosa, H. Nguyen, L. Garcia, and Y. Wang, "Carrier Aggregation for LTE-Advanced: Functionality and Performance Apsects", IEEE Communications Magazine, June 2011 (provided with the access to file on 4 February 2016); I. Shayea, M. Ismail, and R. Nordin "Capacity Evaluation of Carrier Aggregation Techniques in LTE-Advanced System", ICCCE 2012, 3-5 July 2012, Kuala Lumpur, Malaysia (provided with the access to file on 4 February 2016); Alotaibi, M., Sirbu, M. and Peha, J. (2015), "Impact of Spectrum Aggregation Technology and Frequency on Cellular Networks Performance", Proc. of IEEE DySPAN, 2015, available at: http://users.ece.cmu.edu/~peha/Spectrum_Aggregation_Performance_DySPAN_2015.pdf (provided with the access to file on 4 February 2016).

2139 Reply to the Statement of Objections, paragraph 1293.

2140 Notifying Party's response to RFI 34, question 27 and and Annex 27.A, 27.B and 27.C.

paper referred to as *Shayea et al*.[2141] The paper shows that aggregating three and four bands could increase capacity by 50% and 54%, respectively. To take into account […].

(2405) The Commission does not consider this evidence to be particularly compelling. First, the Notifying Party submits only a single research paper in this respect whose results are based on a very specific simulation and it is unclear to what extent these results are applicable in practice.[2142] Second, the paper's results are based on simulations which are not representative of Three's or O2's networks. The paper is modelling five carriers within the same band. This is therefore contiguous spectrum providing a 100 MHz channel, which is very different from the inter-band carrier aggregation considered for the merged entity and standalone companies. Other assumptions of the simulations such as those regarding network load are not clear from the paper and it is therefore not clear how they compare with Three and O2's networks.

(2406) As stated above, there is very limited information about the capacity gain achieved with inter-band aggregation and the evidence of operators on file suggests that they do not believe aggregating as many carriers achieves a particularly high gain. In addition to the operator mentioned in recital (2401) according to which the additional benefits from aggregating four or more carriers are very limited, O2 submits that: […]."[2143]

(2407) This clearly shows that there are several limiting factors regarding carrier aggregation. Some of these limiting factors are yet unknown, especially for untried technologies such as the aggregation of five or more LTE frequency bands. For example, carrier aggregation affects smartphone battery life because the device has to monitor several frequencies, activate additional hardware and increase baseband activity.[2144] It is likely that in certain circumstances the gain achieved by transmitting over six different frequency bands is offset by the power consumed by monitoring and signalling over six different channels. In addition, as acknowledged by the Notifying Party, carrier aggregation is not effective when the network is highly loaded, meaning that it may not be effective in alleviating congestion during the busy hour.

(2408) Moreover, the Commission points out that while Three expects […][2145], aggregating certain combinations of four or more carriers has not been standardised yet and the development of products to support new carrier aggregation features will take some lead time. This implies that actual implementation of inter-band carrier aggregation of multiple carriers, especially beyond five, may take longer than anticipated by Three.[2146]

2141 I. Shayea, M. Ismail, and R. Nordin "Capacity Evaluation of Carrier Aggregation Techniques in LTE-Advanced System" (provided with the access to file on 4 February 2016); ICCE 2012, 3-5 July 2012, Kuala Lumpur, Malaysia (provided with the access to file on 4 February 2016).

2142 The research paper has been submitted to a conference, not to a scientific journal. The paper has thus presumably not yet been scrutinized to a large degree by the scientific community.

2143 Annex 2 to the Reply to the Statement of Objections, paragraph 91.

2144 "LTE-Advanced Carrier Aggregation Optimization", Nokia Networks 2015 (provided with the access to file on 4 February 2016) and K. I. Pedersen,F. Frederiksen, C. Rosa, H. Nguyen, L. Garcia (provided with the access to file on 4 February 2016).

2145 Reply to the Article 6(1)(c) Decision, paragraph 211.

2146 For example […]. See specifications released at the end of March 2016 available at the same links submitted by the Notifying Party in footnote 1321 of the Reply to the Statement of Objections: http://www.3gpp.org/dynareport/36101 htm and http://www.3gpp.org/dynareport/36104 htm

(2409) In the Reply to the Statement of Objections, the Notifying Party also submits that a) the timelines for standardising four and five carrier aggregation are sufficiently certain to expect that commercial solutions will be available in the medium to long term; and b) Three considers that the benefits of carrier aggregation may be significantly greater for the merged entity than for Three or O2 as standalone operators, as the merged entity will have a less loaded network. As such, Three considers its efficiencies analysis to be conservative as it assumes the same capacity uplift from carrier aggregation for the merged and standalone entities.[2147]

(2410) The Commission accepts that the standardisation of our and five carrier aggregation is progressing, that mobile operators may to some extent influence the timing of standardisation and that there is ongoing 3GPP work to aggregate beyond five LTE carriers. However, even accepting the strong assumptions of Three's model that standardization of […] carriers will be available by […] and by the same year all the merged entity's 4G users will have it enabled on their handsets, as set out above, the Commission does not consider it accurate that aggregating […] carriers will uplift capacity by […]% and notes that Three may eventually aggregate spectrum of its coverage and its capacity layer in the standalone scenario as set out in recital (2399).

(2411) In light of the above, the Commission considers that both Parties are able to exploit the benefits of carrier aggregation to a very large extent in the stand-alone scenario. This is because both Parties will be able to aggregate at least four carriers or more if additional spectrum is acquired in the PSSR auction. Therefore, almost all of the claimed benefits from carrier aggregation are not merger-specific.

(2412) Moreover, the incremental benefits of aggregating additional carriers (in particular above the levels that could be realistically achieved in the stand-alone scenario) are not sufficiently verified. In this regard the Commission notes that incremental benefits from carrier aggregation diminish with the number of carriers already aggregated. While the exact additional benefits from carrier aggregation beyond 4 aggregated spectrum blocks remain uncertain, there are indications that they may be very small. The Commission notes that […]. Moreover, the Commission notes that the extent to which carrier aggregation increases capacity in high demand cells and areas is more limited and may well be lower than estimated by the Notifying Party. The Transaction is therefore unlikely to bring about sizeable technical benefits through carrier aggregation as compared to those that could be achieved by the Parties on a standalone basis.

Spectrum benefits from refarming and increased spectral efficiency

(2413) As regards the claimed benefits from refarming, the Commission accepts that the amount of spectrum that the merged entity would need to reserve for 3G may be lower compared to the amount of spectrum, the Parties jointly will likely allocate to 3G. As set out by the Parties, this benefit is linked to spectrum typically being deployed in 2x5 MHz carriers. It appears indeed not practical to deploy a significantly lower amount of spectrum than a 2x5 MHz block for 3G.

(2414) In the Statement of Objections, the Commission noted that the magnitude of the benefit from refarming appears to be limited. In particular, as discussed in the previous paragraph, the benefit from refarming can be at most that 2x5 MHz of 3G spectrum can be refarmed earlier by the merged entity and used for 4G.

2147 Reply to the Statement of Objections, paragraphs 1294-1298.

(2415) Moreover, the potential benefit from refarming will disappear once 3G is no longer supported. In this respect, there are indications that 3G will be switched off around 2020 and probably even before the GSM layer is switched off.[2148]

(2416) In addition, when quantifying the benefits from refarming, it has to be taken into account that more extensive refarming reduces the capacity available in the 3G layer. Thus only the spectral efficiency gain compared to 3G should be taken into account especially in the short run when the 3G layer is still used extensively for data.

(2417) In the Reply to the Statement of Objections, the Notifying Party disagrees with the Commission's assessment on the basis that in the standalone scenario Three will be unable to switch off its 3G network as early as […] in order to provide voice services: Three does not operate a 2G network and VoLTE may not be enabled on all handsets after […]. Moreover, 3G spectrum will be used to provide legacy support in the future and is not expected to carry a significant amount of traffic as all packet data traffic will be carried on the 4G network.[2149]

(2418) As set out in Annex C, […].

(2419) As regards the claim that the merged entity can […], the Commission recalls that this claim is based on the assumption that in Three's network […]which the Commission rejects, as discussed in Annex C.[2150] The main argument of the Commission as set out in Annex C is that in traffic hotspots Three already operates a dense network […]. Since even the 1.8 GHz spectrum that Three uses for its 4G capacity layer has better propagation characteristics than 2.3 GHz spectrum, the (indoor) coverage increase of the 800 MHz spectrum in traffic hotspots will be very limited. Hence the transmission conditions of subscribers connected on the basis of coverage spectrum cannot be assumed to be particularly poor in those areas and hence assuming […] is not justified.

(2420) In conclusion, for the above-mentioned reasons, the Commission considers that claimed benefits due to a faster refarming of spectrum in the medium run are sufficiently verified. However, these benefits are likely to be only transitory and will disappear once Three's 3G layer would be switched off in the absence of the Transaction. The Commission further considers that any increase of the spectral efficiency of 800 MHz and 1 400 spectrum that would deployed by Three in its coverage layer in the standalone scenario is not sufficiently verified.

b) Cost and quality benefits arising from technical factors

i. Notifying Party's view

(2421) First, according to the Notifying Party the technical benefits for RAN consolidation (site densification, increased spectrum holdings and carrier aggregation) imply that the merged entity will have an integrated network with significantly higher capacity

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2148 See for example http://www mobileworldlive.com/featured-content/top-three/telenor-norway-shut-3g-network-2020-five-years-2g/ (provided with the access to file on 4 February 2016) or https://www.cable.co.uk/news/mobile-providers-will-switch-off-2g-and-3g-networks-by-2020-analyst--700000624/ (provided with the access to file on 4 February 2016).

2149 Reply to the Statement of Objections, paragraphs 1300-1302.

2150 In any event, the geographic distribution of subscribers of the merged entity is unlikely to materially change compared to the joint distribution of subscribers of the Parties. Subscribers in buildings that can be only served based on low frequency spectrum will suffer from suboptimal radio conditions and will thus have lower throughput also in the merger scenario. Hence, the spectral efficiency of low frequency spectrum cannot be assumed to increase as a consequence of the merger.

than the sum of the Parties' network capacities absent the Transaction. The merged entity would hence […] than the Parties absent the Transaction.

(2422) The Notifying Party quantifies […] On the basis of estimates from Three's Capacity Model, the Notifying Party estimates that Three and O2 would have to build an additional […] sites at a cost with net present value of around GBP […]bn in a "baseline scenario" assuming current spectrum holdings; and an additional 12 000 sites at a cost with net present value of GBP 2.5-3.4bn under a "best case scenario" assuming additional spectrum acquisitions and investments in small cells and streetworks that the Parties would make absent the Transaction. The Notifying Party considers these estimates to be conservative as they assume that there are no practical limitations on accessing new RAN sites. In the Reply to the Statement of Objections, the Notifying Party presents additional calculations of the claimed efficiencies as a cost differential between Three and O2 standalone and the merged entity. These calculations also include the costs of the two standalone networks and the costs of the merged entity's network including integration costs. The Notifying Party claims that this approach leads to higher cost savings of GBP […] assuming current spectrum holdings and target grids.

(2423) Second, the Notifying Party argues that the merged entity would "*face considerably lower marginal costs […] than the sum of the costs that Three and O2 would need to incur as standalone businesses*."[2151] Furthermore, by bringing together all the (usable) sites of the two networks into a single integrated grid, network consolidation would result in a one-off cost. The efficiency brought about by the Transaction would hence consist in converting costs that are variable in nature for Three and O2 on a standalone basis into costs that are fixed for the merged entity. The Notifying Party hence considers that, in contrast to Three and O2 absent the Transaction, the merged entity would have zero incremental network costs resulting from a variation of its subscribers base by 10%.[2152] In the Reply to the Statement of Objections, the Notifying Party illustrates its argument by discussing an example for an alternative integration strategy in which, in a given area, the sites of two merging networks would be integrated incrementally rather than a one off programme. The incremental addition of sites in a given area would entail a reconfiguration of the radio network locally every time a new site is added. As this would involve revisiting all surrounding sites each time a new site is added to the network, the Notifying Party claims that an incremental approach is 30% more costly in NPV terms, despite the ability to defer individual site CAPEX requirements. In the Notifying Party's views this example would illustrate the one-off nature of network integration. Moreover, the Notifying Party also claims that commercial experience suggests that large integration programmes are more efficient and hence integration would be best achieved as a one-off investment. The Notifying Party therefore considers that the merged entity would have zero incremental network costs which implies a reduction in incremental network costs for the merged entity amount to the entire incremental network costs of the standalone Three and O2 absent the Transaction.

(2424) In response to the Commission's preliminary view in the Statement of Objections that network consolidation could likely be achieved following an incremental approach,

2151 Frontier Efficiencies Paper, paragraph 1.14.

2152 Frontier Efficiencies Paper, paragraphs 2.6 and 3.14 "*[RAN consolidation] will remove the need for currently planned network investments in the counterfactual, resulting in a marginal cost saving*". See also the Notifying Party's response to question 70 of RFI 74.

the Notifying Party also calculated the incremental cost estimate for the merged entity based on the assumptions that the merged entity's costs of integration and capacity expansions are variable. Using the approach proposed by the Notifying Party for the estimation of incremental costs of Three standalone, the Notifying Party estimates that the resulting forward looking variable capacity-related costs to mitigate congestion fully between 2015 and 2020 would amount to […]% of revenues which would be […] than the corresponding figure for Three standalone which the Notifying Party estimates to be […]% in the Reply to the Statement of Objections. The Transaction would hence lead to a reduction in incremental network costs in the order of […]% of revenues even if the merged entity's network costs were considered incremental, which the Notifying Party considers not to be the case.

(2425) Third, the Notifying Party argues that RAN consolidation, in particular through carrier aggregation, would allow the merged entity to provide users with higher (headline and average) download speeds than what is achievable by Three and O2 absent the Transaction. The Notifying Party considers this to be a distinct benefit from capacity benefits that would […]. However, the Notifying Party does not quantify these benefits. In the Reply to the Statement of Objections, the Notifying Party corrected the average speed figures presented in the Efficiencies Paper and clarified how these estimates had been generated. The Notifying Party considers that the corrected average speed figures (which are lower than those provided in the Efficiencies paper) likely understate the gap in average speed between the Parties and non-merging MNOs because of […]. The Notifying Party also argues that there is a wide range of actual average speeds experienced by users around the expected average speed so that a higher average speed implies that fewer users will experience unacceptably low speeds.

ii. Commission's assessment

<u>The value of cost savings from avoided […]</u>

(2426) As regards the Notifying Party's quantification of the value of cost savings from avoided […][2153], the Commission notes the following.

(2427) In the Statement of Objections, the Commission noted that the Notifying Party's approach to estimate the value of cost savings from avoided […] was flawed as it did not provide comparison of costs of the merged entity and the Parties absent the Transaction on a like-for-like basis.

(2428) The Commission noted that the Notifying Party's quantification approach of the *"value of cost savings from avoided [...]"* assumed that the merged entity had no costs to reach the projected reduction in […] and that this appeared to be based on the Notifying Party's position that the costs of the planned RAN consolidation would be fully incurred by the merged entity according to the timing set out in its current [Plan B] irrespectively of any considerations about how much capacity the merged entity will actually need at any given point in time.

(2429) In the Reply to the Statement of Objections the Notifying Party presents revised figures, which, according to the Notifying Party, follow the approach outlined by the Commission in the Statement of Objections. These updated figures would lead to a higher estimated value of cost savings from avoided […] compared to the original preferred approach put forward by the Notifying Party in its Efficiencies paper.

2153 Reply to the Statement of Objections, section 14.2.1.

(2430) First, the Commission disagrees that the Notifying Party's revised calculations address the criticism set out in the Statement of Objections. The Commission acknowledged in the Statement of Objections that Three's and O2's networks would likely be consolidated at some point post-Transaction. However, the Commission noted that this would not imply that the consolidated network would have no incremental costs […]. Rather the implicit incremental costs of network capacity for the merged entity […] is the difference between the costs of building a consolidated network as planned and the costs of building a hypothetical smaller consolidated network with a capacity equal to the sum of the Parties' capacities pre-Transaction. The Commission pointed out in the Statement of Objections that the Notifying Party's approach did not estimate this implicit incremental cost.

(2431) The Notifying Party's revised calculations do not address this point. The Notifying Party's calculations remain based on estimated total costs of the Parties standalone and corresponding total costs of the merged entity. The Notifying Party's approach does not estimate the incremental cost for a consolidated network to increase capacity from a hypothetical small scale consolidation to the level planned under the [Plan B] (nor does the Notifying Party document to the requisite standards the reasons it considers such incremental cost to be nil). The Notifying Party's estimate of the value of cost savings from […] is hence conceptually flawed.

(2432) Second, the Commission notes that the revised estimate presented by the Notifying Party assumes current spectrum holdings and target grids, which implies that it corresponds to the "baseline scenario" in the Notifying Party's Efficiency Paper discussed in the Statement of Objections. The revised estimate is only slightly higher at GBP […]bn than the corresponding estimate of GBP […]bn in the Efficiencies paper. The Notifying Party has not presented a revised estimate for "best case scenario" in the Efficiencies paper which resulted in a significantly lower savings estimate of GBP […]bn. This reduction is due to the fact that the "best case scenario" allowed for increases in spectrum holdings as well as, in the case of Three, investments in small cells and streetworks absent the Transaction.

(2433) As discussed in Annex C, the Commission considers that the Parties would have cost-effective alternative means to […] and therefore would remain effective competitors absent the Transaction. The Commission considers, having regard to established practices in the industry, that there are a number of reasonably practical alternatives and commercially viable options to […]. These options are discussed in Annex C and include […]. The Notifying Party has not shown that these alternative means to [...] With the exception of […], neither the Notifying Party initial estimates nor the revised estimates take account of such possibilities.

(2434) The Notifying Party's "baseline scenario" for the Parties' costs absent the Transaction ignores such measures. The Commission therefore considers calculations under the "baseline scenario" (including the update in the Reply to the Statement of Objections) to be irrelevant for the assessment of cost savings from the Transaction. Moreover, the Notifying Party's "best case scenario" for costs in the absence of the Transaction also does not account for all of the above measures. The calculations based on the best case scenario hence also likely overstate cost savings from the Transaction.

(2435) Third, as discussed in Annex C, the Commission maintains that the Notifying Party's model to estimate […] absent the Transaction, as modified for the purposes of these proceedings, is flawed and significantly overstates the […] on a standalone basis of the Parties. This leads to an overstatement of the costs of the standalone businesses to reduce […] to the assumed level and hence also invalidates the Notifying Party's estimates of the value of savings from reduced […].

(2436) In light of the considerations above, the Notifying Party's claimed value of savings from avoided congestion cannot be considered to satisfy the tests of verifiability and merger specificity because the Notifying Party's estimate for the merged entity's costs of reducing congestions is conceptually flawed, and because congestion and costs absent the Transaction are likely overstated. The Commission also notes that the Notifying Party does not claim that the estimated cost savings would be passed on to consumers.

Reduction in incremental cost of network capacity

(2437) In the following recitals, the Commission first assesses the Notifying Party's argument that the merged entity would face no incremental costs of network capacity because integration would be a one-off programme so that the claimed capacity benefit from the Transaction would occur regardless of demand and associated costs should be considered sunk.[2154] The Commission then assesses the Notifying Party's alternative approach for quantifying incremental costs of the merged entity which, according to the Notifying Party, would lead to a conservative incremental cost estimate for the merged entity corresponding to […]% of revenues. The Notifying Party's quantification of incremental costs for the Parties absent the Transaction, including revisions proposed by the Notifying Party in the Reply to the Statement of Objections are assessed in Annex A.

(2438) As regards the Notifying Party's argument that the merged entity would have zero incremental network costs over a limited variation in subscriber numbers the Commission notes the Notifying Party has not provided any documents to support this claim. The Commission also disagrees with this argument for a number of reasons.

(2439) First, the argument is subject to the same flaw as the Notifying Party's quantification of cost savings from […] in that it does not recognise that the incremental network costs for a permanent change in the number of subscribers would be the difference in the costs of building a network dimensioned to cater for a subscriber number as planned and the costs of building a network dimensioned to cater for a permanently lower or higher subscriber base.

(2440) As the cost of the integrated network is not yet sunk, the Notifying Party has a choice between the type of equipment to be installed on each site, the amount of spectrum to be rolled out, and how many and what sites it will retain post-Transaction. The Notifying Party's plans to install different types of equipment on different sites as part of the integration, depends on expected demand in each area.[2155] In the Commission's view, this indicates that integration would likely be different (and with it the associated costs too) if expected demand was permanently higher or lower.

(2441) Although the choices made during network integration may be different in scale (e.g. in the sense that network integration provides the Parties an opportunity to add more sites in a specific area in a single programme rather than more gradually), the Commission considers that the choices to be made for the merged entity are not fundamentally different in nature. The Commission considers it likely that both the

[2154] See Reply to the Statement of Objections, Section 14.4.1.
[2155] See, for example, the Notifying Party's presentation to the Commission of 25 September 2015.

merged entity and the Parties absent the Transaction would decide on an ongoing basis what geographic areas to prioritise for capacity expansions through upgrades of equipment or deployment of additional spectrum, or whether to build additional sites, etc.

(2442) Moreover, choices such as how much spectrum to deploy on what sites have different cost implications and hence create incremental costs for the merged entity. For example, deploying more spectrum likely creates high incremental costs, for example as new equipment may need to be deployed at the sites, and site contracts with landlords and independent infrastructure providers may need to be updated and renegotiated. Similarly, the different choices of equipment depending on demand will also have significant cost implications. The Commission therefore does not accept that amount of spectrum and equipment which will be deployed on individual sites would be unaffected by a significant change in the number of customers of the merged entity.

(2443) In the Reply to the Statement of Objections the Notifying Party argues that consolidation would remain a one-off investment because it would be costly and complicated to incrementally add sites to the network in several steps in a given area as this would entail reconfiguring the network and site coverage in the same area several times. The Notifying Party submitted an illustrative example to support this claim.

(2444) The Commission accepts that choosing an incremental approach which repeatedly requires reconfiguring the network in the same area over a relatively short period of time may be sub-optimal and possibly result in higher costs, because the costs of re-configuring the local network may exceed the savings from deferred or saved investments. However, the Commission considers that even if within a given cluster of sites the reconfiguration of the network grid would be carried out as a one-off exercise, the Notifying Party would still have options to vary the timeline of integration and capacity expansions.

(2445) For example, if demand were lower than expected in a given area, the Notifying Party could pursue its network integration plan more slowly than envisaged. Integrating the network in fewer areas (or in fewer clusters of sites) within a given time period would allow the merged entity to delay CAPEX and OPEX which results in cost savings according to the Notifying Party approach for estimating incremental network costs for the Parties standalone.[2156]

(2446) Indeed, in the Reply to the Letter of Facts of 17 March 2016, the Notifying Party claims that "*Three will start deploying the additional spectrum on the busiest sites first*". The Commission agrees that the additional spectrum will likely be deployed incrementally, starting on the busiest sites first. This is a reason why the Commission considers that consolidation for the merged entity would not be a one-off exercise but a progressive and incremental exercise, the timetable of which can be adapted as market conditions evolve.[2157]

[2156] As noted by the Notifying Party, the merged entity would have to continue to bear its share of costs of sites in the MBNL and Beacon/CTIL network sharing agreements regardless of whether the merged entity uses the sites. Therefore, the savings relating to the avoidance of such costs on sites that are no longer needed post-consolidation cannot form a motivation for swift network consolidation.

[2157] The Commission's view is also consistent with section E of the Commitments text of 6 April 2016 (section E), where Three explains the merged entity's network capacity upgrade process: *"Network*

(2447) Equally, if demand were lower than expected, the Notifying Party could refrain from using all of its spectrum on integrated clusters of sites directly or delay the purchase or upgrading of equipment that allows the use of new technologies, which again would result in savings associated to the deferral of upgrades. The incentive for such delays may not only come from the fact that the CAPEX requirements would be lower in the short run but may also be justified by the progressive decrease in prices of the equipment required. The deferral of upgrades and deployment of additional spectrum would also result in saving additional costs relating to contract re-negotiations with landlords and extra licensing costs due to the equipment vendors.

(2448) Moreover, the merged entity would have a heterogeneous portfolio of frequencies (including 800 MHz, 900 MHz, 1.4 GHz, 1.8GHz and 2.1 GHz) and it is far from clear whether the entirety of this combined spectrum would be deployed at once on […]. While there may be some duplication of costs from having to revisit the same site twice, Three has not provided any evidence that such potential duplication of costs would be larger than the cost savings from deferring the acquisition of additional equipment and licenses or contracts further in the future.

(2449) Furthermore, the argument that the merged entity would have zero incremental costs because integration would be a one-off exercise also ignores that integration, even if it was accepted to be a one-off exercise that led to significant capacity benefits would only lead to zero incremental costs for the merged entity for a limited period of time. This is because as demand grows, even the merged entity will have to invest in capacity expansions incrementally again, for example in relation to the roll out of 5G.

(2450) Moreover, the Commission notes that the illustrative example on gradual site additions given in the Reply to the Statement of Objections is not backed up by any verifiable documents or internal assessments of the cost savings. In any event, the Notifying Party has not provided evidence why a more incremental approach with respect to the roll-out of equipment or with respect to integration at an overall slower pace as described in the recitals above[2158] would not be feasible and result in cost savings.

(2451) For the above reasons, the Commission cannot verify the Notifying Party's claim that the merged entity would have zero incremental network costs post-Transaction because integration would be a one-off exercise. The Commission considers this claim unlikely to be correct as there is likely flexibility regarding the speed and extent of consolidation and capacity expansions. As a consequence, the claim of zero incremental network costs cannot qualify as an efficiency under the standard set out in the Horizontal Merger Guidelines.

(2452) Regarding the Notifying Party's claim in the Reply to the Statement of Objections that even if the merged entity had incremental costs of network capacity (which the Notifying Party considers not to be the case) the merged entity's network incremental costs would be estimated to be no higher than […]% of revenue (compared to its

Capacity/congestion forecasts are performed on an ongoing basis. Sites […] that are predicted to become congested due to forecast traffic demand are identified. Programmes are established to deliver solutions to address these congested sites. Upgrades are prioritised in proportion to the scale of customer impact. Network capacity upgrades can be targeted at specific sites or can be large scale programmes (e.g. LTE deployment)".

2158 See in particular recitals from (2444) to (2447), as well as recitals (2361) and (2363).

estimate of […]% of revenue for Three absent the Transaction), the Commission notes the following.

(2453) As discussed in section 3.2.4.1.a of Annex A, the cost deferral model proposed by the Notifying Party to arrive at this estimate contains a mechanical error (which also affects the incremental cost estimate for Three absent the Transaction). Once this error is corrected, the estimate of […]% proposed by the Notifying Party cannot be considered to be conservative but is instead likely to lead to an underestimation of the merged entity's incremental costs for reasons discussed in Annex A, Section 3.2.4.1.a.

(2454) The Commission also notes that under the current [Plan B] of network consolidation the benefits of consolidation would not start to materialise before […]. This means that while preparatory works for consolidation can start in the interim period […], the merged entity will likely need to continue investing incrementally during this period to keep addressing the capacity requirements of Three and O2 (in a likely similar fashion to Three and O2 standalone). Therefore, considering both these capacity expansion costs and the integration costs, during the period […] the merged entity may even have higher incremental costs compared to Three and O2 standalone.

(2455) The Commission therefore also considers the Notifying Party's alternative estimate of incremental network costs of the merged entity to be incorrect and hence non-verifiable.[2159] Moreover, as discussed in Section 3.2.4.1.a. of Annex A, the Commission rejects the Notifying Party’s revised estimate of incremental network related costs for Three of [...]% of revenues absent the Transaction. The Commission’s estimate of Three’s incremental network costs absent the Transaction is significantly lower at […]%.

(2456) In conclusion, as noted in the Statement of Objections, the Commission does not exclude that the Transaction might to some extent reduce the incremental network costs of the merged entity relative to the Parties' absent the Transaction. However, the Commission considers that the Notifying Party's claims of zero or reduced incremental network costs do not pass the tests of merger specificity and verifiability. The Commission rejects the claim by the Notifying Party that the merged entity would have zero incremental network costs for the reasons set out above. The Commission also cannot verify the level of incremental network costs for the merged entity under the alternative approach proposed by the Notifying Party because technical issues with the cost deferral modelling used imply that the Notifying Party’s estimate most likely significantly understates the merged entity's incremental costs.

Claim of quality effect on merged entity

(2457) In respect of the Notifying Party’s argument that the merged entity would also be able to offer higher network quality in the form of higher speed to its users and that

[2159] The Commission notes that it is not possible to produce a revised estimate of the merged entity's incremental costs once the mechanical error in the model is corrected because (i) the Notifying Party has not provided an estimate of the capacity-related network costs for the years 2015-2018 and (ii) for the year 2019-2020 the capacity-related network costs reported by the Notifying Party are sourced from the Notifying Party's Capacity Model, which, as Discussed in Annex C, likely overestimates demand and congestion levels and hence the capacity to be built.

this would constitute a separate efficiency putting the merged entity in a stronger position to compete,[2160] the Commission notes the following.

(2458) First, the Notifying Party's calculations underpinning its average speed estimates […]. The Commission considers that in order to generate reliable predictions, the average speed would need to be properly modelled also for off-peak hours. The Notifying Party has not presented any evidence which would allow to verify whether Three's simplistic model is properly calibrated and whether the assumed linear relationship between spectrum holding and average speed is realistic. The Commission therefore does not accept the Notifying Party's estimates of increased average speeds resulting from the Transaction.

(2459) Second, even accepting the Notifying Party's corrected estimate, the long term average speeds for the Parties absent the Transaction are projected to be in excess of […]Mbps. While these figures are significantly lower than those for the merged entity which according to the Notifying Party are projected to be in the order of […]Mbps, the recommended bitrate for streaming a high definition video with the highest standard resolution of 1080p is 4.5Mbps. This implies that the average long run speed for the Parties absent the Transaction and using current encryption technology is […] that required for a video stream of the highest standard resolution. The projected average speed for the Parties absent the Transaction is hence likely sufficient to provide an excellent user experience and quality in the foreseeable future. Therefore, absent any assessment of the additional value of higher download speeds, the Commission cannot assume that there would be any material benefit to consumers.

(2460) Third, the Commission accepts that there is a distribution of actual download speeds around the estimated average. However, the Commission notes that according to the distribution around average speeds from the recent drive survey provided in the Reply to the Statement of Objections,[2161] only around […]% of observations are around 2Mbps or lower and only around […]% of observed download speed measurements appear to be at 1Mbps or below. In this context, the Commission also notes that most applications currently require much lower speeds to offer an acceptable performance. Customers using such applications would not have any negative impact of a limited maximum download speed. The vast majority of the measured user experience is hence above the threshold where users experience congestion (and in most cases significantly above this threshold).

(2461) Fourth, the Notifying Party has not pointed to any evidence in the Efficiency Paper or in the Reply to the Statement of Objections that would show that an increase in download speeds above this threshold would have a significant impact on user experience. Moreover, even for download speeds below this threshold the Notifying Party has not submitted sufficient evidence to estimate how much consumers would value a speed increase. Speed is not the only relevant feature of network quality. For example, (as explained in Annex C) Three refers to its network reliability in its advertisements, which seems to indicate network reliability is also important to consumers. The Commission therefore considers that the increase in average speeds in cases where the speed would be above the minimum threshold has likely limited impact.

[2160] See Reply to the Statement of Objections, Section 14.2.2.
[2161] Reply to the Statement of Objections, Figure 77 and paragraph 1264.

(2462) Fifth, the Commission accepts that estimated average speeds may not be directly informative for performance during peak times. The Notifying Party argues that an increase in average speeds through increased spectrum holdings would reduce the number of instances where consumers […] as it would shift the entire distribution towards higher download speeds.

(2463) The Commission considers, however, that the issue of low performance during peak times is effectively an issue of congestion. As explained in Annex C, the Notifying Party's Capacity Model, as modified for the purposes of the proceedings, likely significantly overstates the degree of congestion by Three absent the Transaction. As set out in Annex C […]. For this reason, the Commission does not accept the Notifying Party's claim that average speed is likely overstated due to increasing congestion.

(2464) The Commission also notes that congestion relief during peak times is primarily related to the available capacity and the offered traffic. Most of the observed instances of low maximum speed presumably related to peak times. Therefore, to the extent that the Notifying Party's claims about speed increases relate to increasing download speed during peak times, the effect is already captured by claims that the merged entity would have lower incremental costs of network capacity. It is hence not appropriate to treat such considerations as a separate efficiency that would be distinct from capacity efficiencies, as explained in more detail in Section 8.4.2.3.c

(2465) Sixth, the Commission notes that the calculations of average speeds presented by the Notifying Party assume that […]. As discussed in Annex C and Section 8.4.2.2.a the Commission considers both of these scenarios unlikely so that the likely actual average speeds by Three will be higher than estimated by the Notifying Party.

(2466) Overall, the Commission does not exclude that the merged entity might be able to some extent to provide higher quality to its users compared to the Parties absent the Transaction. However, the extent of this effect cannot be sufficiently verified based on the information provided by the Notifying Party and is likely limited. The Notifying Party's arguments regarding consumer benefit from increased quality of the merged entity are further assessed in Section 8.4.2.3.d below.

c) Potential benefits from network consolidation in the absence of the Transaction

i. Notifying Party's view

(2467) The Notifying Party considers that the efficiencies arising from the network benefits of RAN consolidation are merger-specific because the data speed benefits arising from the Transaction could not be delivered without bringing together the spectrum holdings of Three and O2. It submits that such a step would not be possible without the Transaction as the same spectrum frequencies cannot be simultaneously transmitted from two distinct and overlapping, competing networks.[2162]

(2468) The Notifying Party explains that the Three and O2 standalone businesses would need to find at least an additional […] sites to deliver the same capacity as the merged network and that the time and costs associated with gaining access to a large number of new sites in congested areas of the United Kingdom would be prohibitive.

(2469) The Notifying Party considers that a roaming agreement between the Parties would generate limited capacity-related benefits […]. The Notifying Party also considers

[2162] Frontier Efficiencies Paper, paragraph 1.41.

that BT/EE and Vodafone would have limited incentive to enter into a national roaming agreement with Three or O2 on a commercially reasonable basis.

(2470) The Notifying Party considers that the submitted efficiencies cannot be achieved by acquiring additional spectrum as the efficiency benefits derived from their models take into account the acquisition of spectrum in forthcoming auctions.

ii. Commission's assessment

(2471) The Commission considers that, to the extent the Transaction would give rise to any verifiable network efficiencies of the nature claimed by the Notifying Party, a potential spectrum sharing arrangement between Three and O2 (or between the Parties and other MNOs) also represents an alternative that could achieve similar efficiencies with a less anti-competitive outcome.

(2472) The network efficiencies claimed by the Notifying Party relate principally from the sharing of the Parties' RAN grids and the combination of their respective spectrum portfolios. The Commission notes that sharing of RAN assets and spectrum portfolios has been achieved on commercial terms in other countries without the merging of the relevant operators' retail businesses. In Denmark, for example, TeliaSonera and Telenor share their spectrum and RAN grids through a joint venture company, TT-Netvaerket. The range of alternatives described by the Notifying Party as described in recitals (2468) to (2470) do not include the possibility of full RAN and spectrum sharing between the Parties. […].

(2473) Therefore, a spectrum sharing arrangement would, in the Commission's view, allow the Parties to achieve virtually the same network benefits as the network efficiencies which, according to the Notifying Party, would arise from the Transaction. However, a spectrum sharing arrangement would be less anti-competitive than the proposed Transaction because it would not give rise to the loss of price competition between the Parties at the retail or wholesale level while likely having a similar effect as the Transaction on the Parties' network sharing partners Vodafone and EE as well as on the Parties' investment incentives.

(2474) In the Reply to the Statement of Objections, the Notifying Party does not contest that a spectrum sharing arrangement between the Parties would not be a less anti-competitive means to achieve network efficiencies.

(2475) However, the Notifying Party argues that such an arrangement would not be reasonably practical having regard to established business practices and hence would not meet the requisite criterion in the Horizontal Merger Guidelines. According to the Notifying Party, such an agreement has not been contemplated as a realistic option by the Parties in the ordinary course of business and would effectively require an infrastructure joint venture.

(2476) The example of the Danish network joint venture referred to in the Statement of Objections would not be an appropriate comparator because the Parties to the Danish joint venture were similar in size, had similar spectrum holdings, and at the time of the formation of the joint venture were not involved in network sharing agreements. Moreover, the Danish network joint venture was also formed at a time where it was useful to avoid duplication of fixed costs of rapidly expanding coverage, which is not the case in the present case.

(2477) Moreover, the Notifying Party argues that a solution for network consolidation would not be commercially feasible because the Parties situations are asymmetric in terms of size of the subscriber base and data usage by subscribers, as well as spectrum holdings focused on different spectrum bands, and different network grid sizes. This would imply different bargaining power between the Parties and different forward looking incentives.

(2478) While, according to the Notifying Party, […] their incentives would not be fully aligned. Spectrum sharing agreements would also be incomplete contracts that can give rise to hold-up problems. Moreover, the asymmetries would imply the need for significant side payments as the benefits to one party would significantly exceed those to the other. […].

(2479) In the Commission's view, some of the Notifying Party's arguments in the Reply to the Statement of Objections are not convincing.

(2480) First, the Commission notes that there is only a minor technical difference between network integration through an infrastructure joint venture (which the Notifying Party argues would be required for a spectrum sharing solution) and network integration following the proposed Transaction. Under the Notifying Party's [Plan A] as well as under the [Plan B], the different spectrum holdings and grids by the Parties and the combined network would be combined in a consolidated network to serve the combined customers bases of the Parties. In this context, the Commission notes […] as set out in recital (1123). This shows that MOCN would be technically feasible at least for 4G. MOCN would also be the basis for a spectrum sharing solution within an infrastructure joint venture.

(2481) Moreover, the Commission has not identified any legal barrier that would differentiate network integration under such a joint venture from the Transaction including in relation to the solution of any issues relating to the existing network sharing agreements with EE and Vodafone; and the Notifying Party has not argued that there would be any.

(2482) Second, as regards issues of differences in incentives or bargaining power which are emphasised by the Notifying Party, the Commission does not consider such issues in itself to be so severe that a spectrum sharing solution could not be considered to be reasonably practical. While the Commission acknowledges that the situation of the Parties in the present case may not be the same as that of the parties to the Danish joint venture at the time of the formation of that joint venture, the Commission considers that the spectrum sharing agreement in Denmark illustrates that such agreements are feasible and an established business practice in the mobile telecommunications industry. The Commission further considers that, if the claimed network efficiencies from the Transaction were as strong as argued by the Notifying Party, then the Parties would likely have a strong mutual incentive to realise a spectrum sharing agreement which allows them to achieve such benefits without a full merger. While a spectrum sharing arrangement may not be without challenges, and may require different contributions from, and possibly side payments between, the Parties in line with their respective benefit, the Commission considers that such an arrangement is still realistic. In this context, the Commission notes that […] as set out in recital (1123).

(2483) Third, the Commission considers that a spectrum sharing solution would still give rise to concerns of harm to the non-merging MNOs via the existing network sharing agreements. It might also still affect overall investment incentives in the industry. However, a spectrum sharing solution would not give rise to an elimination of price competition at the retail or wholesale market where the Parties would remain in competition with one another and each Party would own a share of the shared assets and could retain access to the shared network at the actual costs of the provided services. It is therefore a less anti-competitive means to achieve the network efficiencies claimed by the Notifying Party, even if the approval of any such spectrum sharing agreement by the competent authorities might require remedies to avoid harm to the Parties existing network sharing partners.

(2484) Fourth, the Commission acknowledges that asymmetries in incentives may arise in network sharing agreements and that such agreements are incomplete contracts which may give rise to hold-up problems. Indeed the Commission's concerns about harm to the Parties' respective network sharing partners (discussed in Section 8.2.2) rests, in part, on the concern that post-Transaction, the Notifying Party would no longer have an incentive to invest in the agreements with EE and Vodafone to the same extent or would even frustrate these agreements to the detriment of consumers.

(2485) In this context, it needs to be taken into account that a spectrum sharing agreement, in particular when implemented through an infrastructure joint venture, would result in a deeper form of agreement than the existing network sharing agreements which may in particular solve issues that otherwise arise from asymmetric spectrum holdings.

(2486) Nevertheless, the Commission acknowledges that currently there are a number of differences in the position of O2 and Three. Moreover, the pre-existing involvement in network sharing agreements renders it more difficult to enter into a spectrum sharing in particular due to […]. […]. This illustrates that a transition from the existing network sharing agreement to a spectrum sharing agreement between O2 and Three can be expected to be challenging, which also has an impact on the assessment as to whether entering into such an agreement can be considered a realistic alternative.

(2487) In any event, given that the Commission considers that the submitted efficiencies do not meet the three cumulative efficiencies criteria for reasons unrelated to the possible alternative option to enter into a spectrum sharing joint venture, the Commission can leave open as to whether this alternative can be considered to be realistic in light of the specificities of this case.

d) Conclusion on verifiability and merger specificity of network efficiencies

(2488) Overall, the Commission notes that earlier refarming of up to one 5MHz block of spectrum could constitute a (transitory) benefit of the Transaction and that it appears plausible that the Transaction allows deploying the joint spectrum on a denser network compared to a stand-alone scenario. However, as set out above, the extent could not be sufficiently verified with the information provided by the Notifying Party. The Parties also have realistic alternatives to expand capacity on a standalone basis or to realise any claimed efficiencies through limited spectrum pooling […] and which the Commission considers to be a less anticompetitive realistic alternative. Moreover, the Commission considers that any quality benefits from higher download speeds are likely limited.

(2489) The Commission therefore concludes that the claimed technical benefits of RAN consolidation as well as associated cost and quality benefits do not satisfy the criteria of verifiability and merger specificity.

8.4.2.3. Benefits to consumers

(2490) According to the Notifying Party[2163], the technical benefits of RAN consolidation would translate into consumer benefits in three cumulative ways. First, the merged entity would […] to the Parties absent the Transaction and hence it would […]. Second, the merged entity would have zero incremental costs of network capacity for serving additional subscribers and hence reduced marginal costs of acquiring new customers which would lead to lower prices. Third, the higher quality of the merged entity would lead to increased competitive pressure on the merged entity's rivals Vodafone and EE to the benefit of consumers.

(2491) In the following subsections, the Commission first sets out why it considers that claimed consumer benefits from lower prices through incremental cost reductions and the claimed consumer benefits from the claimed […] are non-cumulative as they capture the same efficiency claim. The Commission then assesses the Notifying Party's claims of consumer benefit through: (i) […]; (ii) lower price due to the pass through of claimed incremental cost reductions; and (iii) increased competitive pressure on the merged entity's rivals through higher quality.

a) The non-cumulative nature of consumer benefit from claimed incremental cost reductions and […]

i. Notifying Party's view

(2492) The Notifying Party argues that the claimed technical and cost benefits in relation to network capacity would lead to two separate efficiencies to the benefit of consumers.

(2493) First, the Notifying Party claims that the Transaction would lead to an incremental cost reduction and consequent downward pricing pressure for the merged entity. Specifically, the Notifying Party argues that the merged entity would have zero network incremental costs in years following the end of […]. This efficiency claim is discussed in more detail in Sections 8.4.2.2.b and 8.4.2.3.c.

(2494) Second, the Notifying Party claims that the merged entity's network capacity generates a decongestion of its network relative to the scenario absent the Transaction. The Notifying Party argues that […] and the merged entity […] would have a lesser incentive to increase prices […]. This efficiency claim is discussed in more detail in Section 8.4.2.3.b.

(2495) The Notifying Party considers that each of the above effects constitutes a distinct source of downward pricing pressure for the merged entity that counteracts the upward pricing pressure from consolidation. Therefore, the Notifying Party considers that a balancing exercise should consider on the one hand the consumer harm from incentives to increase price and on the other hand the combined consumer benefit from incremental cost reductions […].

(2496) In its Reply to the Statement of Objections, the Notifying Party reiterates the cumulative nature of the two effects. As an alternative quantification of this combined effect, the Notifying Party presents an approach in which no avoided price increases due to […] are considered but an increased estimate of incremental network costs in the standalone scenario is used. According to the Notifying Party, the original estimate of incremental network costs was based on […]. The increased estimate of incremental network costs would correspond instead to […]. The

[2163] Reply to the Statement of Objections, section 14.4.

Notifying Party claims that this alternative approach leads to higher estimated efficiencies than its original preferred approach, showing that the original approach is conservative.

ii. Commission's assessment

(2497) In the Commission's view, the argument that higher capacity by the merged entity would lead to lower congestion and lower prices and the argument that lower incremental costs of capacity would lead to lower prices are conceptually different aspects of one and the same effect.

(2498) In the Notifying Party's approach to model […] absent the Transaction (which are discussed in detail in Section 8.6.2.3.b below), the Notifying Party treats the capacity expansion plans of the Parties absent the Transaction as given. For these given capacity plans, the pricing decisions hence determine the number of subscribers on the network […] by their subscribers. Reducing price will attract additional subscribers but it will also have a cost as an increase in subscribers […] and deteriorates the user experience for all customers on the network, resulting in higher subscriber churn. In the Commission's view in this interpretation attracting new subscribers through lower prices does not result in any incremental costs of capacity as the overall level of capacity remains constant by assumption.

(2499) The Notifying Party's second argument that lower incremental network costs would result in price reductions instead implicitly assumes that an MNO choses the user experience it intends to provide to its subscribers and then adjusts capacity accordingly depending on the size of its subscriber base.[2164] For a given level of user experience (which includes factors such as […]), the MNO's pricing decision then determines its number of subscribers and hence the incremental investments in network capacity required to provide the chosen level of user experience to each subscriber. Under this approach, the cost of acquiring new subscribers through lower prices includes the incremental cost of capacity required to hold the user experience constant on the larger subscriber base. As the user experience is held constant through appropriate investments in capacity, there is, in the Commission's view, no room for also accounting for additional (shadow) costs in terms of additional […] related churn resulting from the pricing decision in this interpretation.

(2500) The Commission therefore considers that both interpretations represent two alternative ways of analysing the same effect.[2165] The Commission hence rejects that the two claimed sources of "downward pricing pressure" (one related to lower

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2164 The Notifying Party estimates of incremental network costs with and without the Transaction are discussed in Section 8.6.2.2.b.ii and Annex A respectively. The pass through to consumers of incremental cost savings is discussed in Section d below.

2165 This can be formalised in a simplified static framework in which a MNO's profit depends on three variables – price, capacity and quality (that is to say level of congestion). Price and quality jointly determine the level of demand by subscribers and the capacity determines the MNO's costs. Choosing two of these variables determines the third: the combination of price and capacity would determine the quality offered to users; alternatively, the combination of price and quality would determine the capacity required. If the decision problem is formulated as a choice over price and quality, the 'cost component' in making the optimal price choice includes incremental costs of network capacity to proved the chosen level of quality to additional users. If the decision problem is formulated in terms of a choice of price and capacity, price choices, for a given choice of capacity) will have a shadow cost of reduced quality (such as in the form of higher congestion-related churn). However, the two types of cost interpretation do not apply simultaneously. Price choices either have implications on incremental network investments or on quality (that is to say congestions), but not both.

congestion related price increases resulting from higher levels of capacity and one from a reduction in incremental network costs) would be distinct and would need to be considered cumulatively. Doing so would lead to double counting of one and the same effect. This observation is irrespective of the claimed magnitude of estimated downward pricing pressure by the Notifying Party under each effect.

(2501) In its Reply to the Statement of Objections, the Notifying Party argues that its approach would not result in double counting as the estimate of incremental network costs presented in the Efficiencies Paper did not fully solve the network congestion issues faced by Three absent the Transaction. As a result, the Transaction would lead to both a price increase due to avoided congestion and a price increase due to a reduction in incremental network costs. The Notifying Party also provides an alternative increased estimate of the incremental network costs for Three standalone that would be sufficient to solve congestion problems through additional capacity. According to the Notifying Party, this revised estimate could also be used as a basis for analysing the extent of incremental cost reductions arising from the Transaction without the need to consider a separate effect due to avoided congestion related price increases. This alternative quantification approach is discussed in Section 3.2.4.1.a of Annex A.

(2502) The Commission acknowledges that in principle, if the estimated incremental costs of network capacity for additional subscribers are based on investments that are insufficient to keep congestion at acceptable levels, then a measure of the reduction in this incremental cost estimate might not be sufficient to fully capture the effect of such reduction as congestion levels might decrease post-Transaction thereby leading to a separate efficiency. Conversely, from the Notifying Party's presentation of its alternative approach, it appears that the Notifying Party does not disagree with the Commission that measuring an incremental cost reduction starting from a correct estimate of incremental network costs that is sufficient to contain congestion to an extent that would avoid a material quality degradation would not give rise to a separate efficiency from the avoidance of congestion related price increases.

(2503) However, the Commission disagrees with the Notifying Party as regards the level of investment required to solve congestion problems through investments. As explained in Annex C, Three's Capacity Model on which the revised estimate by the Notifying Party is based severely overestimates congestion in the following years in the version submitted to the Commission for the purpose of the Transaction. Based on its review of Three's Capacity Model, the Commission considers that […]. Moreover, Three's internal documents also suggest that [...].[2166] Therefore, the Commission disagrees with the Notifying Party's argument that the previous incremental network cost estimates would be insufficient to address congestion problems. The Commission's review and estimate of incremental network costs holding congestion constant are discussed in Annex A.

(2504) The Commission therefore maintains that treating the claimed price reduction due to avoided congestions and the claimed reduction in incremental network costs as originally estimated as two separate sources of downward pricing pressure hence does lead to a double counting as noted in the Statement of Objections.

(2505) As noted in the Statement of Objections, the Commission considers that while both approaches are conceivable, a quantification based on the reduction of incremental

[2166] Three's internal documents, "Cost per GB Q1-2015 refresh" [ID010104222.00001].

costs of serving additional customers (including incremental cost of capacity) to be more tractable in practice. First, as shown by the discussion of the Notifying Party's "Congestion-related churn model" (the "Congestion Model"), quantifying the pricing effects of congestion considerations is highly complex and problematic (see Section 8.4.2.3.b). In comparison, a quantification of the reduction in incremental costs can, in principle, be based on a more factual assessment. Second, the Commission considers that the second approach, which takes account of the network investment costs required for maintaining the quality of the network when acquiring additional subscribers, is more plausible in particular in a setting where the aim is to approximate longer run pricing effects. The second approach appears to be more in line with the observation that congestion at specific sites can be alleviated to a certain degree in the short run, for example by activating additional spectrum or increasing the number of sectors on a site.

(2506) The Commission hence concludes that the Notifying Party's claim of two separate downward pricing pressure effects amounts to double counting. Furthermore, while both approaches are conceivable for the quantification of the efficiencies, the Commission considers that a quantification based on estimated incremental cost reductions is a more tractable and complete approach compared to the "dual" approach used by the Notifying Party.

(2507) Against this background, the Commission will now assess the claimed consumer benefit […] and that of lower prices through reduced incremental costs in turn.

(2508) As outlined in section 8.4.1, to be considered in the assessment of a merger procedure the efficiency claims should satisfy the cumulative criteria described in the Horizontal Merger Guidelines.[2167] The alleged efficiencies should benefit consumers, in the form of, for example, incentives to decrease prices post-merger, be merger specific, as they have to be the direct consequence of the merger, and be verifiable, in the sense that they should be quantified or their significant positive impact should be identifiable by the Commission.

b) Quantification of the effect of […] on prices

i. Notifying Party's view

(2509) According to the Notifying Party, absent the Transaction […]. […]. The merged entity which would expect to have […] would not implement […] price increases.

(2510) The Notifying Party submitted the "Congestion Model" to […]. The Congestion Model (which largely sources inputs from Three's Capacity Model discussed in Annex C) assumes the capacity configuration for Three at site level to be given for the years […], and, for a certain amount of customer churn resulting from congestion, numerically computes the optimal price increase that maximizes the net present value of the difference between Three's profits with the price increase and Three's profits without the price increase over the three years period. In the Notifying Party's Congestion Model, the optimal price increase balances the trade-off between price-related churners (the customers who leave Three due to the price increase) and the congestion-related churners (the customers who leave Three due to network congestion). As the price-related churners leave the network, they reduce Three's congestion and, in turn, reduce the congestion-related churners. The Notifying Party's Congestion Model estimates that Three would have incentive to […] on a standalone

[2167] Horizontal Merger Guidelines, section VII.

basis[2168], and claim that this figure represents a downward pricing pressure (that is, an incentive to decrease prices) for the merged entity, effectively subtracting it from the likely upward price effects post-Transaction.

(2511) The Congestion Model treats congestion at site level […]. According to the Congestion Model, a site is congested if […] in a given site is […] ([…] Kbps in [...], respectively). If a site is congested, a given percentage of customers in that site will churn (the "congestion-related churn"). This percentage is assumed ([…]%) and is equal for all sites.[2169]

(2512) In its Reply to the Statement of Objections, the Notifying Party replies to the several criticisms put forward by the Commission in the Statement of Objections and argues that the congestion-related price increase predicted by the Congestion Model is […].

ii. Commission's assessment

(2513) The Commission considers that the Notifying Party's quantification of the benefits to consumers brought about by the alleged reduction of network congestion cannot be verified.

(2514) First, the Commission notes that the Notifying Party's […] of claimed […] price increases absent the Transaction relates to the period […]. However, as network consolidation would only start to affect capacity […], the capacity of the merged entity during the period covered by the model would simply equate to the sum of capacities of Three and O2 standalone. […]

(2515) The Notifying Party's argument that because pricing decisions are forward-looking, […] related price increases would materialise more quickly than network consolidation is not convincing. Even assuming that the Transaction leads to capacity benefits after […], it is not clear why the merged entity would set lower prices in the period before thereby attracting more customers, and, according to the logic of the Notifying Party, accepting a greater degree of […]. Effectively, with […] level, this claim would imply that the merged entity offers its customers a lower quality of service than absent the Transaction during the period considered. The Commission considers this to be inconsistent with the Notifying Party's claim that the Transaction would allow the merged entity to become a higher quality operator than the Parties absent the Transaction. The Notifying Party also has not modelled such different behaviour in the period before […] or provided other evidence that the considerations regarding the alleged trade-off between […] and price during that period would be materially different for the merged entity than for the Parties standalone. The Commission therefore considers that the Transaction would likely have no impact on […].

(2516) Second, the Commission considers that the level of congestion would not be significantly affected by the Transaction. As explained in Annex C, the Commission considers that Three would not be subject to material capacity constraints in the future and that congestion would not increase substantially.

2168 […].

2169 The Notifying Party derive the congestion-related churn from the difference in the churn rates in heavily congested sites ([…]%) and non-congested sites ([…]%), multiplied by 12 to result in the yearly figure.

(2517) In this regard, the Commission also notes that, according to the Notifying Party's Congestion Model, […].[2170] This trend is also confirmed by the Notifying Party's sensitivity scenario submitted with its Reply to the Statement of Objections which models different congestion related price increases for each year.[2171] Even taken at face value, this version of the model claims congestion related price increases relative to […] (for which the effect of congestion is not modelled) of […]% in […], […]% in […], and […]% in […].[2172] The Notifying Party's results, even taken at face value, hence indicate that (i) […]; and (ii) […]. The model hence […].

(2518) Moreover, the Congestion Model estimates […].[2173,2174] In itself, the claim that the Parties would be forced to implement congestion related price increases in the near future appears inconsistent with the assumption that subscriber growth would actually increase relative to historical levels (which would normally be expected to require price reductions rather than price increases relative to the prices of rivals).[2175]

(2519) The Congestion Model also predicts that in the period […] the number of Three's congested sites will be below […]%, and that the number of customers experiencing congestion will be below […]%. As described by the Notifying Party in the Form CO, Three considers that up to […]% of congested sites (or, equivalently, up to […]% of active customers) is an acceptable level of network congestion.[2176] The prediction of the Congestion Model, whereby […], appears therefore inconsistent with Three's internal threshold of acceptable number congested sites and customers experiencing congestion.

(2520) Moreover, the claim that Three would be suffering from increasing congestion during the period […] also appears inconsistent with the Notifying Party's revised estimate of incremental costs in the Reply to the Statement of Objections which it claims relieves congestion through capacity investment. This revised estimate is based on an investment profile which has […]. In the period […], however, the revised investment profile is […]. As discussed in Section 3.2.4.1.a of Annex A, the Commission considers […]. Nevertheless the claim by the Notifying Party of increasing levels of congestion in the period […] on which its modelling of congestion related price increases is built appears inconsistent with the Notifying Party's claim that the revised investment profile underpinning its revised estimate of incremental network costs fully relieves congestion through investments.

2170 The Congestion model does not provide estimates on the number of congested sites in […], so it is not clear from the Congestion model whether there is any increase in congestion during the period […].

2171 Reply to the Statement of Objections, Annex D.3.

2172 The Notifying Party's congestion related price increase of […]% for […], which is the last year of the model is hence significantly below the Notifying Party's headline claim of […]%. The average price increase in this version of the model of […]% is also significantly lower.

2173 The Congestion model assumes […]% in […], […]% in […], […]% in […]. This compares to subscriber growth of approximately […] % p.a. in the years 2010-2014, declining to […] % p.a. in 2013 and 2014. (Commission's computation on the basis of Ofcom's CMR 2009 [ID6057] and 2011[ID6079], Annex 9 to the Form CO, Virgin Media's annual reports 2003-2011 [ID6016 to ID6022].)

2174 The Commission considers that the assumed subscriber growth in the Congestion model will also affect the assumptions for "average busy hour users" in the model on which determines congestions, because having more subscribers will result in an increase in busy hour users.

2175 The Commission notes that the Congestion model treats this […] subscriber growth as exogenous, assuming that it will not be affected by the claimed price increase or by the claimed increase in congestion.

2176 Form CO, Section 6, paragraph 368.

(2521) Third, the Commission also considers the Congestion Model to suffer from a number of technical flaws:

(2522) The first technical flaw stems from the Congestion Model implicitly assuming a change of behaviour in […]. The Notifying Party's Congestion Model claims to model the effect of congestion on pricing decisions from […]. However, in the calibration of the model based data for […], the Notifying Party assumes that congestion plays no consideration in pricing decisions.[2177] This introduces an inconsistency between the calibration of the price sensitivity of demand (which is based on 2014 margins) and the subsequent optimisation for the years […] on the basis of the same margins.

(2523) As the Congestion Model assumes the future capacity profile as given, the determination of the optimal price change for the years […] should be based on contribution margins (which are the margins relevant for the profit effect of varying subscriber numbers if such variation does not lead to changes in network investments). The calibration of the price sensitivity based on a Lerner condition in […], would, however, need to be performed based on a lower margin estimate which takes account of the shadow costs of congestion in […]. A possible approximation of this would be to use incremental margins for the calibration.[2178]

(2524) The Notifying Party argues in its Reply to the Statement of Objections that using incremental costs for the demand calibration while using the contribution margins for the profit maximization is economically incoherent as this would result in an immediate incentive to reduce price in the year […]. To be consistent, the model should therefore use the same margin measure for the calibration and the optimisation.

(2525) The Commission disagrees with this argument. The Notifying Party's claim that there would be an immediate incentive to reduce price in […] is due to the implicit assumption that congestion would not be taken into account in […]. A consistent and correctly calibrated model would need to show that there is no incentive to change price in […], taking account of congestion in […]. The Congestion Model does not do this. Instead, the Congestion Model uses one assumption on how prices are determined for the calibration, and another assumption of how prices are determined to predict congestion related price changes. This assumed change in behaviour is an inconsistency in the model which undermines the model's results. The Commission is not in a position to correct this flaw. However, the Commission notes that when contribution margins are used in Three's profit maximization post […], while the demand calibration is based on incremental margins (as an approximation of the effect of congestion in […]), then the model predicts significantly lower congestion related price increases.

(2526) The second technical flaw relates to the fact that the model mixes static and dynamic assumptions. In the Statement of Objections, the Commission noted that this affects the robustness of the model's conclusions by illustrating an example which allowed the price-related churners to be subtracted by the customer base of the next year, as the congestion-related churners are in the Congestion Model, that is to say an

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2177 As noted in footnote 2170, the Notifying Party's Congestion model provides no information on the number of congested sites in […].

2178 This is because of the duality (discussed in Section 8.6.2.3.a) between a model in which the firm chooses […] on the one hand and a model in which the firm choses […] on the other.

inconsistency in the treatment of churn within the model. This sensitivity aligned the treatment of the two categories of churners by including dynamism over time also for the price-related churners, and resulted in a significant reduction of the congestion-related price increase measured by the Congestion Model.

(2527) In its Reply to the Statement of Objections, the Notifying Party argues that such sensitivity is "*economically nonsensical as it implies that a one-off change in prices dramatically affects the price-elasticity of demand*", adding that the sensitivity is unreasonable because it "*assumes that lost customers would not return even if prices were subsequently reduced*".[2179] The Commission disagrees with the Parties' argument and notes that the fact that customers who leave the network following a price increase are lost for a period of time irrespective of any subsequent price change represents a distinct feature of the mobile telecommunications market. In the mobile telecommunications market, a significant part of the operator's customer base is unable to timely change tariff and provider due to factors such as contractual relations. Therefore, customers who leave a network will join a different network and will be subsequently "locked in" with that operator for a period of time (approximately two years in case of contractual relations).[2180] Moreover, the same assumption is used by the Notifying Party's Congestion Model for congestion-related churners, and the Notifying Party did not provide any explanation for the significantly different approaches followed by the Congestion Model towards the two types of churners.

(2528) The third technical issue relates to the model ignoring the standard economic trade-off between quality and price. A degradation of a product's quality can generally be compensated by a price reduction by the supplier in order to retain customers. This is because price and quality are closely intertwined by a direct relation whereby higher quality products are generally priced higher, while lower quality products are generally priced lower. The Congestion Model instead treats price and quality as two separate elements with no relation to each other, other than indirectly through their effect on congestion. According to the Congestion Model, for example, the congestion related churners cannot be convinced to remain on the network even if their price were to decrease significantly. Although the Commission does not contest that congestion may lead to an incentive to increase prices, for the reasons outlined by the Notifying Party, following an increase in congestion there exists at least a trade-off between decreasing prices to let the congestion-related churners stay on the network and increasing prices to decongest the network and, hence, increasing the quality of the services. This trade-off is not taken into account by the Congestion Model.

(2529) A fourth technical issue relates to the measurement of congestion-related churn which is a key input for the Congestion Model. The Notifying Party did not provide compelling evidence indicating that the higher churn rate in heavily congested sites ([…]% as opposed to […]% in non-congested sites) is due to congestion.[2181,2182]

2179 Reply to the Statement of Objections, recital 1346.

2180 In its quantitative analysis the Commission takes this feature of the mobile telecommunication market into account by primarily using gross add shares for its analysis which are a proxy for the contestable subscribers, that is, for subscribers that are not locked in in the current period.

2181 The Notifying Party bases its claim on aggregate figures of a subsample of Three's customer base (the owners of contracts voice and data) that was […]. For those customers, the Notifying Party observes the primary site the customers use, and the amount of customers who have churned. The churn rates are

Moreover, given that the Notifying Party's Congestion Model bases its congestion-related churn on the difference between the churn rates in heavily congested and in non-congested sites, it is particularly relevant to assess that the two churn rates are systematically different from each other. However, the Notifying Party provided only aggregate figures, from which it is not possible to assess whether the higher churn rate is due to congestion, and it is not possible to compute any statistical indicator (such as the variance) of the churn rates to infer whether they are systematically and statistically different from each other.[2183]

(2530) In the Statement of Objections, the Commission questioned what could be inferred from those figures, given that there may be other reasons explaining the higher churn rates for certain customers, and the relation shown by Notifying Party can be only considered a correlation. In its Reply to the Statement of Objections, the Notifying Party, mentioning an example made by the Commission whereby different churn rates might be related to different geographical locations of the sites, argues that […].[2184] The Commission cannot consider this as evidence to validate the difference in the churn rate in congested sites provided by the Notifying Party. The Notifying Party clarified an example that the Commission made to explain how other factors other than congestion may influence the churn rates. Such factors may depend not only on geographic location, but also on the period of the recording […], the intensity of advertisement campaigns, etc. Moreover, the Notifying Party did not provide any indication showing that the churn rates in congested sites is systematically and statistically different than the churn rates in the green non-congested sites.[2185]

(2531) Overall, for the reasons set out above, the Commission considers that the Notifying Party's quantification of the benefits to consumers due to congestion relief is flawed. As a result the claimed congestion related price increase cannot be verified by the Commission. Moreover, during the period covered by the Congestion Model the Transaction would not change the degree of congestion experienced by Three while the Commission found that Three is unlikely to be capacity constrained also in the long run and corresponding longer run congestion estimates are overstated. Therefore the claim about avoidance of congestion related price increases cannot be considered merger specific.

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computed as the ratio between customers churned and total customers using primarily a given site category.

2182 Sites are categorized by the average throughput experienced by the costumers. Non-congested "green" sites have a throughput of more than 1Mbps, slightly congested "amber" sites have a throughput between 1Mbps and 400Kbps, congested "red" sites have a throughput between 400Kbps and 200Kpbs, finally heavily congested "dark red" sites have a throughput below 200Kbps.

2183 Response to RFI 74, Annex 53.

2184 See Underlying calculations to the Reply to the Statement of Objections, "Congestion churn by geography (para 1341).xlsx".

2185 In its Reply to the Statement of Objections, the Notifying Party provided some sensitivity checks using the churn rates of red congested sites as opposed to dark red congested sites. These sensitivities show that the price increase would decrease to about […]%. The Commission, however, does not consider those sensitivities sufficient to address the concerns on the reliability of the measure, as the churn rates in both red and amber sites suffer from the same limitations of the churn rate in dark red sites.

c) Pass-through of incremental cost reductions into lower consumer prices

i. Notifying Party's view

(2532) According to the Notifying Party, the merged entity would benefit from lower incremental network costs than absent the Transaction and this would lead to downward pricing pressure for the merged entity compared to the situation absent the Transaction to the benefit of consumers.

(2533) In the Efficiencies Paper, the Notifying Party argued that the merged entity would have zero incremental capacity costs while the incremental costs of capacity would be […]% of revenues for Three and […]% of revenues for O2. Assuming a 50% pass-through rate of incremental cost reductions, this would equate to a downward pricing pressure equivalent to a price decrease of […]% for Three and […]% for O2. This downward pricing pressure would need to be added to the downward pricing pressure resulting from the […] related price increases absent the Transaction which the Notifying Party estimates at […]%.

(2534) In the Reply to the Statement of Objections, the Notifying Party reaffirms these estimates. The Notifying Party also explains that the incremental costs estimates for the Parties absent the Transaction […]. The incremental costs of Three required to keep congestions constant would be […]% of revenues. Combined with the alternative incremental network cost estimate for the merged entity of […]% this would lead to an estimate reduction of incremental costs of […]%. This figure is higher than the equivalent implied reduction in variable costs summing the two effects estimated in the Efficiencies Paper which would amount to […]% of revenue. The Notifying Party therefore considers that the downward pricing pressure estimated in the Efficiencies Paper would be conservative.

ii. Commission's assessment

(2535) The Commission notes that, in general, "*reductions in variable or marginal costs are more likely to be relevant to the assessment of efficiencies than reductions in fixed costs*"[2186] since the former are in principle more likely to result in lower prices for consumers.

(2536) The Commission acknowledges that a reduction in incremental costs of network expansions increases, all else being equal, the incentives of firms to engage in capacity expansions. A reduction in incremental costs of network expansions can hence be expected to benefit consumers. The quantitative framework adopted by the Commission to assess the price effects expected from the Transaction allows incorporating such cost reductions in the analysis and their effect on price. The Notifying Party's argument that the downward pricing pressure would amount to 50% of the incremental cost reduction is a reasonable approximation of the same effect.[2187]

(2537) However, as discussed in Section 8.4.2.2.b above, the Commission considers that the claimed incremental network cost savings do not meet the criteria of verifiability and

[2186] Horizontal Merger Guidelines, paragraph 80.

[2187] The assumption of 50% pass-through of marginal cost changes into price derives from the assumption of linear demand which is also used in the Commission's quantitative analysis. Using the Commission's model to assess the effect of incremental cost reductions on price would also account for feedback effects between the Parties products (in the indicative price rise analysis) and all market participants (in the calibrated merger simulation version). However, the difference is immaterial for the purposes of the assessment of the Notifying Party's claims.

merger specificity. Neither the claim of zero incremental costs of the merged entity, nor the claim of incremental cost of the merged entity of […]% under the Notifying Party's alternative approach can be verified. Moreover, the Commission also does not accept the Notifying Party's estimates of incremental network costs of the Parties absent the Transaction as discussed in Annex A.

(2538) Moreover, in any event, on the basis of the quantitative analysis in Annex A, the Commission considers that even if the merged entity faced zero incremental network costs, so that there was an incremental network cost reduction amounting to the entire incremental network cost of the Parties absent the Transaction, such reduction would be insufficient to offset the incentives to raise price resulting from the elimination of competition between the Parties.[2188] Three and O2 would still have incentives to increase prices by respectively 9.3-11.5% and 5.9-7.5% in the overall private segment (based on provider level and network level diversions, respectively) and the average price increase across all operators would be 4-5.4% in the overall private segment.[2189]

(2539) In light of the above, while the Commission accepts that reductions in incremental network costs of the merged entity could lead to benefits to consumers, the Commission rejects such efficiencies because the incremental network cost savings claimed by the Notifying Party are neither verifiable nor merger specific. Moreover even if the claim that the merged entity would have zero incremental costs was verifiable or merger specific, the pass-through of such reductions to consumers would not be sufficient to offset the incentives to increase price and the Transaction would still be likely to lead to significant price increases.

d) Increased competitive pressure on EE and Vodafone due to higher network quality of the merged entity[2190]

i. Notifying Party's view

(2540) The Notifying Party argues that absent the Transaction the quality gap between the Parties and EE/Vodafone would increase, with a consequent gradual churn of customers from Three and O2 to EE and Vodafone. This increased demand faced by EE and Vodafone would lead the two operators to increase their prices in the absence of the Transaction. By improving the network quality of the merged entity, the Transaction would decrease the churn of customers from Three and O2 to EE and Vodafone. This would increase the competitive pressure of the merged entity on EE and Vodafone, thereby constraining their pricing more than the standalone Three and O2.

(2541) The Notifying Party illustrates this effect with an economic model and a number of assumptions. According to the Notifying Party every 5 percentage points shift of market share from Three and O2 to EE and Vodafone would lead EE and Vodafone to increase their prices by […]% on average.

2188 The incremental network cost reductions for Three and O2 represent only a limited part of the marginal cost reductions required to offset the Parties' incentives to increase prices, as expressed by the CMCRs calculated by the Commission. See Annex A, Section 3.4.1.

2189 These predicted price increases result from a variation of the Commission's quantitative analysis baseline scenario where the network incremental costs of Three and O2 are reduced to zero post-Transaction.

2190 Reply to the Statement of Objections, section 14.2.2 and 14.5.

(2542) In the Reply to the Statement of Objections, the Notifying Party noted that the fact that benefits to customers cannot readily be quantified does not imply that they should be disregarded in their entirety. The Notifying Party points to the Commission's guidelines[2191] stating that *"[w]hen the necessary data are not available to allow for a precise quantitative analysis, it must be possible to foresee a clearly identifiable positive impact on consumers, not a marginal one."* In the Notifying Party's view, the benefit to consumers from the merged entity's alleged ability to offer high speed mobile data is not a "marginal" one.

ii. Commission's assessment

(2543) The Commission notes that the claimed increased pricing pressure on Vodafone and EE from claimed higher quality of the merged entity's products is a feedback effect. The corresponding initial effect would be the claimed increase in quality of the merged entity which (to the extent that it is verifiable and merger specific) would improve the merged entity's product value.

(2544) However, as explained in Section 8.4.2.2.b, the Commission considers that the claimed quality improvement through the Transaction is not verifiable and not merger specific and, in any event, likely of limited magnitude.

(2545) The Commission further notes that the claimed quality improvements are to a large extent coupled to the claims about higher capacity of the merged entity. In the Commission's view, incentives for the merged entity to invest in higher capacity are largely already captured through the assessment of the claimed reductions in incremental costs of network capacity expansions and therefore do not constitute a separate quality efficiency.

(2546) The Commission also notes that the Notifying Party does not attempt to estimate the effect of the claimed quality improvement on consumers or on market prices. The Notifying Party's claims that every 5 percentage points shift of market share from Three and O2 to EE and Vodafone would lead to an increase in EE's and Vodafone's prices by 3% on the basis of its model. This simply seeks to illustrate the effect that assumed shifts in demand would have on the prices of rivals. The Notifying Party does not provide any estimate of the magnitude of this quality-related market share shift. Moreover, the Notifying Party only refers to an internal analysis of Three suggesting that its customers have […]% higher propensity to churn if their most used cell is temporarily congested, that is to say if the measured downlink throughput is below […].[2192] In addition, as discussed in recital (2529), the Commission notes that the evidence underlying Three's claim that there would be a […]% higher propensity to churn due to congestion does not appear to be robust.

(2547) The Commission considers that in this context quantifying the effect of quality improvements in terms of the reduction of churn generated by de-congesting the sites is not appropriate. As noted in Section 3.2.4.1 of Annex A, the Commission considers that the incremental network costs factored into the Commission's quantitative analysis already assume that both the network of the merged entity and the networks of Three […].

(2548) Finally, in relation to the Notifying Party's argument that a precise quantification of the benefits from an increased average speed for the merged entity is not needed, and

[2191] Horizontal Merger Guidelines, paragraph 86.
[2192] Form CO, Section 6, paragraph 218.

that it is sufficient that there is a *"clearly identifiable positive impact on consumers, not a marginal one"*, the Commission considers, as explained in Section 8.4.2.2.b above, that the average speed projected for the Parties absent the Transaction is likely sufficient to provide a good user experience […]. Moreover, the Parties could increase average download speeds by acquiring additional spectrum in upcoming auctions which is not considered in the Notifying Party's analysis. The Commission therefore concludes that the consumer benefit from higher quality/download speeds by the merged entity is likely limited. This applies to both the direct consumer benefit from higher quality as well as any indirect benefit from increased competitive pressure on EE or Vodafone.

(2549) In light of the above, the Commission concludes that the efficiencies claimed by the Notifying Party in relation to increased competitive pressure on EE and Vodafone through higher quality do not fulfil the three criteria of verifiability, merger specificity and benefit to consumers.

(2550) Overall, the Commission concludes that the claimed network efficiencies do not fulfil the cumulative criteria of verifiability, merger specificity and benefit to consumers for the Commission to take them into account in the assessment of the Transaction.

8.4.3. Assessment of scale efficiency claims

8.4.3.1. Fixed cost savings due to economies of scale[2193]

a) Notifying Party's view

(2551) The Parties submit that the Transaction will lead to fixed cost savings, as a full integration of the Parties' operations would allow them to eliminate duplicate functions via a rationalisation of the combined business.

(2552) According to the Parties, the combined entity will be able to realise cost synergies of around GBP […]bn in total (net of the integration costs).[2194]

(2553) The origin of the savings are: […].

(2554) As supporting evidence for the existence of scale economies in the industry, the Notifying Party has also carried out an econometric analysis of relationship between Three's average unit cost (OPEX per subscriber) and scale (subscriber number) over time. The Notifying Party finds that a 10% increase in Three's subscribers leads to a […]% decrease in the OPEX per subscriber.

(2555) The Notifying Party argues that scale economies would benefit consumers through their potential to increase future investments.

(2556) First, economies of scale in mobile networks would improve the economics of network investments thereby increasing incentives to invest. Operators with larger subscriber bases would have higher returns on incremental investments because they can spread costs over a larger customer base. Smaller operators invest in more targeted capacity relief measures, raise prices, and/or accept higher congestion levels.

(2557) If a firm can expect to earn more profit per subscriber over the long term, then it will have a greater incentive to make investments in securing larger numbers of

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[2193] Reply to the Statement of Objections, section 15.1.

[2194] Frontier Efficiencies Paper, Table 5.

customers, and it can expect to be above breakeven on a larger number of investment decisions.

(2558) Second, by increasing cash flow, savings from economies of scale would put the merged entity in a better position to finance profitable investments.

(2559) According to the Notifying Party, the Commission should revisit the evidence submitted by the Notifying Party in *Hutchison 3G UK/Telefónica Ireland*.[2195] Specifically, the Notifying Party argues that the economic literature review on cash flow and investments submitted in that case would show that both external and internal capital markets are imperfect and that empirical studies find a statistically significant relationship between firms' cash-flow and their investments. Moreover, an empirical analysis prepared for that case would demonstrate that the relationship between investment and cash flow would also hold in the telecoms industry. According to the Notifying Party, the Commission's reasoning in the conditional clearance decision of that case does not undermine the probative value of economic studies submitted in that case.

(2560) The Notifying Party further notes that a recent study by Genakos, Valletti and Verboven[2196] would be consistent with the view that market consolidation leads to higher investment. Although the study does not find significant effects of concentration on capital expenditure at the market level, it finds that increases in market concentration lead to an increase in capital expenditure per firm. The Notifying Party argues that because concentration would eliminate duplication of fixed costs, investments would be "better spent" in more concentrated markets.

b) Commission's assessment

(2561) The Commission considers that the efficiencies claimed by the Notifying Party in relation to fixed cost savings due to economies of scale do not fulfil the three criteria of verifiability, merger specificity and benefit to consumers.

i. Verifiability and merger specificity

(2562) With respect to verifiability and merger specificity of fixed cost savings, the Commission acknowledges that the elimination of duplicate functions between merging parties often leads to some fixed costs savings. The Commission also accepts that the operating expenditures per subscriber might decrease with increasing scale of operations of MNOs as operating expenditures overall increase less than proportionally with the subscriber base.

(2563) While this indicates the existence of scale economies in the industry, the Commission notes that the Notifying Party has not submitted any documentation in support of the calculation of the magnitude of claimed fixed cost savings. The estimates are purely based on Three's internal assumptions and estimations which have been consolidated into a single estimate in cooperation with their investment bank.[2197] The Notifying Party has not submitted sufficiently detailed information to allow the Commission to understand how these estimates were obtained and how reliable these estimates are. Overall, the level of claimed scale economies arising from the Transaction therefore cannot be verified.

2195 Commission decision of 28 May 2014 in case No. M.6992 – *Hutchison 3G UK/Telefónica Ireland.*

2196 Genakos C., Valletti T., Verboven F. (2015): "Evaluating Market Consolidation in Mobile Communications", Cerre Report [ID4074].

2197 Annex 79 and Annex 158 to Form CO.

(2564) In the Reply to the Statement of Objections, the Notifying Party argues that requesting detailed documentation would set an impossibly high evidential hurdle as the Parties cannot legally exchange detailed commercially sensitive information prior to completion of the Transaction.

(2565) The Commission considers that it is not unreasonable to expect the Parties to document estimated expected cost savings in some detail and to provide supporting evidence of the assumptions from which they are derived. As noted in the Horizontal Merger Guidelines, information on efficiencies resides with the Parties.[2198]

(2566) In any event, the Commission notes that a detailed discussion of the verifiability and merger specificity of the claimed fixed cost savings is not necessary, as the Commission finds it unlikely that these savings (if verified and merger specific) would be passed on to consumers.

ii. Benefit to consumers

(2567) The Commission notes that, in general, "*reductions in variable or marginal costs are more likely to be relevant to the assessment of efficiencies than reductions in fixed costs"*.[2199] This is because the former are in principle more likely to result in lower prices for consumers. Whereas fixed costs have an impact on a firm's overall profitability and therefore possibly on the number of firms that are active in a market, these have to be incurred irrespective of the volumes sold. In contrast, in pricing decisions firms generally trade off selling higher volumes at the expense of achieving lower revenue per unit. Since fixed costs do not affect this trade-off, they can be expected to be less relevant for pricing decisions from an economic point of view.[2200,2201]

(2568) The Notifying Party has not submitted arguments or evidence which would warrant departing from this general approach in this case.

(2569) The Commission notes that it is important to distinguish between arguments of the Notifying Party that, because of scale economies, certain investments would become more profitable from arguments that, because of fixed cost savings, the merged entity would have more cash flow available to finance profitable investments. The first type of argument relates to the profitability of investments as such. The second type of argument relates to the financing of such investments.

(2570) As regards the first type of argument that the increase in subscribers would increase the profitability of incremental network investments to the benefit of consumers, the Commission notes that this argument is not linked to fixed cost savings. Fixed costs savings, while affecting the overall profits of a firm, do not affect the profitability of incremental investments. The profits of incremental investments only depend on the incremental revenues and incremental costs generated by such incremental investments and not on the overall level of profit (or profit per subscriber) of an MNO as suggested by the Notifying Party. It does hence not follow that a firm with a

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[2198] Horizontal Merger Guidelines, paragraph 87.

[2199] Horizontal Merger Guidelines, paragraph 80.

[2200] In this context, the Commission does not generally contest that fixed costs may indirectly influence prices, as higher fixed costs may imply that fewer firms can profitably operate in the market which, due to less competition, may result in higher prices. However, in the absence of the proposed transaction, the Parties can still be expected to remain active in the market.

[2201] See discussion in Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, recitals 1060 and following.

higher profit per subscriber has a greater incentive to make investments in securing a larger number of customers; nor that such a firm would expect to break even on a larger number of investment decisions. For a firm with more subscribers to have a greater incentive to make incremental investments, the incremental profit from such investments would need to increase with the scale of the firm. As pointed out in the Statement of Objections, the Notifying Party has made a specific claim in this regard only with respect to spectrum acquisitions which is assessed in section 8.4.3.2.

(2571) The second type of argument of the Notifying Party is that fixed cost savings would lead to increased cash flow which in turn would put the merged entity in a better position to finance profitable investments. This claim is of a very general nature and the Notifying Party only refers back to a literature review submitted in *Hutchison 3G UK/Telefónica Ireland* to support the claim that increased cash flow would increase investments.

(2572) In its Decision on *Hutchison 3G UK/Telefónica Ireland*, the Commission noted that the literature reviewed was not specific to mobile telecoms firms at the country level or to the relationship between investments and cash flow by MNOs. Instead, the studies were either not specific to telecoms, or covered a wide range of telecoms groups from fixed line incumbents to small resellers. Moreover the studies did not study the effect of mergers. The Commission also pointed to the existence of other economic literature indicating cross financing between divisions of the same company.[2202]

(2573) The Notifying Party considers that the Commission's arguments in *Hutchison 3G UK/Telefónica Ireland* do not undermine the probative value of the studies for the following reasons: (i) the purpose of the general literature was to show that it would be the wrong starting assumption to believe that investments are necessarily independent of the availability of retained profits to finance investments; (ii) the Commission has provided no evidence or reasoning to suggest that general empirical relationship between improved cash flows would not apply to the specific industry at hand or why they would not apply to merger synergies; (iii) that the economic literature does not allow a conclusion that a group company structure will fully address all obstacles to financing investments. According to the Notifying Party, the Commission should revisit the studies submitted in *Hutchison 3G UK/Telefónica Ireland* with these factors in mind.

(2574) The Commission considers it unnecessary to revisit its assessment of the Notifying Party's submissions in *Hutchison 3G UK/Telefónica Ireland*. In the Decision of *Hutchison 3G UK/Telefónica Ireland*, the Commission found that the Notifying Party's studies on cash flow constraints allowed no inferences on the effect of fixed costs savings from the Transaction on investment in that specific case.[2203] Moreover, the Commission also found that the Notifying Party had not demonstrated, in the context of that specific case, that scale efficiencies would lead to more investment to the benefit of consumers; nor had the Notifying Party been specific about what investments it would not be able to pursue due to cash flow constraints that would be pursued post-Transaction .[2204]

[2202] *Hutchison 3G UK/Telefónica Ireland, recital 790*
[2203] *Hutchison 3G UK/Telefónica Ireland, recital 790*
[2204] *Hutchison 3G UK/Telefónica Ireland, recital 799*

(2575) The Notifying Party's comments on the Commission's reasoning in the Irish Decision do not undermine these conclusions. General considerations do not exempt the Notifying Party of the need to demonstrate its efficiency claims in the context of the specific case. As in *Hutchison 3G UK/Telefónica Ireland*, the Notifying Party has provided in the present case no specific evidence that increased cash flow from fixed cost savings would lead to more investments.

(2576) Moreover, the Notifying Party does not argue that Three would be cash flow constrained on a standalone basis. […].[2205] Moreover, cash flow constraints on Three would seem highly implausible as its parent group, CKHH, appears to dispose over very large financial resources as demonstrated by the present and other acquisitions.

(2577) The Notifying Party argues that […]. The Commission assessed the Notifying Party's claim in recitals (853)-(858), where it concluded that in the absence of the Transaction, […]. In any event, a possible new owner of O2 other than Telefónica […]. The Commission therefore considers that […] is irrelevant […].

(2578) Finally, the Notifying Party refers to a recent study[2206] which finds no significant difference in total industry investment between three and four player markets. The Commission discusses this study in Annex B, which forms an integral part of this Decision. The Commission considers that the study's finding of no significant effect of mergers on industry level capital expenditures does not necessarily imply that investment will be "better spent" in more concentrated markets to the benefit of consumers even if mergers may entail fixed costs savings. The Commission also notes that this study examines capital expenditure while the claimed fixed cost savings relate to a significant extent to operating expenditures. The Notifying Party’s econometric evidence on scale economies is also based on operating expenditures. As discussed in section 2.2.3 of Annex B, the Commission also considers that the arguments put forward by the Notifying Party regarding the ex-post assessment of the acquisition of Orange Austria by H3G[2207] cannot be used to make inferences on the effects of mergers on investments.

(2579) In light of the above, the Commission does not accept that the Parties' claims on efficiencies from fixed cost savings from the Transaction, even if such savings were verifiable and merger specific, would benefit consumers.

(2580) Overall, the Commission concludes that the efficiencies claimed by the Notifying Party in relation to fixed cost savings brought about by the Transaction are not verifiable and merger specificity because the Parties have not documented the estimated expected cost savings in sufficient detail in terms of evidence, assumptions and calculations on which these savings have been calculated. These alleged efficiencies would in any event most likely not benefit consumers, as fixed cost savings are unlikely to be passed through in the form of more competitive pricing.

2205 See recital (708). See also Ofcom, Phase 2 submission to the European Commission, "Three's ability and incentive to acquire spectrum in the future," paragraph 8 and following and Figure 1 [ID03924].

2206 Genakos C., Valletti T., Verboven F. (2015): “Evaluating Market Consolidation in Mobile Communications” [ID4074].

2207 Commission case No M.6497 – *Hutchison 3G Austria/Orange Austria.*

8.4.3.2. Increased incentives and ability to acquire spectrum[2208]

a) Notifying Party's view

(2581) The Notifying Party claims that a higher subscriber base would put the merged entity in a stronger position to be successful in securing significant amounts of spectrum in upcoming spectrum auctions. This is because (i) spectrum would have a higher intrinsic value for the merged entity (as a result of a higher commercial value) and (ii) because the merged entity would be less vulnerable to strategic bidding by EE and Vodafone.

(2582) According to the Notifying Party, […].

(2583) Three's incentive to acquire new spectrum in the absence of the Transaction would be limited by a number of factors. First, customer numbers are a key driver of operators' commercial spectrum valuations. A large customer base is relevant because it takes time to acquire customers, and is expensive relative to customer retention. This was recognised by Ofcom in its 4G auction statement, where it considered that smaller MNOs find it harder to obtain value from new spectrum if they cannot attract customers to monetise the spectrum.

(2584) According to the Notifying Party, the commercial value of spectrum to a smaller MNO is mainly given by the opportunity to increase its market share. On the other hand, the commercial value to a larger operator is given by (i) the opportunity to defend market share and (ii) the opportunity to sell new services to existing and new customers. The Notifying Party is of the view that for these reasons, all else equal, differences in the commercial value of new spectrum will be directly correlated with existing revenue shares.

(2585) As regards strategic bidding, the Notifying Party refers to Ofcom's 4G auction statement, where Ofcom recognised that Three as a standalone business would be exposed to the risk that larger operators would be prepared to pay a premium above their intrinsic value of spectrum in order to outbid Three. This strategic premium reflects the profits that the operators would expect from denying spectrum to their smaller rival, thereby affecting the degree to which Three could compete. As explained in the Form CO, this ability to bid strategically will not be mitigated by future spectrum releases. For instance, BT/EE could put high strategic value on acquiring large quantities of 2.3 GHz and 3.4 GHz spectrum in the upcoming auction.

b) Commission's assessment

(2586) The Commission has preliminarily concluded that the efficiencies claimed by the Notifying Party in relation to any improved ability to acquire spectrum do not fulfil the three criteria of verifiability, merger specificity and benefit to consumers.

i. Verifiability

(2587) The Commission considers that the Transaction will not improve the Parties' ability and incentive to obtain spectrum in upcoming auctions because: i) technical value will likely be more important than commercial value in the upcoming PSSR auction and the Parties' technical value is not likely to increase post-Transaction; ii) the

[2208] Reply to the Statement of Objections, section 15.2.

commercial value normally decreases in the (low frequency) spectrum holding[2209] and the merged entity will hold a significant portion of 800 MHz spectrum; iii) strategic bidding is unlikely to take place in the upcoming PSSR and Ofcom will ensure that strategic bidding is not used to the detriment of competition in future auctions; and iv) […]. These four aspects will therefore mean that the Parties' ability to acquire spectrum, absent the Transaction, will be guaranteed in the future and, therefore, the Transaction will not result in any increase of that ability.

(2588) The assessment of Three's and O2's ability and incentives to acquire further spectrum as well as an in-depth discussion of the arguments submitted by the Parties in their replies to the Statement of Objections are discussed in Sections 1.2.5.2 and 2.2.6.1 of Annex C. The following paragraphs contain the most important arguments of the previous recital.

(2589) First, the Commission considers that not only commercial value but also technical value drives operators' incentives to bid more aggressively in spectrum auctions. To the extent that both Three and O2 have lower amounts of spectrum, in relative terms, than BT/EE or Vodafone, their technical value for spectrum will also likely be higher as set out in more detail in Annex C. Moreover, as Ofcom notes[2210], the upcoming PSSR auction only includes capacity spectrum, for which the technical value is expected to play a much more important role than commercial value. In conclusion, the Commission is of the view that Three and O2 will not be disadvantaged against Vodafone or BT/EE and will in particular likely be able to acquire together the entire 2300 MHz spectrum which will be available as set out in Annex C.

(2590) Second, the Commission further considers that the commercial value normally decreases in the (low frequency) spectrum holding. The commercial value is often linked to enabling an operator to offer a higher quality service, e.g. by increasing the (indoor) coverage or the reliability of the network. However, once a sufficient amount of low-frequency spectrum has been deployed, the (indoor) coverage cannot be materially expanded anymore by deploying more low frequency spectrum, so that the commercial value of low frequency spectrum for operators which already hold a significant amount of low frequency spectrum for their 4G layer may be limited. In this context, the merged entity will hold 2x15 MHz of 800 MHz spectrum, which allows rolling out a high-speed 4G layer. The Notifying Party has failed to submit an analysis which establishes that the merged entity would nevertheless have a substantially higher commercial value for additional spectrum than either of the Parties in the standalone scenario.

(2591) Whereas capacity spectrum may also have some commercial value, this does not change the overall consideration that Three will likely have a higher intrinsic value of capacity spectrum than BT/EE or Vodafone for two reasons. Three will likely have a higher commercial value from increasing its average speed than BT/EE or Vodafone. In addition, also the behaviour of mobile operators who do not deploy their entire spectrum on sites which are not much loaded suggests that there is only limited commercial value from delivering very high average speeds.

[2209] For example, if low capacity spectrum is used to extend the coverage, once an operator has enough coverage spectrum to offer acceptable speed in those regions, the additional commercial value from more coverage spectrum will be limited.

[2210] Ofcom, Phase 2 submission to the European Commission, "Three's ability and incentive to acquire spectrum in the future" [ID3924].

(2592) In addition, Three was one of the successful bidders (together with Vodafone) in Qualcomm's 2015 spectrum sale, which confirms its ability to acquire spectrum. Moreover, as noted in Section 2.2.6.1 of Annex C, […],[2211] which next to the fact that O2 acquired 10 MHz of very valuable 800 MHz spectrum in the 4G auction further suggests that O2 as a standalone business is able to acquire spectrum.

(2593) Third, Ofcom has the duty and powers to design spectrum auctions in such a way that anti-competitive outcomes, such as strategic bidding, are not possible or made more difficult or unlikely. Generally, the Commission is of the view that Ofcom will prevent that MNOs are materially disadvantaged by imposing competition measures in future auctions to the extent this becomes necessary.

(2594) On 10 March 2016, Ofcom submitted a letter to the Commission indicating that it will propose to include competition measures in the PSSR award where it considers such measures to be necessary and proportionate to promote effective and sustainable competition. In particular, Ofcom points out that it cannot be assumed that it would impose no spectrum caps in the forthcoming PSSR auction as expressed in its decision of October 2015. When considering competition measures, Ofcom would also expect to revisit the question of whether to distinguish between the 2.3 GHz and 3.4 GHz bands for the purpose of competition measures.

(2595) The Commission considers that the letter submitted by Ofcom on 10 March 2016 provides evidence that Ofcom can be expected to foresee effective measures to prevent strategic bidding in the future spectrum auctions governed by Ofcom to the extent this is deemed necessary. It can thus be expected to ensure that strategic bidding is unlikely to materialise in particular in the upcoming PSSR auction.

(2596) In any event, for the reasons further discussed in Annex C, the Commission considers that the gains from strategic bidding are limited and costs of doing so are material. The Commission notes that strategic bidding is unlikely to materialize in the upcoming PSSR auction in particular as regards the auctioned 3.4 MHz spectrum due to the high amount of spectrum auctioned and, as Ofcom notes, because capacity spectrum reduces the incentives for strategic bidding.

(2597) The Commission's view is supported by Ofcom, which in its recent Public Sector Spectrum Release Statement (26 October 2015) takes the view that strategic bidding concerns are remote in the upcoming PSSR auction for a number of reasons. Ofcom has also submitted that its auction design discourages strategic investment or mitigates its effects, including the way prices are set in the auction, the nature of the bidding and the limited information available to bidders during the auction.

(2598) Last, as described in Annex C, the Commission considers that [O2 is not budget constrained].

(2599) In reply to the Statement of the Objections, the Notifying Party submits that larger operators will attach greater commercial value to spectrum, all else being equal, as upselling improved services to an existing customer base is less costly than to new subscribers. Moreover, the Notifying Party considers that strategic bidding will become less likely as the risks associated with strategic investments and the costs to strategic bidders would be increased by the Transaction.

(2600) As regards the first point of greater commercial value, the Commission first retiterates that in the upcoming PSSR auction capacity spectrum will be auctioned

[2211] This information has been made available in the data room.

whose commercial value will be limited. Moreover, as set out in recital (2590), the commercial value of spectrum may decrease in the spectrum holding. Since the merged entity will have 2x15 MHz of 800 MHz spectrum and thus more than each of the merging parties, its commercial value for further spectrum can also be reduced (despite its larger customer base). Similarly, to the extent network consolidation would allow to deploy the joint spectrum more intensely, the need for further capacity spectrum and thus the technical value may well reduce as a result of the Transaction.

(2601) In relation to the second point of a reduced risk for strategic bidding, the Commission considers that the risk of strategic bidding is also very small (see recitals (2593)-(2597)) in the absence of the Transaction, so that benefits of any alleged further reduction of strategic bidding would be immaterial.

(2602) In light of the above, the Commission concludes that the Notifying Party's claim in relation to any improved ability to acquire spectrum does not fulfil the verifiability criterion.

ii. Merger specificity

(2603) The Commission notes that spectrum access could in principle also be ensured by spectrum-sharing and the same arguments as set out in recitals (2471) to (2474) apply mutatis mutandis. However, given that the benefits are not verifiable and that the benefit to consumers has not be shown, it is not necessary to conclude on merger specificity.

iii. Benefit to consumers

(2604) The Notifying Party has not provided sufficient evidence as to what extent the claimed additional spectrum would benefit the consumers of the combined entity. In this context, it would also have to be reflected that the total amount of spectrum does not increase as a consequence of the Transaction. Hence, to the extent the merged entity would be able to acquire more spectrum (which would possibly benefit the merged entity's consumers), competing MNOs would acquire less spectrum, which may have adverse effects on the consumers of these competing MNOs.

(2605) Hence, consumers would benefit from an increased ability and incentive of the merged entity to acquire spectrum only to the extent this spectrum could be more efficiently deployed by the merged entity (for example in case the merged entity would be much more capacity constrained than its competitors without the additional spectrum) compared to the competing MNOs.

(2606) Therefore, the Commission considers that the efficiencies claimed have failed to meet the criterion of benefits to consumers.

c) Conclusion on increased incentives (and ability) to acquire spectrum

(2607) The Commission concludes that, for the reasons set out above, the efficiencies claimed by the Notifying Party in relation to any improved ability to acquire spectrum do not fulfil the three criteria of verifiability, merger specificity and benefit to consumers.

8.4.4. Conclusion on efficiencies

(2608) Overall, the Commission concludes that the efficiencies claimed by the Notifying Party in relation to both network efficiencies and scale efficiencies do not meet the three cumulative criteria of verifiability, merger specificity and benefit to consumers set out in the Horizontal Merger Guidelines which are required for such claims to be taken into account of the Commission's assessment of the Transaction. The Commission notes that a potentially more intense deployment of spectrum on a denser network as well as the Notifying Party’s claim that the merged entity would be able to refarm one 5MHz block of spectrum earlier than absent the Transaction appear plausible in the abstract. However, the capacity benefits from a single block of spectrum have not been properly quantified and are likely small and only transitory. Moreover, the Commission considers that the fact that claimed network efficiencies would not materialise before […] reduces the weight that it can place on such claims, even if they met the three criteria of the Horizontal Merger Guidelines.

8.5. Conclusion and compatibility with the internal market

(2609) In light of the above the Commission has come to the view that the Transaction would significantly impede effective competition in a substantial part of the internal market within the meaning of Article 2(3) of the Merger Regulation through non-coordinated effects in the market for retail mobile telecommunications services in the United Kingdom (discussed in Sections 8.2.2. and 8.2.3.), as well as non-coordinated effects on the wholesale market for access and call origination on public mobile networks in the United Kingdom (discussed in Section 8.3.).

9. COMMITMENTS

9.1. Analytical framework

(2610) When a concentration raises competition concerns, the merging parties may seek to modify the concentration in order to resolve those competition concerns and thereby obtain clearance for the merger.[2212]

(2611) Under the Merger Regulation, the Commission must show that a concentration would significantly impede effective competition in the internal market or in a substantial part of it. In contrast, it is for the Notifying Party/Parties to the concentration to propose appropriate commitments.[2213] The Commission only has the power to accept commitments that are deemed capable of rendering the concentration compatible with the internal market so that they will prevent a significant impediment to effective competition in all relevant markets in which competition concerns were identified.[2214]

(2612) The commitments must eliminate the competition concerns entirely and must be comprehensive and effective in all respects. The commitments must also be proportionate to the competition concerns identified.[2215] Furthermore, the commitments must be capable of being implemented effectively within a short period

[2212] Remedies Notice, paragraph 5.

[2213] Remedies Notice, paragraph 6.

[2214] Remedies Notice, paragraph 9.

[2215] Recital 30 of the Merger Regulation. The General Court set out the requirements of proportionality as follows: "*the principle of proportionality requires measures adopted by Community institutions not to exceed the limits of what is appropriate and necessary in order to attain the objectives pursued; when there is a choice between several appropriate measures recourse must be had to the least onerous, and the disadvantages caused must not be disproportionate to the aims pursued*" (T-177/04 *easyJet v Commission* [2006] ECR II-1931, paragraph 133).

of time as the conditions of competition on the market will not be maintained until the commitments have been fulfilled.[2216]

(2613) The Commission also recalls that the Remedies Notice sets out that "*commitments which are structural in nature, such as the commitment to sell a business unit, are, as a rule, preferable from the point of view of the Merger Regulation's objective, inasmuch as such commitments prevent, durably, the competition concerns which would be raised by the merger as notified, and do not, moreover, require medium or long-term monitoring measures*."[2217]

(2614) The Remedies Notice further explains that "*the question of whether a remedy and, more specifically, which type of remedy is suitable to eliminate the competition concerns identified, has to be examined on a case-by-case basis. Nevertheless, a general distinction can be made between divestitures, other structural remedies, such as granting access to key infrastructure or inputs on non-discriminatory terms, and commitments relating to the future behaviour of the merged entity. Divestiture commitments are the best way to eliminate competition concerns resulting from horizontal overlaps, and may also be the best means of resolving problems resulting from vertical or conglomerate concerns. Other structural commitments may be suitable to resolve all types of concerns if those remedies are equivalent to divestitures in their effects ... Commitments relating to the future behaviour of the merged entity may be acceptable only exceptionally in very specific circumstances*."[2218]

(2615) Moreover, the Remedies Notice sets out that "*divestitures are the best way to eliminate competition concerns resulting from horizontal overlaps, and may also be the best means of resolving problems resulting from vertical or conglomerate concerns"*[2219] and *"are the benchmark for other remedies in terms of effectiveness and efficiency. The Commission therefore may accept other types of commitments, but only in circumstances where the other remedy proposed is at least equivalent in its effects to a divestiture*",[2220] and other structural commitments *"may be suitable to resolve all types of concerns if those remedies are equivalent to divestitures in their effects"* whilst behavioural commitments *"may be acceptable only exceptionally in very specific circumstances".*[2221]

(2616) The Commission also recalls that it has the legal duty to ensure, when assessing the remedies proposed by the merging parties, that such remedies are effective. Paragraph 13 of the Remedies Notices states that in order for the commitments to remove the competition concerns entirely and be comprehensive and effective, there has to be an effective implementation and ability to monitor the commitments. Whereas divestitures once implemented do not require any further monitoring measures, other types of commitments require effective monitoring mechanisms in order to ensure that their effect is not reduced or even eliminated by the parties. Otherwise such commitments would have to be considered as mere declarations of

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2216 Paragraphs 9, 10, 11, 63 and 64 of the Commission Notice on remedies acceptable under the Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (OJ C 267, 22.10.2008, p. 1-27), (the "Remedies Notice").

2217 See Remedies Notice, paragraph 15.

2218 See Remedies Notice, paragraphs 16 to 17.

2219 See Remedies Notice, paragraph 17

2220 See Remedies Notice, paragraph 61.

2221 See Remedies Notice, paragraph 17.

intentions by the parties and would not amount to any binding obligations, as, due to the lack of effective monitoring mechanisms, any breach of them could not result in the revocation of the decision according to the provision of the Merger Regulation.

(2617) Paragraph 14 of the Remedies Notice further provides that where the parties submit remedy proposals that are so extensive and complex that it is not possible for the Commission to determine with the requisite degree of certainty, at the time of its decision, that they will be fully implemented and that they are likely to maintain effective competition in the market, an authorisation decision cannot be granted[2222]. The Commission may reject such remedies in particular on the grounds that the implementation of the remedies cannot be effectively monitored and that the lack of effective monitoring diminishes, or even eliminates, the effect of the commitments proposed.

(2618) Based on these principles as well on the principles related to the implementation and effectiveness of all type of commitments set out by Paragraphs 13 and 14 of the Remedies Notice, the Commission assessed the Commitments put forward by the Notifying Party in the present case.

9.2. Procedure

(2619) In order to address the competition concerns identified in the Statement of Objections, the Notifying Party submitted commitments on 2 March 2016 (the "First Commitments"). On 15 March 2016 (day 65 of the Commission's investigation, the legal deadline to formally submit commitments), the Notifying Party submitted revised commitments (the "Second Commitments"). The Commission launched a market test of the Second Commitments on 18 March 2016 (day 68 of the Commission's investigation) (the "Market Test"). Questionnaires were sent to (1) current and potential future providers of mobile telecommunications services in the United Kingdom, providers of infrastructure services in the mobile telecommunications sector, as well as the associations MVNO Europe and iMVNOx; and (2) national telecommunications regulators, including Ofcom. In addition, the national competition authorities of the United Kingdom, Germany, and the Netherlands provided their views on the Second Commitments. Following the Market Test, the Notifying Party submitted another revised set of commitments on 6 April 2016 (day 78 of the Commission's investigation) (the "Third Commitments"). Meetings with the Notifying Party during which the different commitment proposals were discussed, including prior to their formal submission, were held on 22 January 2016, 19 February 2016 and 10 March 2016. The Commission gave detailed feedback on the outcome of the Market Test during a state of play meeting on 31 March 2016. In this meeting, the Commission also provided the Notifying Party with its assessment of the Second Commitments in light of the outcome of the Market Test. The Notifying Party presented the Third Commitments during a meeting on 5 April 2016.

9.3. Description of the Second Commitments

(2620) The Second Commitments comprise four components: (1) the Tesco Mobile Commitment; (2) the New Entrant Operator ("NEO") Commitment; (3) the Network Sharing Commitment; and (4) the Wholesale Market Commitment.

[2222] See Case T-87/05 *EDP v. Commission*, [2005] ECR II-3745, paragraph 102.

(2621) In this section, the Commission will describe the main elements of the Second Commitments, which were ultimately market tested and will be assessed in Section 9.4.[2223] The Commission notes that the First Commitments comprised a version of the NEO Commitment and of the Tesco Mobile Commitment that were very similar to the NEO Commitment and the Tesco Mobile Commitment contained in the Second Commitments (the First Commitments did not include the Network Sharing Commitment nor the Wholesale Market Commitment). To the extent that the respective Commitments were amended in the Second Commitments as compared to the First Commitments, the Commission will clarify this in the present section.

9.3.1. Tesco Mobile Commitment

(2622) Under the Tesco Mobile Commitment the Notifying Party commits, first, to divest O2's 50% stake in Tesco Mobile.

(2623) Second, the Notifying Party commits to offer a capacity based wholesale agreement for [5-10]% of capacity on the *"mobile communications radio access network operated and/or used by O2 in the United Kingdom from time to time (including for the avoidance of doubt as it evolves over time) subject to any limitations contained in national roaming or infrastructure (including site) sharing agreements with third parties"* (the "Network") to Tesco Mobile for a period of [5-10] years.[2224] Tesco Mobile would have to pay a fixed annual fee to be agreed by the Notifying Party and Tesco Mobile. In the first [1-5] years of the capacity being made available, such annual fee would be no less than the total sums paid or payable by Tesco Mobile to O2 for wholesale access services in the 12 month period preceding these [1-5] years. For any subsequent years, the annual fee would be no less than that which would be payable in accordance with the pricing principles applicable to the capacity used by the NEO at a given point in time (see recital (2626)). The Notifying Party would make the capacity available provided that Tesco Mobile has its own core network. Until Tesco Mobile has its own core network, the Notifying Party commits to continue to service Tesco Mobile's customers on similar terms to the arrangements currently in place between O2 and Tesco Mobile.[2225] Tesco Mobile would have equivalent quality of service compared to the Notifying Party's retail customers, as well as non-discriminatory access to all elements of the Network, current and future Network technologies as well as features and services deployed in the Network as available to the Notifying Party's retail customers.[2226]

(2624) If the NEO were to exercise the O2 Divestment Option, H3GI would offer Tesco Mobile an equivalent capacity agreement.

9.3.2. NEO Commitment

(2625) First, under the NEO Commitment, the Notifying Party commits to grant a perpetual fractional network interest ("Network Interest"), amounting to up to [10-20]% of the

[2223] The First Commitments will not be assessed as the Notifying Party submitted the Second Commitments prior to the Commission having carried out a market test on the First Commitments.

[2224] The Tesco Mobile Commitment contained in the First Commitments foresaw a capacity based wholesale agreement for up to [5-10]% of capacity on the Network.

[2225] The Tesco Mobile Commitment contained in the First Commitments foresaw that the Notifying Party would continue the wholesale access arrangements currently in place between O2 and Tesco Mobile.

[2226] The Tesco Mobile Commitment contained in the First Commitments foresaw equivalent quality of service compared to the Notifying Party's other customers (as opposed to retail customers) and non-discriminatory access to the network elements described in this recital in the same way as the Notifying Party's customers (as opposed to retail customers).

capacity ("Capacity Share") in the Network to one or two NEOs. The Network interest would be granted at the end of the trustee divestiture period of the Tesco Mobile Commitment.

(2626) The minimum amount of capacity to be taken by the NEO(s) varies over time and, in case there is only one NEO, is structured as follows: From year [1-5] to year [1-5], the NEO can either use the full [10-20]% of capacity or decide to reach the [10-20]% by the end of year [1-5] through applying a reasonable glide path. For years [5-10] to [5-10], the NEO would elect a minimum Capacity Share equivalent, in absolute terms, to the one used at the end of year [1-5], but as regards the element that is measured in Gbps, amounting to no less than […] Gbps. From year [10-15] onwards, the NEO and the Notifying Party can agree on a minimum capacity at their choosing. In each case, the minimum capacity share chosen by the NEO is referred to as "Elected Capacity Share". In any event, the Notifying Party commits to make available at least […] Gbps as of […] and […] Gbps as of […] provided that the NEO's Elected Capacity Share is [10-20]%.[2227] Annex 1 to the Second Commitments sets out the way in which the Capacity Share would be made available to the NEO in further detail.

(2627) The NEO is prevented from transferring the Network Interest or its Capacity Share to any third party, whether on a wholesale, resale agency or other distribution basis.

(2628) The NEO(s) would pay an agreed fixed price to the Notifying Party in consideration for the Network Interest entitling them to the use of the Capacity Share. In addition, the NEO(s) would pay, on an annual basis, a proportion, corresponding to the Elected Capacity Share, of the running operating expenses, as well as ongoing capital maintenance and improvement costs incurred by the Notifying Party plus a return on capital ("Ongoing Charges"). The Notifying Party would provide the NEO(s) with an annual statement of the calculation of the Ongoing Charges, prepared by its own auditor in accordance with agreed principles. The NEO(s) can decide to request the joint appointment of an independent auditor to verify the accuracy of the Ongoing Charges.

(2629) The NEO customers would have equivalent quality of service to non-NEO retail customers on the Network.[2228]

(2630) The NEO(s) would have non-discriminatory access to all elements of the Network and to all current and future radio technologies, features and services deployed in the Network. The NEO(s) would have to provide their own core network.

(2631) The NEO(s) would be updated and consulted on the Notifying Party's technology and network roadmap plans for the following 12 months […]. The Notifying Party would retain sole control over all decisions concerning the operation of the Network and investments in the Network. The Notifying Party would discuss in good faith requests by the NEO(s) for network investments that are not part of the network roadmap. If no agreement can be reached on such investments, they would be implemented either entirely at the expense of the NEO(s) (if the investment can be technically segregated or partitioned on the Network for the NEO's own use) or with

2227 The NEO Commitment contained in the First Commitments did not make the obligation of the Notifying Party to provide at least […] Gbps as of the […] and […] Gbps as of […] to the NEO conditional upon the fact that the NEO's Elected Capacity Share has to be [10-20]%.

2228 The NEO Commitment contained in the First Commitments foresaw equivalent quality of service compared to non-NEO customers (as opposed to retail customers) on the Network.

financial contribution by the Notifying Party capped at GBP […]million in incremental CAPEX costs and at GBP […] million in incremental OPEX costs (in return for a full right by the Notifying Party to use such investment). Finally, network investments requested by the NEO(s) are subject to both sides agreeing on any required safeguards to ensure adequate service to all customers on the Network and the investment not causing a material adverse effect on: (i) the carriage of traffic over the Network; or (ii) the quality, coverage or availability of the services being provided by the Notifying Party or any other operator using the Network.

(2632) The Second Commitments clarify that the NEO(s) are entitled to differentiate their network quality, for instance by building an own supplemental network using own or unlicensed spectrum or by deploying own features, functionality, spectrum, sites or transmission.

(2633) The Network Interest is non-transferrable for a period of [5-10] years. After this period, it can be transferred, subject to a right of first refusal by the Notifying Party.

(2634) Second, the Notifying Party commits to offer an option for one NEO to have the network capacity provided over a total of […] MHz spectrum in different spectrum bands[2229] currently owned by O2 ("Target Spectrum Use Option") instead of the network capacity being provided through a Capacity Share of the Network. The Target Spectrum would be ring-fenced for the NEO's exclusive use.

(2635) The Target Spectrum Use Option would be available as of year [1-5] following the grant of the Network Interest and be subject to a number of conditions, including that (i) it can only be exercised with respect to the whole of the Target Spectrum; (ii) it can only be exercised if the NEO has an Elected Capacity Share for years [5-10] to [5-10] as described in recital (2626); (iii) the Elected Capacity Share on the basis of which the Ongoing Charges are being calculated would be the Target Spectrum downlink capacity (in MHz) as a proportion of the total Network spectrum downlink capacity (in MHz) in a given year; (iv) the provisions in relation to non-discriminatory access to all elements of the Network and in relation to service level equivalence would discontinue to apply.

(2636) Third, the Notifying Party commits to offer an option for one NEO to acquire O2 ("O2 UK Divestment Option"). The O2 UK Divestment Option can be exercised by the NEO within […] months following the grant of the Network Interest and would be subject to a number of conditions. The Notifying Party would procure that O2 is transferred to the NEO no later than […] months following the exercise of the O2 UK Divestment Option. If the NEO were to prefer to acquire a stake in Three instead, the Notifying Party commits to discuss this request in good faith.

(2637) The NEO would be obliged to offer a wholesale network access agreement for a maximum period of [1-5] years from the transfer of O2 to the NEO to facilitate the transfer of the Notifying Party's customers off the Network. The wholesale network access agreement would have to include satisfactory protections to ensure appropriate service levels and continuity and quality of service.

(2638) O2 would include the following assets ("O2 UK Retained Assets"): (i) 50% ownership in CTIL; (ii) all contractual interests and obligations of O2 in relation to the Beacon agreements; and (iii) all assets that enable O2 to satisfy their obligations in connection with the Beacon agreements, including 2G, 3G and 4G equipment,

[2229] […].

operational capability to run the O2 elements of the Beacon network and to benefit from that network as a whole, and the Target Spectrum as described under the Target Spectrum Use Option. The NEO would assume all rights and obligations related to the Beacon network.

(2639) The Target Spectrum would be sold to the NEO at fair market value. The remaining assets would be sold at book value.

(2640) Under certain circumstances the Notifying Party would have the right to re-acquire any part of the Target Spectrum.

(2641) In case of two NEOs, the Capacity Share of one NEO would be at least [10-20]%. The Target Spectrum Use Option and the O2 UK Divestment Option would have to be exercised by the NEO with the [10-20]% Network Interest. The Notifying Party can also decide to provide a Network Interest of only [10-20]% provided that the capacity based wholesale agreement offered to Tesco Mobile also extends to [10-20]% instead of [10-20]% of capacity. In both cases, the total capacity made available under the NEO Commitment and the Tesco Commitment would have to amount to [20-30]%. All remaining provisions related to the NEO Commitment would apply *mutatis mutandis*.[2230]

(2642) At the request of the NEO and subject to the approval of the monitoring trustee that would be appointed in the present case, the Notifying Party would provide the Network Interest to the NEO using air interface prioritisation such as 4G multi-operator core network ("MOCN") or equivalent functionality. Also in this case, all remaining provisions related to the NEO Commitment would apply *mutatis mutandis*.[2231]

(2643) Finally, the Notifying Party would have to find a NEO and enter into arrangements to grant the Network Interest to the NEO within the first divestiture period. Following that, a divestiture trustee would have mandate to enter into arrangements with a NEO within the trustee divestiture period.

9.3.3. Network Sharing Commitment

(2644) Under the Network Sharing Commitment the Notifying Party proposed to enter into a number of commitments related to the MBNL agreements on the one hand and the Beacon agreements on the other hand.

(2645) As regards the MBNL agreements, the Notifying Party commits, first, to offer to EE to clarify or, as necessary, amend the […] as far as the behaviour of Three and the decision making procedures within […] in relation to unilateral deployments are concerned. Second, the Notifying Party commits to offer to EE to implement a […] fast-track dispute resolution procedure aimed at facilitating unilateral network investments. Third, the Notifying Party commits to offer to EE to agree on a new business plan on the basis of the current business plan for the period from […] until […]. Fourth, the Notifying Party commits to offer to EE to […]. The Notifying Party commits to make an offer to EE (the "EE Offer") setting out the appropriate

[2230] The NEO Commitment contained in the First Commitments provided that the Notifying Party can decide whether to provide the Network Interest to one or two NEOs. In case of two NEOs, the Capacity Share would be divided equally between the two NEOs. The Target Spectrum Use Option and the O2 UK Divestment Option would have to be exercised jointly by the two NEOs. All remaining provisions related to the NEO Commitment would apply *mutatis mutandis*.

[2231] The NEO Commitment contained in the First Commitments did not contain this provision.

amendments to the MBNL agreements required to implement the changes listed in this paragraph. The EE Offer would be valid until […]. Finally, the Notifying Party commits to exercise its rights and fulfil its obligations under the MBNL agreements in good faith in order to comply with, rather than frustrate those agreements.

(2646) As regards the Beacon agreements, the Notifying Party commits, first, to complete the Beacon network by […] (unless Vodafone and the Notifying Party agree on a later date). Second, the Notifying Party commits to offer to Vodafone to […]. The term of those newly entered into agreements would run until […] unless Vodafone determines, at its absolute discretion, a shorter term. Third, the Notifying Party commits to offer to Vodafone the partitioning of the transmission of 4G traffic of the two companies (the "Transmission Option") as follows: (i) […]; (ii) O2 shall bear the cost incurred by Vodafone for such partitioning in the "West Region" and in the "South Region" up to a cap of GBP […]; and (iii) the Transmission Option shall be available until […]. The Notifying Party commits to make an offer to Vodafone (the "Vodafone Offer") setting out the appropriate amendments to the Beacon agreements required to implement the changes listed in this paragraph. The Vodafone Offer in relation to the option to […] would be valid until […]. The Vodafone Offer in relation to the option to partition transmission would be valid for […] from the date of closing. If Vodafone exercises the Transmission Option separately, it would be available until […] or, in case Vodafone does not accept the Vodafone offer, until […]. Finally, the Notifying Party commits to exercise its rights and fulfil its obligations under the Beacon agreements in good faith in order to comply with, rather than frustrate those agreements.

(2647) More generally, and related to both network sharing arrangements, the Notifying Party commits to (1) implement a certain network integration plan, which is a variation of the [Plan A], whereby the merged entity would commit to the Beacon grid and use around [5,000-10,000] additional MBNL sites; and (2) enhance information barriers in relation to MBNL and Beacon.

9.3.4. Wholesale Market Commitment

(2648) Under the Wholesale Market Commitment, with respect to MVNOs that, at the date of closing, have an MVNO agreement with either Three or O2, and such agreements do not yet include access to 4G services ("Existing MVNO"), the Notifying Party commits to offer to include 4G services on the same rates as charged for 3G services, that is to say, at no extra cost. 4G access would be implemented in accordance with an agreed implementation plan with reasonable implementation costs to be borne by the Existing MVNO. This commitment would be valid for a period of [5-10] years following the date of closing, unless the Notifying Party ceases to offer 4G services to its own end customers at an earlier date.

(2649) With respect to MVNOs which, at the date of closing, do not have an MVNO agreement with either Three or O2 ("New MVNO"), the Notifying Party commits to offer wholesale access (including 4G) to such New MVNOs. The terms and conditions would be benchmarked against the average of those offered by Three and O2 at the date of closing, taking into account the size and type of the MVNO, the type of products and services, volumes, prices, the commercial and operational model, as well as other relevant commercial terms. The benchmark would not include the terms offered to Tesco Mobile and to the NEO(s). Wholesale access would be implemented in accordance with an agreed implementation plan with reasonable implementation costs to be borne by the New MVNO. This commitment would be valid for a period of [5-10] years following the date of closing, unless the Notifying Party ceases to offer such technology to its own end customers at an earlier date. New MVNOs would only obtain wholesale access under this commitment if they make a minimum revenue commitment of GBP […] over a […] year term. The Notifying Party would furthermore not be obliged to grant wholesale access if this would lead to more than 50% of the capacity on the Network being committed to third parties.

9.4. Commission's assessment of the Second Commitments

9.4.1. Market test

9.4.1.1. Tesco Mobile Commitment

(2650) The vast majority of respondents consider that the likelihood of Tesco Mobile entering into the capacity based wholesale agreement as proposed under the Tesco Mobile Commitment depends on the actual terms of such agreement.[2232] […] provides a list of shortcomings in relation to the capacity agreement offered, including in relation to key commercial terms such as the amount of capacity and the pricing terms of such agreement […].[2233] As will be described in recitals (2651) to (2654), the majority of respondents consider that the terms of the capacity based wholesale agreement as proposed by the Notifying Party under the Tesco Mobile Commitment would not allow Tesco Mobile to compete effectively and are to some extent unclear and uncertain.

(2651) Respondents have different views on the maximum market share that Tesco Mobile could actually achieve under a capacity based wholesale agreement for [5-10]% of capacity of the Network. The figures for the *theoretically* achievable subscriber market share vary between 3% and approximately 13%, with a majority of respondents considering that Tesco Mobile could theoretically achieve a subscriber market share of between 5% and 8%.[2234]

(2652) As regards the market share that Tesco Mobile could *realistically* achieve over the term of the proposed capacity based wholesale agreement, responses can be summarised as follows: The market share that Tesco Mobile would be able to achieve after two years from launch would, at best, not be much higher than its current market share. Subscriber market share estimates range between 3% and 7%.[2235] […] submits that the [5-10]% Capacity Share as offered would not even allow Tesco Mobile to support its existing customer base.[2236] Estimates for the subscriber market share that Tesco Mobile could realistically achieve after 5 years range between 3% and 9%. A number of respondents clarify that the realistically achievable market share depends on a number of factors, including on whether or not Tesco Mobile would try to shift its customer focus from subscribers with low data usage to subscribers with higher data usage. If that were to be the case, the market share Tesco Mobile would realistically be able to achieve could be lower than if it

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2232 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 4; Questionnaire Q106 to national regulators of 18 March 2016, question 4; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 21 to 24 [ID5797].

2233 […].

2234 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 5; Questionnaire Q106 to national regulators of 18 March 2016, question 5; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 21 to 24 [ID5797].

2235 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 6; Questionnaire Q106 to national regulators of 18 March 2016, question 6; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 21 to 24 [ID5797].

2236 […].

were to continue focussing on subscribers with a lower data consumption.[2237] […]explains that the market share it could realistically achieve after five years on the basis of the proposed capacity based wholesale agreementwould amount to [5-10]% in terms of subscribers and would thus be lower than its current market share of [5-10]%.[2238]

(2653) Only a minority of respondents consider that the [5-10]% capacity offered on the Network would allow Tesco Mobile to grow in the short term or in the long term. The majority of respondents consider that this would either not be the case or that it is very doubtful that it would be the case.[2239] […] submits that the [5-10]% of capacity as offered would immediately constrain Tesco Mobile customers' consumption. […].[2240] […].

(2654) The vast majority of respondents do not consider it possible to forecast with a sufficient degree of accuracy how the total capacity of the Network and hence the [5-10]% share that would be made available to Tesco Mobile under the capacity based wholesale agreement would evolve. Respondents explain that this depends on a number of factors. Those factors include, on the one hand, the investments into the Network that would be made by the merged entity. Some respondents voiced concern that the merged entity might have incentives to focus its investments on the MBNL network rather than on the Beacon network.[2241] On the other hand, the development of capacity is also said to depend on how data consumption will evolve.[2242] In addition a number of respondents explain that further uncertainty as to how the capacity on the Network would develop stems from the fact that it is uncertain if the Target Spectrum Use Option and the O2 UK Divestment Option contained in the NEO Commitment would be exercised.[2243]

(2655) Finally […] considers that the current terms of the Tesco Mobile Commitment suffer from a number of shortcomings, including in relation to key commercial terms such as the amount of capacity offered under the capacity based wholesale agreement and the pricing terms of such agreement that […] (see also recital (2650)).[2244]

9.4.1.2. NEO Commitment

(2656) Respondents to the Market Test consider that a NEO would require a number of additional assets that are not currently included in the NEO Commitment to be able to operate on the market. The assets identified include, among others, a core network,

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2237 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 6; Questionnaire Q106 to national regulators of 18 March 2016, question 6; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 21 to 24 [ID5797].

2238 […].

2239 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 6; Questionnaire Q106 to national regulators of 18 March 2016, question 6; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 21 to 24 [ID5797].

2240 […].

2241 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 8; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 21 to 24 [ID5797]; […].

2242 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 8; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 21 to 24 [ID5797]; […].

2243 Responses to Questionnaire Q106 to national regulators of 18 March 2016, question 6; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 21 to 24 [ID5797].

2244 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 53; […].

a brand, a distribution network, a customer base, as well as business and customer support services.[2245]

(2657) Estimates vary as regards a realistic timeframe for a NEO to enter the market. Some respondents submit that the timeframe depends, among others, on the assets already available to a NEO. According to the respondents, a NEO would realistically be able to launch its services within one to three years.[2246]

(2658) The majority of respondents to the Market Test do not think that, considering that a NEO is offered a Capacity Share of O2's network subject to any limitations contained in national roaming or infrastructure (including site) sharing agreements with third parties, the NEO Commitment allows for an assessment of the amount of capacity that would be made available in actual terms for a given Capacity Share and how such capacity would evolve over time. Some of those respondents consider that the NEO Commitment would require detailed definitions and explanations on the capacity to be made available to a NEO. They also explain that the way in which the capacity develops would depend on how H3GI would integrate both networks and in particular, how it would deploy its spectrum assets post-Transaction.[2247]

(2659) In addition, the majority of respondents to the Market Test consider that certain parameters that form the basis for the measurement of the capacity to be made available are not sufficiently clear. This concerns in particular the concept of "realisable capacity" as described in Annex I to the Second Commitments and the question of whether or not realisable capacity includes spare capacity on the network.[2248]

(2660) The vast majority of respondents furthermore consider that it is uncertain whether sufficient assets would remain within the Network over time and whether sufficient investments would be made in it over time. Some of those respondents explain that they are concerned that H3GI would prioritise investments in the MBNL network and would shift assets away from the Network to the MBNL network. [2249] Similarly, the vast majority of respondents consider that, given that access for a NEO would only be granted to the O2 network, there is uncertainty whether a NEO would have access to a network that would allow it to compete effectively in the future.[2250] Some of the respondents suggest that the capacity should in any event be made available on the entirety of the merged entity’s network.[2251]

(2661) As regards the market share that a NEO can achieve over time with the Capacity Share as set out in the NEO Commitment, respondents to the Market Test have submitted the following.

2245 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 10; Questionnaire Q106 to national regulators of 18 March 2016, question 10; […].

2246 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 10; Questionnaire Q106 to national regulators of 18 March 2016, question 10; […].

2247 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, questions 11 and 13; Questionnaire Q106 to national regulators of 18 March 2016, questions 11 and 13; […].

2248 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 15; Questionnaire Q106 to national regulators of 18 March 2016, question 15; […].

2249 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 12; Questionnaire Q106 to national regulators of 18 March 2016, question 12; […].

2250 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 14; Questionnaire Q106 to national regulators of 18 March 2016, question 14; […].

2251 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 12; Questionnaire Q106 to national regulators of 18 March 2016, question 12; […].

(2662) First, as regards the *theoretical* subscriber market share that a NEO with a [10-20]% Capacity Share could achieve over time without becoming capacity constrained, answers vary greatly, ranging between 1% and 10% after year 1, between 3% and approximately 16% after year 5 and between 5% and 15% after year 10. A significant number of respondents explain that there are a lot of uncertainties involved as the market share that can theoretically be achieved depends, on the one hand, on the customers a NEO would target and, on the other hand, on how the capacity of the Network would evolve over time. Some of those respondents assume that due to underinvestment the capacity of the Network would not grow in the same way as that of the other MNOs is expected to grow and that, as a result and in light of growing data demand, the theoretical market share that a NEO could achieve would even decrease over time.[2252]

(2663) Second, as regards the market share that a NEO could *realistically* attain over time following commercial launch, fewer respondents provide an estimate and answers vary again greatly. They range between 3% and 8% two years after the commercial launch, although the majority of respondents providing an estimate consider the attainable share to be below 5%. Estimates range between 3% and 10% five years after the commercial launch although the majority of respondents providing an estimate consider the attainable share to be between 5% and 7%. Finally, estimates range between 5% and 12% ten years after the commercial launch. A majority of respondents submit that there are too many variables involved for them to be able to provide a concrete estimate.[2253]

(2664) A majority of respondents consider that a NEO would be incentivised to use the full Capacity Share of [10-20]% after year five. Nevertheless, some respondents submit that it is less certain if a NEO would continue to be incentivised to use the full Capacity Share also after year 10.[2254] One respondent, for instance states that it considers that "[t]*he reason that the Commitments include (1) a constant Gbps minimum commitment between […] and […] and (2) does not explicitly set a minimum capacity purchase obligation after […] is to provide NEO with flexibility. This approach creates the option for the NEO to consume less than [10-20]% of the Network Capacity from 2022 onwards*".[2255]

(2665) As regards the ability of a NEO to verify whether H3GI actually makes available the correct amount of capacity, only a minority of respondents consider that a NEO would actually be able to do so. The remaining respondents either consider that this is not possible or that it would depend on further clarifications or commitments on the part of H3GI with respect to the way in which capacity would be measured.[2256]

(2666) Responses as regards the way in which the cost structure of the Ongoing Charges would work are mixed. While slightly less than half of the respondents consider that this cost structure is sufficiently clear and capable of being effectively implemented and monitored, more than half of the respondents consider that that cost structure is

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2252 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 16; Questionnaire Q106 to national regulators of 18 March 2016, question 16; […].

2253 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 17; Questionnaire Q106 to national regulators of 18 March 2016, question 17; […].

2254 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 19; Questionnaire Q106 to national regulators of 18 March 2016, question 19; […].

2255 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 19.

2256 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 18; Questionnaire Q106 to national regulators of 18 March 2016, question 18; […].

not clear or that the calculation of the actual costs would to some extent depend on further clarifications and cooperation of H3GI.[2257]

(2667) Only a minority of respondents consider that a NEO would be able to effectively monitor the Ongoing Charges invoiced by H3GI. A considerable number of respondents explain that further clarifications should be made in the agreement a NEO concludes with H3GI or that further auditing or monitoring would be required.[2258]

(2668) Similarly, only a minority of respondents consider that a NEO could compete effectively on the basis of the proposed cost structure, including in the long run. A higher number of respondents say that this would not be possible. Others say that it is, at this stage, uncertain, as the cost structure is not clearly defined.[2259] One respondent, who considers a NEO could not compete effectively on the basis of the proposed cost structure, for instance explains that MNO's would always be more cost effective than a NEO using an MNO structure "*so by definition [the NEO] will incur higher running operating expenses*", and that "*the NEO will have to contribute to the ongoing capital maintenance but will not benefit from RoI*". Another respondent who considers a NEO could not compete effectively on the basis of the proposed cost structure for instance explains that "[t]*he NEO cost basis will be higher than the cost basis of other MNOs, due to return on capital and upfront fees, which will probably not allow NEO to have a sufficient margin*". Respondents who submit that it is uncertain whether a NEO would be able to compete on the basis of the proposed cost structure explain that the answer to this question depends on what the costs would amount to in absolute terms but that, at this stage, this is not sufficiently clear.[2260]

(2669) Only a minority of respondents consider that it is possible to devise agreements for the purchase of the Network Interest in such a way that they account for possible issues that could arise in the future in relation to the commercial terms and conditions for the NEO as set out in the Second Commitments. A higher number of respondents say that this would not be possible. Others say that, while this is not possible, future proofing mechanisms or dispute resolution mechanisms could be included so as to provide solutions for problems arising in the future.[2261]

(2670) As regards the ability and incentives of a NEO to differentiate its offerings from those of its host MNO, the merged entity, respondents consider the following.

(2671) Replies are mixed as regards the question whether the commitment to provide NEO customers with equivalent quality of service as non-NEO retail customers and the commitment to provide the NEO with non-discriminatory access to all elements of the Network and all current and future radio technologies, features and services as deployed in the Network are capable of being implemented and effectively

[2257] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 20; Questionnaire Q106 to national regulators of 18 March 2016, question 20; […].

[2258] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 21; Questionnaire Q106 to national regulators of 18 March 2016, question 21; […].

[2259] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, questions 22 and 23; Questionnaire Q106 to national regulators of 18 March 2016, questions 22 and 23; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraphs 18 to 20 [ID5797].

[2260] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, questions 22 and 23; Questionnaire Q106 to national regulators of 18 March 2016, questions 22 and 23.

[2261] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 24; Questionnaire Q106 to national regulators of 18 March 2016, question 24; […].

monitored. A slight majority considers that this is the case, although a considerable number of respondents reply "other", explaining that the answer to this question depends on whether or not relevant performance indicators and other criteria relevant for effective implementation and monitoring are sufficiently defined in advance.[2262]

(2672) The majority of respondents consider that, in light of the way in which the rules on network planning and investments are set up, the NEO would not be able to compete on quality and innovation.[2263] In particular, respondents explain that the NEO would be on par with the Notifying Party but it could not provide higher levels of service quality or innovation "*if this would be dependent on additional investment in the network or in new technologies, as Three alone will have the right to decide on both the operation of the network and investments in the Network*".[2264]

(2673) Moreover, the majority of respondents consider that a NEO would only be able to differentiate its offerings to a limited extent. Those respondents explain that differentiation is, for instance, possible at the level of the core network. However, the NEO would not be able to differentiate its offerings at the level of the RAN network, for instance in relation to coverage.[2265] In addition, the majority of respondents take the view that the NEO would likely require the technical cooperation of H3GI to implement any differentiation in the NEO's service offerings, in particular as regards features to be implemented outside of the NEO's core network.[2266]

(2674) As regards the likelihood of the NEO to request own investments that are not part of the technology and network roadmaps of the Notifying Party, the majority of respondents submit that it is unlikely for the NEO to do so.[2267] Those respondents explain, among others, that the procedure to implement own investments is burdensome for the NEO, the costs of such investments are very high and incentives for the Notifying Party to delay or frustrate investments requested by the NEO are high.[2268]

(2675) A number of respondents consider that the need for the Notifying Party to agree on appropriate safeguards to ensure adequate service to all customers and the absence of material adverse effects on the carriage of traffic over the network and the quality, coverage or availability of services being provided by H3GI or any other operator using the Network is appropriate and that it would not impact the relevant clause in the Second Commitments on the ability of the NEO to implement its investments. A slightly smaller number of customers consider that this is not the case while the remaining respondents reply "other".[2269]

2262 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, questions 25 and 26; Questionnaire Q106 to national regulators of 18 March 2016, questions 25 and 26; […].

2263 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 29; Questionnaire Q106 to national regulators of 18 March 2016, question 29; […].

2264 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 29.

2265 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 30; Questionnaire Q106 to national regulators of 18 March 2016, question 30; […].

2266 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 31; Questionnaire Q106 to national regulators of 18 March 2016, question 31; […].

2267 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 32; Questionnaire Q106 to national regulators of 18 March 2016, question 32; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, paragraph 32 [ID5797].

2268 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 32.

2269 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 28; Questionnaire Q106 to national regulators of 18 March 2016, question 28; […].

(2676) Moreover, the majority of respondents consider that the lack of influence on the merged entity's network roadmap and investment plans are an additional factor adding to the NEO's inability to be a viable competitor.[2270] One respondent, for instance explains that such a commitment "*which is entirely behavioural in nature, is insufficient for the NEO to be able to plan ahead and implement its own service enhancements. The NEO will be completely dependent on Three for the development of the network and the introduction of new technologies. It will therefore not be able to compete in the same way as an MNO which can independently develop its own network and service plans*".[2271]

(2677) The non-transferability of the Network Interest and the prohibition to resell capacity are considered to make the investment in a NEO less attractive by the majority of respondents.[2272] In relation to the non-transferability of the network interest those respondents explain that such limitations deprive the NEO from the commercial freedom an MNO has but also from the commercial freedom of a company that invests in an asset under free market conditions, explaining that the commercially most rational thing might be to sell the asset at any given point in time if it has increased sufficiently in value or if it turns out not to be viable. In realtion to the prohibition to resell capacity similar arguments are made, notably as regards the comparability of a NEO to an MNO. Moreover, respondents submit that reselling capacity is another possibility to fill capacity, which the NEO might have an incentive to do.[2273] A number of those respondents are also concerned about the right of first refusal for H3GI in case a NEO were to decide to sell its Network Interest after the initial [5-10] year term. They explain that this right of first refusal bears the risk that the effects of the NEO Commitment are made redundant as soon as the Network Interest is sold back to H3GI.[2274]

(2678) In relation to the Target Spectrum Use Option and the O2 UK Divestment Option, the majority of respondents to the Market Test consider it unlikely that any of those options would be exercised.[2275] The majority of respondents consider in particular that the Target Spectrum included in the two options is insufficient both in terms of the amount and the spectrum bands on which it is offered. Those respondents explain that, under the Target Spectrum Use Option, the amount and type of spectrum included might lead to the NEO having less capacity available than it would have if it were not to exercise the option and remain with the Capacity Share on the entirety of the Network.[2276] Respondents also explain that there is considerable uncertainty as to the value of the Target Spectrum Use Option as it is unclear how the merged entity

[2270] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 27; Questionnaire Q106 to national regulators of 18 March 2016, question 27; […].

[2271] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 27.

[2272] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 33; Questionnaire Q106 to national regulators of 18 March 2016, question 33; […].

[2273] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 33.

[2274] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 33; Questionnaire Q106 to national regulators of 18 March 2016, question 33; […].

[2275] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, questions 37 and 42; Questionnaire Q106 to national regulators of 18 March 2016, questions 37 and 42; […].

[2276] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, questions 34 and 38; Questionnaire Q106 to national regulators of 18 March 2016, questions 34 and 38; […]; CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, [ID5797], paragraphs 6, 7, 9 and 10.

would use its spectrum post-Transaction.[2277] Similarly, the majority of respondents consider that the Target Spectrum would not allow for the operation of a competitive network under the O2 UK Divestment Option, in particular because it would provide limited capacity and a low quality of service in comparison with MNOs which hold much larger spectrum portfolios.[2278]

(2679) In relation to the O2 UK Divestment Option, a number of respondents also submit that it is difficult to assess the viability of the option without further due diligence as regards the commitments and liabilities of O2 in relation to Beacon.[2279] In addition, one competitor is concerned about […].[2280] That competitor also submits that […].[2281]

(2680) The timeframe within which the NEO would have to decide whether or not to acquire O2 is considered to be much too short by the majority of respondents. Those respondents explain that, even if the NEO were to launch soon after entering into the agreement, exercising the O2 UK Divestment Option is a huge commitment and risk and […] months is too short a timeframe to assess all the risks. Also, the NEO might require more than […] months to transfer its customers to the O2 network or to launch its services and cannot therefore decide within […] months whether or not to exercise that option. [2282]

(2681) Six respondents expressed an interest in becoming a NEO. Out of those, two made it clear that they would only be interested in becoming the smaller of the up to two NEOs. Two other respondents explain that they would be interested provided that a number of shortcomings, including that limitations are applied to the Ongoing Charges and the ability to buy beyond the NEO's committed capacity at competitive rates, are addressed. When asked about the likelihood that they would exercise also the Target Spectrum Use Option or the O2 UK Divestment Option, two respondents consider it likely that they would exercise the Target Spectrum Use Option, and two consider it likely that they would exercise the O2 UK Divestment Option. One of those interested in the O2 UK Divestment Option, however, states that whether or not it would ultimately exercise that option would depend on the Notifying Party providing further clarifications as regards the commitments and liabilities of O2 in relation to Beacon.[2283]

(2682) Finally, during the proceedings several telecommunications operators expressed their interest to the Commission and to the Notifying Party in entering the mobile market in the United Kingdom as MNOs subject to appropriate commitments. In particular, […] and […] consistently stated their preference for entry as an MNO, as opposed to a NEO. Also, […] indicated interest in MNO entry.

a) […]

(2683) In the present case, throughout the proceedings […] expressed its preference to enter the mobile market in the United Kingdom as an MNO rather than a NEO.[2284] […]

2277 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 34; […].

2278 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 38.

2279 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 41.

2280 […].

2281 […].

2282 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 40; Questionnaire Q106 to national regulators of 18 March 2016, question 40; […].

2283 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, questions 50 to 52.

2284 […].

considered that a NEO, essentially being an MVNO, would not be in a position to compete effectively with MNOs and hence would be insufficient to restore effective competition post-Transaction. In […]'s view, the advantage of an MNO was in particular its ability to meet the fast growth in data consumption by providing large data packages at competitive prices, which MVNOs were not capable of doing sustainably.[2285]

(2684) As an alternative to a full independent MNO (for example, if there were spectrum constraints or RAN sharing complexities), […] considered it possible for the merged entity to offer the creation of […].[2286]

(2685) […] had been in contact with H3GI regarding the possible conclusion of an agreement for […] to enter the market in the United Kingdom since end of December 2015.[2287] In January 2016, H3GI informed […] that it was not interested in discussing MNO entry and that H3GI was in talks with a number of players in the United Kingdom regarding a capacity-based model.[2288] H3GI invited […] to consider such a capacity-based model instead of an MNO entry. […] stated to the Commission that they would be willing to consider such a model only if it included spectrum and sites, since […] would want to convert into an MNO over time.[2289]

(2686) […].[2290] […].[2291] […].[2292]

(2687) On 6 March 2016, […] replied to H3GI's term sheet with a *"non-binding expression of interest"*[2293] for the acquisition of the offered O2 assets and its position in Beacon. In its reply, […] wrote that it was "*extremely interested*" in negotiating with H3GI and that its "*clear preference [was] to enter into an agreement that would enable it to enter the United Kingdom mobile market as a new entrant network operator, i.e. the MNO Remedy*".[2294] […] also set out its key commercial terms under which it would be willing to enter into negotiations with H3GI. In particular, […] considered the transfer of […] MHz frequency proposed by H3GI to be insufficient and that at least […] MHz and preferably […] MHz of spectrum would be required for the new MNO to start operating. […],[2295] […]. No counter-proposals were made by H3GI. […].

(2688) […],[2296] H3GI informed the Commission that in light of […], discussions with […] on a potential MNO package had ended definitively.

b) […]

(2689) Similarly to […], throughout the proceedings […] expressed its interest in becoming an MNO based on remedies, rather than a NEO/MVNO.[2297] In […]'s view, an

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2285 […].
2286 *Ibid*.
2287 […].
2288 […].
2289 *Ibid*.
2290 […].
2291 […] [ID4849].
2292 […] [ID4980].
2293 […].
2294 *Ibid*.
2295 [ID5313-00023].
2296 [ID5851].
2297 […]indicated to H3GI that it was not interested in receiving the NEO proposal (e-mail from Freshfields to case team, 6 March 2016 […]).

MVNO would not be sufficient to restore competition following the Transaction. […]considered that an MVNO, regardless of its form, could not replace an MNO as a competitive constraint in the mobile market due to the inherent limitations of an MVNO, such as its limited ability to innovate, a higher cost structure, an agreement which would rapidly become outdated, and capacity challenges which restrict growth and potentially lead to higher consumer prices.[2298]

(2690) On 2 June 2015, before the Transaction was formally notified, […]approached the Commission to express its concerns regarding the negative impact of the Transaction on competition.[2299] […]considered the solution to lie in the entry of a "new mobile operator". […]listed very specific technical requirements for such an entrant, such as […], suggesting its interest in entry. […]confirmed its view regarding the need for entry of a fourth MNO to address the potential competitive harm in its letter to the Commission of 23 October 2015.[2300] […]further elaborated as to the details of its MNO entry plan in subsequent meetings and presentations to the Commission.[2301]

(2691) In parallel, […]was engaging with H3GI regarding its potential entry as an MNO, although unsuccessfully. […]'s contacts with H3GI began in December 2015 when on two occasions (8 December and 22 December 2015) […]presented its proposals for entry to H3GI but, according to […], "*on neither occasion did Hutchison want to engage in any meaningful discussions*".[2302] […]made a further presentation to H3GI on 23 February 2016 but again, according to […], there was no detailed discussion on the proposal and no offer from H3GI to meet in the future. […]repeated its invitations to meet with H3GI in its email of 29 February but there was no acceptance by H3GI.[2303]

(2692) On 6 March 2016, […]replied to H3GI's term sheet of 24 February 2016 regarding the proposed divestment of O2's assets and position in Beacon (see recital (2686)). In its reply, […]refrained from making an indicative offer based on the H3GI's proposal, indicating a number of key principles of the term sheet which were not acceptable to […]. […]also set out the main terms of its counter-proposal, which included in particular a transitional MVNO agreement, access to […] sites, […] network sharing, access to [..] MHz of spectrum, and roll-out of […] network by […]. […]offered H3GI to meet to discuss the key principles of its counter-proposal.[2304]

(2693) […].

(2694) On 14 March 2016, […]sent a letter to H3GI […] reiterating […]'s willingness to meet with H3GI to discuss a feasible MNO remedy including commercial terms.[2305]

(2695) […],[2306] […].

(2696) […]replied to H3GI on 15 March 2016,[2307] noting that no constructive discussions have taken place to try to bridge the gap and that it was clear that H3GI wished to

2298 […].
2299 […].
2300 [ID4012].
2301 […].
2302 […].
2303 *Ibid.*
2304 […].
2305 […].
2306 [ID5319].

consider only the H3GI's proposal. […]nevertheless stated that it remained open to further discussions regarding a possible MNO solution.

c) […]

(2697) […].

(2698) […].[2308] […].[2309]

(2699) […][2310] […].[2311]

(2700) […].[2312]

(2701) […].[2313] […].

d) UKB

(2702) For the sake of completeness, the Commisison notes that UKB expressed an interest in the entry based on a MOCN network sharing. Three and UKB subsequently signed a Letter of Intent to enter into a reciprocal 4G MOCN network access agreement, under which UKB would gain access to 5% of the O2 4G Network Capacity. The Commission's assessment of that arrangement and UKB's plans is set out in recitals (1131) to (1147).

9.4.1.3. Network Sharing Commitment

a) Commitment towards EE relating to MBNL

(2703) […].

(2704) […].[2314] […].[2315] […].[2316]

(2705) […].[2317] […].[2318] […].[2319]

(2706) […].[2320] […].[2321] […].[2322]

(2707) […].[2323] […].[2324] […].[2325]

(2708) […].[2326] […].[2327] […].[2328][…].[2329]

2307 […].
2308 […].
2309 […].
2310 […].
2311 […].
2312 […].
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2317 […].
2318 […].
2319 […].
2320 […].
2321 […].
2322 […].
2323 […].
2324 […].
2325 […].
2326 […].
2327 […].
2328 […].

(2709) […].[2330] […].[2331]

(2710) […].[2332]

(2711) […].[2333]

(2712) […].[2334]

(2713) […].[2335]

b) Commitment towards Vodafone relating to Beacon

(2714) […] submits that the Network Sharing Commitments does not address the competitive harm resulting from the Transaction, and does not meet the basic criteria of acceptability under the remedies notice.

(2715) According to […], the commitments provide for an uncertain behavioural remedy that, in light of the complex network sharing arrangements, is inadequate to prevent the serious competitive harm resulting from the Transaction. The behavioural remedy to complete Beacon would not give sufficient protection […] in relation to future investments in the network and would not resolve the fundamental misalignement of interests between the Beacon network sharing partners. The merged entity would straddle both Beacon and MBNL and have the ability and incentive to frustrate Beacon. […] states that this could only be resolved by a clear-cut structural commitment. A behavioural remedy would be impossible to enforce and therefore unacceptable under the Commission's remedy notice.[2336]

(2716) Furthermore, […] submits that the commitments do not address the fundamental misalignment of interests following the Transaction which would reduce the likelihood of network investments and result in less effective competition. […] suspects that the merged entity would want to transition its customers from Beacon to MBNL since […]. Therefore, Hutchison would have no incentive to invest in Beacon. […] underlines that an alignment between network sharing partners is essential of effective network sharing and that the outside option of the merged entity in the form of MBNL sites would cause a misalignment.[2337]

(2717) […] further argues that the NEO proposal would make the Network Sharing Commitment unworkable because it would create *"a further and fundamental uncertainty as regards investment in Beacon during the option period"*. Due to the limit spectrum holding of the NEO, the NEO would neither have an incentive to invest in Beacon should he exercise the O2 divestiture option.[2338]

(2718) […].[2339]

(2719) […].[2340]

2329 […].
2330 […].
2331 […].
2332 […].
2333 […].
2334 […].
2335 […].
2336 […].
2337 […].
2338 […].
2339 […].
2340 […].

(2720) […].[2341]

(2721) […].[2342]

c) Commitment in relation to certainty of network plans

(2722) […].[2343] […].[2344] […].[2345]

(2723) According to […], the committed network structure is entirely unclear. […].[2346]

(2724) […].[2347]

d) Commitment to enhance information barriers in relation to MBNL and Beacon

(2725) […].[2348] […].[2349] […].[2350]

(2726) […].[2351]

(2727) […].[2352]

9.4.1.4. Wholesale Market Commitment

(2728) The majority of respondents to the Market Test note that both commitments, that is to say the commitment to grant 4G access to Existing MVNOs, and the commitment to offer wholesale access to New MVNOs do not include future technologies such as 5G and are therefore of limited value, in particular in the medium to long term.[2353]

(2729) The pricing of 4G for Existing MVNOs (which would be at no extra cost compared to existing services) is considered to be unattractive by the majority of respondents. Those respondents explain that data usage will increase while the cost of producing data will decrease. As a result, under the usual unit pricing wholesale models, MVNOs would not be able to offer products that can compete with those of MNOs, in particular in relation to data.[2354]

(2730) The majority of respondents also consider that the pricing of wholesale access for New MNOs is considered to be uncompetitive. Those respondents explain that, given the terms would be benchmarked against existing terms, prices would not be competitive in the future as the overall cost of production is expected to decline. While MNOs would be able to reflect this in their retail pricing, MVNOs would not and would thus not be competitive vis-à-vis MNOs.[2355] In addition, the majority of

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2341 […].

2342 […].

2343 […].

2344 […].

2345 […].

2346 […].

2347 […].

2348 […].

2349 […].

2350 […].

2351 […].

2352 […].

2353 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, questions 45 and 48; Questionnaire Q106 to national regulators of 18 March 2016, questions 45 and 48; […].

2354 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 45; Questionnaire Q106 to national regulators of 18 March 2016, question 45; […].

2355 Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 47; Questionnaire Q106 to national regulators of 18 March 2016, question 47; […].

respondents considers that the terms of the benchmarking as set out in the Wholesale Market Commitment are unclear and thus difficult to implement and monitor.[2356]

9.4.1.5. Overall feedback on the Second Commitments

(2731) Overall, the majority of respondents to the Market Test, as well as the national competition authorities that have provided their comments do not consider that the Second Commitments address the competition concerns identified on the market for retail mobile telecommunications services stemming from (i) the elimination of competition between the Parties and (ii) the impact on EE and Vodafone and the market as a whole of the post-Transaction network sharing situation. The majority of respondents does not consider either that the Second Commitments address the competition concerns identified on the wholesale market for access and call origination on public mobile networks.[2357]

9.4.2. Commission's assessment

(2732) The Commission recalls that, to be acceptable, the overall result of any commitments must be sufficient to eliminate entirely the significant impediment of effective competition resulting from the Transaction. In the present case, the commitments need to eliminate the significant impediment of effective competition identified with respect to (i) horizontal non-coordinated effects on the market for retail mobile telecommunications services in the United Kingdom arising from the elimination of important competitive constraints as identified in Section 8.2.1; (ii) horizontal non-coordinated effects on the market for retail mobile telecommunications services in the United Kingdom arising from network sharing as identified in Section 8.2.2; and (iii) non-coordinated effects on the wholesale market for wholesale access and call origination on public mobile networks as identified in Section 8.3.

(2733) In the present case, and in light of the principles set out in the Remedies Notice, notably in Paragraph 15, 17 and 61 referred to in Section 9.1, the Commission considers that the extent and gravity of the identified competition concerns render it, for the reasons set out in this section, very unlikely that the Second Commitments, taken as a whole, would eliminate entirely the competition concerns resulting from the Transaction in all of the relevant markets in the United Kingdom identified in Section 7, and as summarised in recital (2732).

9.4.2.1. Tesco Mobile Commitment

(2734) In relation to the Tesco Mobile Commitment, the Commission acknowledges that the divestment of O2's 50% stake in Tesco Mobile could create an independent MVNO with approximately five million customers. However, given the uncertainties around the actual divestment as explained in recital (2735), the limited ability of non-MNOs to effectively constrain MNOs and the way in which the Tesco Mobile Commitment is devised, the Commission considers that the Tesco Mobile Commitment, even if taken together with the NEO Commitment, would not address the competition

[2356] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 46; Questionnaire Q106 to national regulators of 18 March 2016, question 46; […].

[2357] Responses to Questionnaire Q105 to non-MNOs of 18 March 2016, question 49; Questionnaire Q106 to national regulators of 18 March 2016, question 49; […], CMA, Submission to the European Commission on the Second Commitments, 29 March 2016, [ID5797], BKartA, Submission to the European Commission on the Second Commitments, 23 March 2016 [ID5629], ACM, Submission to the European Commission on the Second Commitments, 24 March 2016, [ID5754].

concerns raised by the Commission in Section 8.2.1 in their entirety and would not be comprehensive and effective from all points of view.[2358]

a) Divestment of O2's 50% stake in Tesco Mobile

(2735) The Commission considers that certain provisions of the Tesco Mobile Shareholders' Agreement create a considerable amount of uncertainty as to whether the Tesco Mobile Commitment would ever lead to the creation of an independent MVNO and thus, as argued by the Notifying Party, to the immediate divestment of 50% of the market share increment resulting from the Transaction. The Remedies Notice provides that "[s]*tructural commitments, in particular divestitures, proposed by the parties will meet these conditions only in so far as the Commission is able to conclude with the requisite degree of certainty that it will be possible to implement them* […]."[2359]

(2736) The divestment of O2's 50% stake in Tesco Mobile is not an upfront commitment, that is to say, the closing of the Transaction is not dependent upon the Notifying Party or the divestiture trustee finding a suitable purchaser. In line with the Commission's Remedies Notice, an upfront solution is often required in cases when there are doubts regarding the effective implementation of a commitment, for example due to considerable obstacles for a divestiture, such as third party rights.[2360] For the reasons set out in recitals (2737) to (2738), the Commission has doubts whether a divestiture of O2's 50% stake in Tesco Mobile would actually materialise in the present case.

(2737) The Tesco Mobile Shareholders' Agreement contains[…].[2361] In addition, […].[2362] Subject to the approvals provided for in the Second Commitments, an independent MVNO could be created if Tesco were to […]. However, given that, […][2363] […]. The Commitments, however, only require a divestment of 50% of the shares in Tesco Mobile. Therefore, O2 could, in line with the wording of the Second Commitments, divest 50% of its shares but would retain the remaining 50% that it would have acquired from Tesco as a result of […]. As a result, Tesco Mobile would not become an independent MVNO and, although O2 would have formally complied with it, the Tesco Mobile Commitment would become ineffective. Finally, if Tesco were […], it could still interfere in the sale of O2's stake in Tesco Mobile to a third party pursuant to the Second Commitments by […]. This would create additional uncertainty as to the divestment of O2's 50% stake in Tesco Mobile.

(2738) At this stage, it is unclear what […] will ultimately decide to do. In particular, the Commission notes that, […] (see recitals (2650) and (2655)).

(2739) Even if O2 were to manage to divest its 50% stake in Tesco Mobile, the impact of this divestment on competition, and in particular on predicted price increases, would

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2358 The Commission notes that, at the time of submission of the Second Commitments and at the time of the Market Test, the Notifying Party had not yet negotiated terms of a divestment of O2's 50% stake in Tesco Mobile as well as of a capacity based wholesale agreement with Tesco Mobile. Such term sheet was only formalised later and submitted to the Commission on 9 April 2016, following the formal submission of the Third Commitments (see Sections 9.5 and 9.6). This fact is thus only taken into account for the purposes of assessing the Third Commitments (see Section 9.6).

2359 See Remedies Notice, paragraph 10.

2360 See Remedies Notice, paragraphs 53-54.

2361 […].

2362 […].

2363 […].

be more limited than submitted by the Notifying Party. The Notifying Party argues that, according to the Commission's quantitative model in the Statement of Objections, a divestment of Tesco Mobile would reduce the overall price effects expected from the Transaction to around 1%.

(2740) The Commission considers that these calculations considerably overstate the competitive impact of the divestment of O2's 50% stake in Tesco Mobile. First, the scenario analysed by the Notifying Party regarding the divestment of O2's 50% stake in Tesco Mobile assumes that, post-divestment, Tesco Mobile would sustain a gross add share of [10-20]%, that is, it would have a similar impact on the market as Vodafone and O2 (who in the Notifying Party's model would have a gross add share of [10-20]% and [10-20]% respectively post-Transaction and post entry) and a larger impact than Three (gross add share of [10-20]% post-Transaction and post entry). The Notifying Party's claims about the impact on price of the Tesco Mobile divestment in the Commission's quantitative framework are hence based on the assumption that Tesco Mobile can attract a significantly greater share of gross adds than its current gross add share which requires that Tesco Mobile would have the incentive and the ability to significantly grow its subscriber based post-divestment.

(2741) The Commission considers this unrealistic. If Tesco Mobile enters into a wholesale agreement over [5-10]% of O2's network capacity, such capacity share would likely be insufficient for Tesco Mobile to significantly grow its subscriber base. This is explained further in Section 9.4.2.1.b. As the Notifying Party's modelling of the impact of a divestment of Tesco Mobile is based on the assumption that Tesco Mobile could grow subscriber share significantly, this, in itself, invalidates the Notifying Party's modelling.

(2742) If Tesco Mobile entered […]. The Notifying Party's modelling of the impact of the Tesco Mobile commitment can also not capture the effect an independent Tesco Mobile that does not enter into a capacity based MVNO contract. The Notifying Party's modelling of the Tesco Mobile divestment under the Second Commitment hence significantly overstates the impact on price of such a divestment and hence cannot be relied upon.

(2743) In addition, the proposed modelling by the Notifying Party assumes that Tesco Mobile and the NEO(s) would become competitors with the same ability and incentives to compete as MNOs. For the reasons set out in recitals (2744) to (2755) in relation to Tesco Mobile and in Section 9.4.2.2 in relation to the NEO(s), the Commission does not consider that Tesco Mobile and the NEO(s) would, in fact, have the same ability and incentives to compete as an MNO.

b) Wholesale agreement

(2744) Even if Tesco Mobile were to enter into a capacity based wholesale agreement with the Notifying Party on commercially acceptable terms, including sufficient capacity for Tesco Mobile to grow its market share, the Commission considers, based on the replies received during the Market Test, that the Tesco Mobile Commitment, even if taken together with the NEO Commitment, would not address the competition concerns raised by the Commission in Section 8.2.1 in their entirety and would not be comprehensive and effective from all points of view.

(2745) Tesco Mobile would operate on the market as an MVNO and would thus have even less ability to differentiate itself from, and to compete with, the merged entity than the NEO(s) as, for example, Tesco Mobile would have even fewer options than the NEO(s) to potentially differentiate their offering from that of the Notifying Party. As a result, the same considerations developed in Section 9.4.2.2 as to why the NEO(s) would not be effective competitor(s) post-Transaction apply, even more pertinently, to Tesco Mobile.

(2746) As regards the capacity based wholesale agreement offered to Tesco Mobile, the Notifying Party submits that this agreement would lead to an increased ability and incentive for Tesco Mobile to compete and that Tesco Mobile is well placed to become an important competitive force on the market which is and would continue to be a close competitor to Three.

(2747) In this respect the Commission considers, at the outset, that, while the qualitative evidence on closeness of competition presented in Section 8.2.1.2.a(i) shows that Three competes closely with Tesco Mobile, the quantitative evidence presented in the same Section shows that, in the postpaid private segment,[2364] the diversion ratios from Three to Tesco Mobile, as well as the diversion ratios from O2 to Tesco Mobile, are limited to [0-10]% (see Figure 37). Moreover, Tesco Mobile's ability to compete effectively for value for money customers mainly depends on […] its parent company O2.

(2748) In any event, the Commission notes that this part of the Tesco Mobile Commitment is merely an offer and there is no certainty that the offer would be taken up. Moreover, a majority of respondents to the Market Test raised concerns as to the difficulty involved in implementing the capacity based wholesale agreement offered to Tesco Mobile in any event (see recital (2650)). As such, the Commission considers that it is not sufficiently likely that this part of the Tesco Mobile Commitment would be implemented for it to be taken into account in assessing whether the Second Commitments would remove the competition concerns in this case entirely, comprehensively and effectively. Indeed, first, Tesco Mobile may decide not to enter into a capacity based wholesale agreement with the Notifying Party. It may prefer to enter into a price-per-unit wholesale agreement similar to those currently in place between MNOs and most of their wholesale partners in the United Kingdom, either with the Notifying Party or with another MNO. As a result, this part of the Tesco Mobile Commitment would already be deprived of its effectiveness if Tesco Mobile were not to accept an offer for a capacity based wholesale agreement for [5-10]% of the capacity of the Network. The effects would be even more detrimental if Tesco Mobile were not to accept an offer for a capacity based wholesale agreement for [10-20]% of the capacity of the Network (in the scenario provided for in paragraph 27(b) of the Second Commitments) as it would go in line with only one NEO with a Capacity Share of only [10-20]% instead of up to two NEO(s) with an overall Capacity Share of [15-25]%.

(2749) Second, as the Second Commitments only require the Notifying Party to make an offer to Tesco Mobile, the Notifying Party could formally respect this commitment, while, at the same time avoiding actually having to enter into a capacity based wholesale agreement by deciding to offer economic and commercial terms to Tesco Mobile that are so unfavourable that Tesco Mobile would not accept such offer. Indeed, the prices for the capacity that would be made available are only defined as minimum prices. In the first [1-5] years, the fixed annual fee would be no less than the total sums paid or payable by Tesco Mobile to O2 for wholesale access services in the 12 month period preceding these [1-5] years. Afterwards, the annual fee would be no less than that which would be payable in accordance with the pricing principles

[2364] Postpaid service is the largest and growing segment in the market, see Figure 17.

applicable to the Elected Capacity Share of the NEO. A minimum price for a unilateral offer provides no certainty of acceptable terms. This means that any offer containing higher prices, even if those prices were set artificially high with a view to induce Tesco Mobile to reject the offer, would be in line with the Tesco Mobile Commitment.

(2750) Third, the Notifying Party would not have to make an offer for a capacity based wholesale agreement at all. According to clauses 13 the Notifying Party would be deemed to have complied with the commitment to offer a capacity deal when Tesco enters into the agreement or when the offer lapses according to paragraph 9. Paragraph 9 of the Second Commitments states that the wholesale offer to Tesco remains open until the Notifying Party has entered into an agreement to divest its share in Tesco. Paragraph 82 reiterates that the obligation to offer a capacity deal shall be deemed to be fulfilled in accordance with paragraph 13 only and that the divestiture trustee shall have no mandate to offer a capacity agreement to Tesco Mobile. Therefore, the Notifying Party would be deemed to have complied with the Tesco Mobile Commitment the moment it enters into an agreement to divest its 50% stake in Tesco Mobile – irrespective of whether such an offer has actually been made.

(2751) The Commission notes that this clause is already triggered the moment the Notifying Party enters into an agreement to divest Tesco Mobile. An approval of the purchaser or the actual transfer of shares is not required. In theory, nothing would prevent the Notifying Party from entering into such an agreement immediately after the Commission approves the Transaction. In such case, the Notifying Party would be deemed to have complied with its obligation to offer a capacity deal.

(2752) As regards the subscriber market share that would be achieved by Tesco Mobile, the Notifying Party argues that the Capacity Share offered would allow Tesco Mobile to serve very substantial shares of subscribers in the United Kingdom. According to the Notifying Party, Tesco Mobile would be able to reach a subscriber market share of at least [5-10]% and likely significantly more.

(2753) The Commission considers these figures to be misleading. As set out in recitals (2652) and (2653), the majority of respondents, and in particular […], consider that Tesco Mobile would not be able to grow significantly beyond its current size in the long term and would become capacity constrained in the short to medium term. Moreover, the Commission considers that it is implausible that a [5-10]% share of the capacity of the Network would allow Tesco Mobile to obtain a subscriber market share of [10-20]% or more. The Notifying Party derives those figures by extrapolating the capacity which Tesco Mobile would require in […] from the capacity required by subscribers with the current usage profile of O2 customers. Such a comparison is not meaningful in a market where data usage has grown by approximately 70%[2365] per year in the recent past and is expected to continue growing very significantly in the future.

(2754) The Commission sets out in Section 9.6.1.2.c what it considers to be a more reasonable proxy for the market share that can be reached by Tesco Mobile under the capacity offered in the Third set of Commitments. The Commission also concludes that under the Third set of Commitments Tesco Mobile would have at best limited

[2365] According to Figure 64 of the Ofcom Infrastructure Report 2014, usage per active connection has grown from 0.11 GB in 2011 to 0.53 GB in 2014, a Compounded Annual Growth Rate of 69%.

potential to grow its subscriber share. A fortiori, the Commission considers that under the capacity offered with the Second set of Commitments Tesco Mobile would likely not be able to grow beyond its current market share.

(2755) As regards the clarity of the terms of the capacity based wholesale agreement offered under the Tesco Mobile Commitment, the Commission considers that, in light of the replies received during the Market Test, those terms are to a large extent not specified and to the extent they are, they are to a large extent uncertain. In particular, as also put forward by the vast majority of respondents to the Market Test, it is uncertain how the capacity on the Network would evolve and what, thus, the [5-10]% capacity offered to Tesco Mobile would account for throughout the term of the agreement. It is therefore, at best, uncertain if Tesco Mobile would be able to compete aggressively on the basis of the wholesale agreement offered by the Notifying Party.

9.4.2.2. NEO Commitment

(2756) In light of the responses to the Market Test and for the reasons set out in recitals (2757) to (2785), the Commission considers that the NEO Commitment suffers from a number of shortcomings and, even if taken together with the Tesco Mobile Commitment, would not address the competition concerns raised by the Commission in Sections 8.2.1 and 8.3.1 in their entirety and would not be comprehensive and effective from all points of view.

a) Network Interest

(2757) First, under the Network Interest, the NEO(s) would be commercially and technically dependent on the host MNO on a long term basis. As explained below, such dependency limits the extent to which the NEO(s) are able to exercise an effective competitive constraint on other market participants and, in particular, the MNOs.

(2758) As regards the commercial dependence of a NEO on H3GI, the Commission notes that, as set out in recital (2776), access to the merged entity's network is to some extent cost-based in that a NEO would have to co-finance the Network on a pro rata basis without, however, being able to influence decisions on network investments. A NEO would be dependent on the merged entity being able to correctly identify the real cost attributable to that NEO, which is a very complex exercise presenting very challenging issues similar to those encountered, for example, by telecom regulators when having to identify the relevant costs for the purpose of regulating access to fixed infrastructure. In light of these complexities, the Commission considers that there is a risk that the Notifying Party would not be able to correctly identify the real cost attributable to a NEO and that, in addition, that NEO would not have any possibility to assess whether it has been overcharged. The NEO is thus at the mercy of the Notifying Party in terms of invoicing the correct amount of Ongoing Charges.

(2759) A NEO's dependency on the investment decisions of H3GI might influence a NEO's decision as to the Capacity Share it would elect to utilize over time and thus distinguish the ability and incentive of a NEO to compete from that of an MNO. Indeed, a NEO would not only be required to reimburse H3GI for the costs for the capacity that it intends to utilise, but would also have to pay an undefined return on investment. As the undefined return on capital can be set significantly higher than the cost of capital of an MNO, the NEO may find itself at a significant cost disadvantage (and hence competitive disadvantage) relative to H3GI that can always invest into capacity and get access to it at cost.

(2760) As regards the technical dependence of a NEO on H3GI, the Commission notes that the NEO Commitment subjects a number of technical parameters under which a NEO could potentially compete with Three going forward, including the launch of new products, investments, or the roll-out of an own radio access network to the technical control of Three, which would have to agree to them and is entitled not to do so if they are likely to have an adverse impact on the services provided by the merged entity to other wholesale or retail customers. Therefore, a NEO's ability to differentiate would likely be limited.

(2761) Second, a NEO would only have access to the O2 network, not to the entire merged entity's network, which may have repercussions on the future developments of the NEO(s) depending on how the merged entity ultimately decides to consolidate the networks of Three and O2. For example, as has also been submitted by respondents to the market investigation (see recital (2660)), if the merged entity decided to mainly rely on the network of Three and use the O2 network only for additional capacity, the latter network may over time become less competitive and potentially even obsolete.

(2762) Third, the Notifying Party argues that, based on the ability of a NEO to grow its market share, it can be expected that that NEO would be an important competitive force in the United Kingdom and thus address the concerns raised in the Statement of Objections. The Notifying Party states that the Commission considered Tesco Mobile to be an important competitor with a [0-5]% market share and Three to be an important competitive force with a [5-10]% market share. Similarly, the Commission concluded in case M.6992 – *Hutchison 3G UK / Telefónica Ireland* that a new entrant with a market share potential of 8-15% was sufficient to create effective competition on a market with three MNOs. In case M.7018 – *Telefónica Deutschland / E-Plus*, the Commission concluded that a 10.5% market share potential was sufficient.[2366]

(2763) The Commission takes the view that the notion of an important competitive force cannot be reduced to the market share of the player concerned. As set out in further detail above, in light of its cost structure and dependency on the merged entity, a NEO would likely not be able to exercise a meaningful competitive constraint on the remaining three MNOs.

(2764) As regards the subscriber market share to be achieved by a NEO, the Notifying Party argues, as explained in recital (2752), that the Capacity Share offered would allow Tesco Mobile and the NEO to serve very substantial shares of subscribers in the United Kingdom. According to the Notifying Party, the NEO(s) could reach a subscriber market share of [20-30] to [60-70]%, while Tesco Mobile would be able to reach a subscriber market share of at least [10-20]% and likely significantly more.

(2765) As explained in recitals (2753) to (2754), in the light of the replies received during the Market Test, the Commission considers these subscriber market shares to be misleading and to be significantly overestimated. It is implausible that a [10-20]% share of the capacity of the Network would allow the NEO(s) to obtain a subscriber market share of [20-30] to [60-70]%. The Notifying Party derives those figures by comparing the Capacity Share which the NEO and Tesco Mobile would obtain in […] with the current usage profile of O2 customers. Such a comparison is not

[2366] Form RM dated 15 March 2016, paragraphs 106 to 109.

meaningful in a market where data usage has grown by approximately 70%[2367] per year in the recent past and is expected to continue growing very significantly in the future.

(2766) As explained in recital (2773), the capacity made available to the NEO under the Second Commitments is not clearly defined, and several market participants expressed doubts as to how this capacity would evolve over time (see recital (2658)). Given this uncertainty, the Commission considers that a more reasonable proxy for the maximum subscriber market share that Tesco Mobile and the NEO could achieve would be O2's current capacity and the current usage profile of subscribers hosted on O2's network.

(2767) At present, O2's network is dimensioned to serve approximately [30-40]% of subscribers in the United Kingdom, including subscribers of MVNOs hosted on O2's network. The Capacity Share of [10-20]% would therefore allow the NEO to serve a maximum share of subscribers of approximately [5-10]%.[2368]

(2768) Fourth, the Commission notes that the Notifying Party's modelling of the impact of the NEO(s) is merely based on assumptions rather than on facts. It also presupposes that the NEO would be able to compete on a par with an MNO which the Commission considers to be unlikely in light of the issues discussed in recitals (2757) to (2762). The Notifying Party's modelling of the impact of the NEO Commitment is discussed in more detail in Section 9.6.2.2.f.

(2769) Fifth, whether the NEO could grow quickly from a commercial perspective is questionable based on the experience with entry in the past. While O2 has introduced 'giffgaff' as a second brand in 2009, this brand still only has a market share of around [0-5]%. Three entered as an MNO in 2003 and has reached a market share of only approximately [10-20]% in the first half of 2015. Tesco Mobile, which launched as a joint venture between O2 and Tesco in 2003, reached a market share of around [5-10]% in the first half of 2015, namely after 12 years.[2369] Therefore, even brands that were launched by MNOs or in a joint venture with MNOs have experienced limited growth. Moreover, Virgin Media, who launched as MVNO in 1999 has also grown slowly only reaching a market share of around [0-5]% today.

(2770) Sixth, the Commission notes that the Network Interest is non-transferrable for a period of [5-10] years. Thereafter, a NEO can transfer its interest to a third party subject to a right of first refusal by the Notifying Party. Contrary to the views expressed by respondents to the Market Test, the Commission considers that the non-transferability for a period of [5-10] years provides at least a certain guarantee that a NEO, whatever its size, would operate on the market. The Commission, however, agrees with those respondents to the Market Test who consider that a right of first refusal of the Notifying Party can essentially render the effects of the NEO Commitment moot. Indeed, if H3GI were to reacquire the Network Interest, the NEO Commitment would be undone.

2367 According to Figure 64 of the Ofcom Infrastructure Report 2014, usage per active connection has grown from 0.11 GB in 2011 to 0.53 GB in 2014, a Compounded Annual Growth Rate of 69%.

2368 At present, O2's network is dimensioned to serve approximately [30-40]% of subscribers in the United Kingdom, including subscribers of MVNOs hosted on O2's network. [10-20]% of O2's current capacity would hence allow serving [5-10]% of subscribers at the average usage profile of subscribers hosted on O2's network.

2369 In its comments on the non-confidential summary of the Statement of Objections, […] notes that "*[…]* [ID4800], paragraph 2.2.

(2771) Finally, as also submitted by respondents during the Market Test, it is very difficult to future proof the terms of a NEO. For example, the possibility that a NEO varies in size over time makes the calculation of its cost over time very complex. Moreover, it is unknown how the mobile telecoms markets in the United Kingdom would develop in the long run. In particular, it is impossible to address, once and for all, all issues that might potentially come up in the future in an agreement to be concluded between the Notifying Party and a NEO and that would be subject to approval by the Commission.

(2772) In any event, the Commission considers that many elements of the NEO Commitment as far as the Network Interest is concerned are either optional or not defined sufficiently to enable the Commission to determine whether a NEO could be able to operate viably and compete effectively for retail customers in the short, medium and long term.

(2773) Indeed, based on the replies received during the Market Test, the Commission considers that there is uncertainty as regards the actual amount of capacity that would be made available to a NEO over time. Key parameters on which the calculation of the capacity would be based, such as for instance the concept of "realisable capacity" as set out in Annex I to the Second Commitments are not clearly defined. This makes it very difficult to monitor whether the merged entity complies with this commitment, because in order to compute how much capacity would need to be provided to the NEO it is necessary to identify how much realisable capacity the merged entity has at a given point in time. In the absence of a definition of "realisable capacity" which would allow to objectively measure the available capacity, it appears impossible to scutinize whether the "realisable capacity" at a given point in time accurately reflects the network capacity that could be used in practice. To the extent the realisable capacity were to be set below the truly available network capacity, this implies that the share of the available network capacity to which the NEO would have access in practice would be below the notional Elected Capacity Share. In this context the Commission notes that Figure 7 of the Second Commitments only presents the "indicative planned Realisable Capacity of the Network", that is, it provides no certainty that these values would be actually achieved.

(2774) Also, it is uncertain how the capacity of the Network would evolve over time. As pointed out by the majority of respondents to the Market Test, the way in which the Network would evolve does not only depend on external factors such as growing demand for data, but first and foremost on how H3GI decides to develop the Network post-Transaction. It is, at best, uncertain what assets would remain in the network and what the incentives of H3GI in terms of network investments would be. The Commission considers that there is a possibility that H3GI could shift assets, including spectrum, to the MBNL network and that it could decide to invest less into the Network as opposed to the MBNL network to which it would migrate the O2 customers over time. As will be explained further in Section 9.4.2.3, this uncertainty is not mitigated by the commitment of H3GI to the Beacon network under the Network Sharing Commitment. The Network Sharing Commitment as regards the Beacon network is an offer, as set out in Section 9.4.2.3, it is not sufficiently likely that the offer would be taken up by Vodafone for the Commission to be able to take this element into account in assessing whether the Second Commitments, taken as a whole, would remove the competition concerns in this case entirely, comprehensively and effectively.

(2775) There is also a significant uncertainty as to the future capacity of the NEO(s). Indeed, there is no guarantee that a NEO(s) would actually obtain the full [10-20]% Capacity Share other than during […]. Before and after that date, the available Capacity Share can be significantly lower and a NEO's share in the long term can fade into insignificance. Indeed, the NEO Commitment would allow a NEO to stay with what amounted to [10-20]% of the capacity of the network during the […] until the end of year [5-10] even if the overall network were to grow. As of year [10-15], that NEO would even be free to agree with H3GI on any minimum Capacity Share that it would deem appropriate. This could, for instance, also be 1%. The same applies in the case of two NEOs for the larger NEO. The smaller of the NEOs may well achieve its share of up to [5-10]% but given that it would likely be a very small player, its competitive impact on the market would be minimal in any event.

(2776) In addition, also the cost structure of the Ongoing Charges is unclear. In light of the replies received during the Market Test, the Commission considers that the Second Commitments do not contain any clear definitions as regards the exact allocation of the cost to be paid by a NEO. Moreover, the Second Commitments stipulate that the pro rata share attributable to a NEO would be at least equivalent to the Elected Capacity Share. The share could thus also be higher and it is uncertain if and where it would be capped. Also, Ongoing Charges as described in the NEO Commitment are subject to a return on capital which is not further defined and could thus be anything, including prohibitively high, so as to incentivise a NEO not to make use of the entire [10-20]% of its Capacity Share over time (see also recital (2775)).

(2777) Furthermore, in addition to the Target Spectrum Use Option and the O2 UK Divestment Option, a number of other elements offered to the NEO(s) are equally optional. Those elements include notably the possibility of a NEO to opt for a so-called MOCN solution, to carry out investments in the network at its own cost, and to build its own supplemental network. In light of the replies received during the market test (see Section 9.4.1.2), the Commission considers that it is unlikely that these options would be exercised and therefore the Commission is not able to take them into account when assessing whether the Second Commitments address the competition concerns to the requisite legal standard.

b) Target Spectrum Use Option

(2778) The Commission notes, at the outset, that the Target Spectrum Use Option is merely an option and the majority of respondents to the Market Test consider it unlikely that a NEO would exercise it. Even out of those six respondents who expressed interest in becoming a NEO, only two submitted that they would also exercise the Target Spectrum Use Option. The Commission also notes that […], one of the parties interested in becoming the NEO and taking up this option, has submitted its reply to a large extent based on […]. Strictly speaking, […] has therefore not assessed the Second Commitments as they were presented during the Market Test. In light of the responses to the Market Test, therefore, the Commission considers that it is unlikely that the Target Spectrum Use Option would be exercised and therefore the Commission is not able to take it into account in the assessment of whether the Second Commitments, as a whole, would remove the competition concerns in this case entirely and with the requisite degree of certainty.

(2779) In any event, even if a NEO were to exercise the Target Spectrum Use Option, the Commission considers that that NEO would not become a more important competitor if it were to provide its retail mobile telecommunications services to customers over the Target Spectrum as opposed to over the Network Interest.

(2780) In light of the replies received during the Market Test, the Commission considers that the Target Spectrum is insufficient to allow a NEO to exercise competitive constraints on the MNOs present on the market, in particular as regards data services. The Commission recalls that some respondents were concerned that a NEO operating under the Target Spectrum Use Option might even have less capacity available than a NEO operating under the [10-20]% Capacity Share (see recital (2678)). Moreover, until a NEO would be able to exercise the Target Spectrum Use Option, the merged entity could decide to re-farm some of the Target Spectrum to the detriment of that NEO. Alternatively, the NEO might have to re-farm or re-deploy some of the Target Spectrum in order to be able to maximise its capacity. This exercise would be time consuming and, given that the NEO would not be able to use the Target Spectrum in the way it considers to be most efficient until the re-farming process is completed, the exercise would reduce its ability to compete.

(2781) Moreover, and despite the concerns expressed in recital (2780), the Commission notes that under the Target Spectrum Use Option, the Ongoing Charges would be calculated on a pro rata basis comparing the Target Spectrum downlink capacity to the total Network spectrum downlink capacity. The Ongoing Charges depend on the percentage of the overall downlink capacity that the Target Spectrum downlink capacity accounts for. As the NEO does not control the overall downlink capacity of the merged entity, the NEO cannot assess ex-ante what it would pay in terms of Ongoing Charges. This uncertainty further reduces the likelihood that the Target Spectrum Use Option would be exercised.

c) O2 UK Divestment Option

(2782) The Commission notes that, like the Target Spectrum use Option, the O2 UK Divestment Option is merely an option and the majority of respondents to the Market Test consider it unlikely that a NEO would exercise it. Even out of those six respondents who expressed interest, only three submitted that they would also exercise the O2 UK Divestment Option and one of them made it conditional upon obtaining further information about the commitments and liabilities of O2 in relation to Beacon. The Commission also notes that […], one of the parties interested in becoming the NEO and taking up this option, has submitted its reply to a large extent based on […]. Strictly speaking, […] has therefore not assessed the Second Commitments as they were presented during the Market Test. In light of the responses to the Market Test, therefore, the Commission considers that it is unlikely that the O2 UK Divestment Option would be exercised and therefore the Commission is not able to take it into account in the assessment of whether the Second Commitments, as a whole, would remove the competition concerns in this case entirely and with the requisite degree of certainty.

(2783) In any event, even if a NEO were to exercise the O2 UK Divestment Option, the Commission considers that that NEO would not be able to exercise an effective competitive constraint on other market participants and, in particular, the MNOs.

(2784) In particular, in light of the replies received during the Market Test, the Commission considers that the Target Spectrum is insufficient to allow a NEO to exercise competitive constraints on the MNOs present on the market, in particular as regards data services because the spectrum assets included would not allow the NEO to build up sufficient network capacity.

(2785) Finally, a NEO would have to exercise the O2 UK Divestment Option within […] months following the grant of the Network Interest. According to the Second Commitments, the grant occurs at the latest at the end of the trustee divestiture period by concluding an agreement with a NEO. The grant does thus not coincide with the actual commercial launch of the NEO. Based on the replies received during the Market Test, the Commission notes that, depending on the NEO, the launch may take between one and three years. It is thus possible that the NEO would have to decide to exercise the O2 UK Divestment Option even prior to launching its services under the Network Interest and, if the commercial launch were to occur more than [1-5] years after the grant of the Network Interest, H3GI would even have had to transfer O2 to that NEO prior to its commercial launch. In light of that, the Commission considers that the time period for a NEO to decide whether or not the O2 UK Divestment Option should be exercised is too short and would even further decrease the likelihood of a NEO to exercise that option.

9.4.2.3. Network Sharing Commitment

(2786) In light of the responses to the Market Test, the Commission considers that the Network Sharing Commitment does not address the competition concerns raised by the Commission in Section 8.2.2 in their entirety and would not be comprehensive and effective from all points of view, for the following reasons.

(2787) The Commission considers that the Network Sharing Commitment in particular does not effectively address the key concern identified in this Decision that the misalignment of interests between the merged entity and its network sharing partners would significantly increase as a result of being part of both Beacon and MBNL. As such, the merged entity would no longer be fully committed to either network sharing agreement to the detriment of the respective network sharing partner. It would not have the same incentives to develop MBNL as absent the Transaction because it would have access to the Beacon sites and vice-versa.

a) Uncertainties as to the network sharing situation remain

(2788) As discussed in Section 8.2.2.4 d) v), unless the final network sharing situation resulting from the Transaction becomes clear, the network sharing partners would have fewer incentives to invest in their networks. As both BT/EE and Vodafone would be incentivised to wait for the long-term outcome of the network sharing situation before undertaking significant investments, uncertainty would likely lead to lower industry-wide investments.

(2789) The Network Sharing Commitment does not address the uncertainty resulting from the post Transaction network sharing situation, as there is no guarantee that either EE or Vodafone would accept the Notifying Party's offer it committed to make under the Network Sharing Commitment. To the contrary, based on the results of the market test, it appears quite likely that Vodafone and BT/EE would not accept such offers.[2370] In other words, the Notifying Party would have complied with the Network Sharing Commitment by making to each of BT/EE and Vodafone offers that are highly unlikely to be accepted. This clearly shows the ineffectiveness of this commitment and its inability to address the uncertainty described above.

(2790) Moreover, on the Vodafone side, even if Vodafone were to decide to accept the Vodafone Offer and continue […], the NEO may decide to exercise the O2 UK Divestment Option and acquire O2's stake in Beacon. In that case the merged entity would no longer be part of Beacon, but probably of MBNL, and Vodafone may find

[2370] See Section (2682).

itself with a new network sharing partner, which it has not chosen. The consequences of that would, again, be uncertain.

(2791) In addition, the commitments relating to the consolidated network do not provide sufficient certainty on the future network of the merged entity. While the Notifying Party proposes to commit to continue using […] CTIL sites and at least […] MBNL sites as described in Three's [Plan A], this commitment is subject to "*the other Commitments*" which includes the O2 UK Divestment Option for the NEO. If the NEO were to exercise this option, the commitment to use […] Beacon sites would be rendered meaningless. As such, this part of the Network Sharing Commitment is internally inconsistent with the O2 UK Divestment Option included in the NEO Commitment. BT/EE and Vodafone would be unable to rely on the limited commitments regarding the future network sharing situation for as long as the O2 UK Divestment Option can be exercised.

(2792) Finally, the doubts mentioned in recital (2797) as to the Notifying Party's ability to ensure that Three would act in accordance with the obligations of the Notifying Party, contribute to the uncertainty whether the network sharing situation envisaged under the Second Commitments would be implemented.

b) Harm to competitive position of BT/EE not fully addressed

(2793) According to the Network Sharing Commitments, the consolidated network of the merged entity would correspond to the one described in the [Plan A]. This plan is described in Section 8.2.2.4 a) i). Notably, this means that the merged entity would […].

(2794) Therefore, the harm to the competitive position of BT/EE following the implementation of the network consolidation as described in the commitments would be similar to the harm under the [Plan A]. This harm is assessed in Section 8.2.2.4 b) i). The Commission concluded that the harm caused by potential delays or frustration of unilateral investments in MBNL is likely to decrease the network quality of BT/EE and therefore to severely harm the ability of BT/EE to compete. This harm to BT/EE's ability to compete is further aggravated by the sum of increased costs BT/EE is likely to face for current and future infrastructure.

(2795) As further explained in the following subsections, this harm is not addressed by the Network Sharing Commitment. In general, the Commission notes that the content of the EE Offer is described in very general terms. As such, this part of the Network Sharing Commitment would be almost impossible to enforce for the Commission as the Notifying Party could potentially comply with the relevant provisions of the Commitment by making an offer to BT/EE that is formulated in very general terms and is therefore of limited binding nature.

(2796) In addition, according to the Notifying Party's response to RFI 64:

"[…]"

(2797) […] The Commission points out that according to paragraph 11 of the Remedies Notice, it is incumbent on the parties to remove any uncertainties like third party rights, that affect the implementation of the remedies.

(2798) Moreover, even assuming that an offer is made and the content of the EE Offer were to be sufficiently clear, the Commission considers that the proposed amendments of the MBNL agreements are insufficient to prevent opportunistic behaviour of Three following the Transaction.

i) Unilateral Deployments

(2799) The commitment to offer to BT/EE *"to clarify or, as necessary, amend the terms of the Co-operation Agreement"* with regard to unilateral deployments in paragraph 42 does not address the concerns described in this Decision. The high-level description of the clarifications or amendments and the nature as a commitment to make an offer cause considerable uncertainties as to whether it would be implemented at all.

(2800) Many of the suggested clarifications or amendments just reiterate the current MBNL agreements. Therefore, they do not prevent Three from using the MBNL procedures to delay or frustrate unilateral deployments by BT/EE.[2371]

(2801) The statement that […].

(2802) The commitment that […].

(2803) The commitment that neither Three nor EE shall have the ability to unilaterally delay or otherwise frustrate unilateral deployment by any means (paragraph 42 c) is unlikely to have any effect if BT/EE were to accept an offer of Three to amend the MBNL agreements with such clause. It is completely unclear whether and if so how the Notifying Party wants to further substantiate such amendment. As such, the Commission is not in a position to assess whether this part of the Network Sharing Commitment is likely to be implemented, or the manner in which it is to be implemented, and as such cannot determine whether this part of the Network Sharing Commitment would have an effect on the competition concerns raised in the present Decision. Consequently, the Commission is not in a position to take this part of the Network Sharing Commitment into account in the assessment of whether the Second Commitments, as a whole, would remove the competition concerns in this case entirely and with the requisite degree of certainty.

(2804) The Notifying Party further proposes to commit […].

(2805) The commitment that […] (paragraph 42 e) neither addresses the competitive concerns raised by the Transaction. As discussed in Recital (1516), the Commission considers that the managing director is anyhow unlikely to constrain the ability of the merged entity to delay or frustrate unilateral deployments by BT/EE.

(2806) Finally, the addition of a fast track dispute resolution mechanism in case the Technical Committee has not reached a compliance decision within […] days (paragraph 42 f) does not address the competition concerns as discussed in the following paragraphs.

(2807) The new fast-track dispute resolution procedure is likely to have a limited effect in restraining opportunistic behaviour of the merged entity as the MBNL arrangements are general in their very nature and currently, potential disputes are rather solved by finding compromises than by adhering to the letter of the agreements. In the future, given the misaligned incentives of the merged entity, these compromises would be more difficult to find.

(2808) In general, there are two main shortcomings of the fast-track dispute resolution mechanism proposed by the Notifying Party. The first shortcoming is that the basis for decisions of the panel is not suited to substitute co-operation of the network sharing partners and thus to ensure a proper functioning of MBNL. The second is that despite the short timeframes for the individual steps of the fast-track dispute

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[2371] See recitals (1485) et seq.

resolution procedure, the overall length of such procedure would not prevent harm by delaying important investment decisions.

(2809) As to the insufficient basis for decisions, the new fast-track dispute resolution procedure in Annex 2 to the commitments sets out that the panel shall base its determination on three factors: (i) the commitments given by the Notifying Party in the present case, (ii) the obligations under the MBNL agreements and (iii) the decision of the European Commission in the present case.

(2810) The Notifying Party proposes to apply the fast-track dispute resolution mechanism to […] (paragraph 42 e) and on certain reserved matters under the MBNL agreements for which each shareholder has a veto right, namely for […] (paragraph 44).

(2811) For none of these matters, the panel of the proposed fast-track dispute resolution mechanism could substitute cooperation between the network sharing partners. For […], there is not even a sufficient basis in the commitments or the MBNL agreements for a panel to decide a conflict between the parties as there are no criteria in the MBNL agreements as to under what circumstances […].

(2812) As to unilateral deployments, […].

(2813) […].

(2814) […]. Whereas network sharing partners with an aligned interest in being able to make unilateral deployments would not necessarily stick to a strict reading of these criteria, the panel has to. Therefore, the fast-track dispute resolution mechanism would be unable to preserve an effective functioning of the MBNL procedures in the way an aligned incentive to being able to make unilateral deployments does.

(2815) […].

(2816) Decisions of the panel based on these criteria would be difficult to predict. They would be made at the end of the whole fast-track dispute resolution mechanism and thus only after the parties invested significant time and efforts. If the interests of the parties in being able to make unilateral deployments would be aligned, they could quickly clarify whether the other party has concerns and find a practical solution. The risk involved in the decisions by the panel based on these criteria would likely deter investments.

(2817) The Commission notes that in addition to these uncertainties, BT/EE submitted that the fast-track nature of the process might make the outcome […].[2372]

(2818) Next, the timing of the fast-track dispute resolution makes this mechanism also less practical than co-operation between the shareholders. According to the Network Sharing Commitment, either MBNL shareholder can initiate the mechanisms for […]. According to paragraph 1 of Annex 2, the new fast-track dispute resolution procedure commences after […]. […]. After that, there would be another […] days to appoint the panel (clause 2 of Annex 2) which would have to reach a reasoned written determination within a maximum of […] weeks of the appointment (clause 3 of Annex 2).

(2819) In total, the dispute resolution process would thus last […] weeks. Together with[…], the whole process would last more than […] weeks. If the MBNL shareholders

2372 […].

would be able to agree to a unilateral deployment, a decision would be made within the […]. The fast-track dispute resolution mechanism therefore prolongs the process until a decision is made by […] to […] weeks. A delay of such duration would make recurring decisions that have to be made within MBNL on a constant basis more burdensome and disruptive. Together with the increased uncertainty about the outcome of such procedure, this would significantly impede BT/EE's ability to unilaterally invest.

(2820) In summary, half of the six proposed clarifications or amendments relating to unilateral deployments in paragraph 42 of the Second Commitments merely reiterate the current contractual situation. […] the addition of a fast track dispute resolution mechanism are unable to address the competitive concerns raised by the Transaction. The only clarification or amendment that goes into the direction of addressing these concerns is a mere statement that neither party of MBNL shall have the ability to delay or frustrate unilateral deployments of the other party by any means. This is too unsubstantiated and uncertain in its implementation to effectively address the concerns relating to unilateral deployments. The fast-track dispute resolution mechanism would not help in maintaining the current ability of BT/EE to make unilateral investments either.

ii) New MBNL Business Plan

(2821) As discussed in Section 8.2.2.4 b) i), the merged entity has the ability and the incentive to decrease its costs under the MBNL arrangements. This would further aggravate the harm to the competitive position of BT/EE following the Transaction. The business plan of MBNL sets forth […] funding commitments of the network sharing partners. As such, a binding business plan can prevent Three from avoiding costs committed to under the business plan following the Transaction.

(2822) However, the commitment relating to a new business plan is implemented as a commitment *"to offer to EE to agree"* on a new plan. The description of the business plan subject to such offer is rather general and often only replicates obligations under the MBNL agreements.

(2823) The statement in paragraph 45 (b) (i) that the new business plan would contain a commitment of Three to […] only describes an obligation of Three that it has in any case under the MBNL arrangements. A respective business plan would not prevent Three from trying to reduce the size of the shared grid as the funding commitment is made *"in accordance with the terms and conditions contained in the MBNL Agreements"*. Thus, any leeway under these agreements to reduce the size grid of MBNL could still be used by Three.

(2824) Under paragraph 45 (b) (ii), the Notifying Party commits that the new business plan is to reflect the assumptions and conditions underlying already the operating costs and capital expenditure forecasts in the 2016 MBNL budget that has been agreed between Three and BT/EE. By referencing the budget that has already been agreed for 2016, this statement would not prevent Three from reducing its commitments under MBNL in future years.

(2825) Three further commits to base the new MBNL business plan on the continued application of the core principles set out in […] unless amended or varied by agreement between Three and BT/EE (paragraph 45 (b) (iii)). These principles, unless mutually amended or varied, would also apply in any case. A commitment to base an offer for a new MBNL business plan on such principles does therefore not address the concern that Three would be likely to reduce its share of costs within the leeway the MBNL agreements provide.

(2826) The proposal in paragraph 45 (b) (iv) that cost forecasts are indexed to reflect forecasts from HM Treasury is neither sufficient to address these concerns, same as the commitment to base the offer of a new business plan on the principle that the terms and conditions contained in the MBNL agreements would continue to apply (paragraph 45 (b) (v)).

(2827) The Commission further notes that […].[2373] Therefore, in addition to being potentially ineffective in addressing the competition concerns, the business plan offered might not be accepted by BT/EE […].

(2828) Given the vague description of the business plan offered by Three to BT/EE that mostly repeats obligations of Three already under the current MBNL arrangements, the Commission considers the commitment relating to a new MBNL business plan as insufficient to address the concern that the merged entity could decrease its costs under the MBNL arrangements.

iii) […]

(2829) The commitment to […].

(2830) Both issues played minimal roles in the assessment of the Commission. […]. Therefore, this commitment has no impact on the concerns raised by the Transaction.

iv) Conclusion on harm to competitive position of BT/EE

(2831) Overall, the Commission concludes that the Network Sharing Commitment does not eliminate the risk of significant harm to the competitive position of BT/EE caused by potential delays or frustration of unilateral investments in MBNL and by increased costs BT/EE is likely to face for current and future infrastructure.

c) Harm to competitive position of Vodafone not fully addressed

(2832) Even though the consolidated network of the merged entity would according to the Network Sharing Commitment correspond to the one described in the [Plan A], the Commission's finding that the implementation of the [Plan A] would be unlikely to harm the competitive position of Vodafone was based on the fact that the [Plan A] could only be implemented with Vodafone's consent. When assessing the [Plan A], the Commission took the view that Vodafone is therefore likely to ensure that the [Plan A] would not have a significant adverse impact on its competitive position.[2374]

(2833) The network consolidation plan envisaged under the Second Commitments, however, aims at achieving the aim of using Beacon sites for the consolidated network by […]. […], the consolidation plan of the Notifying Party under the Second Commitments is similar to the [Plan B].[2375] The harm of such termination is assessed in Section 8.2.2.4 c) ii). The Commission concluded that the competitive position of Vodafone is likely to be impaired by a significant decrease in network quality compared to the Beacon network which is caused by higher costs for coverage upgrades which is further aggravated by the increased incremental cost of Vodafone for providing mobile services after […].

(2834) As further explained in the following subsections, this harm is not addressed by the Network Sharing Commitment.

[2373] […].
[2374] See Section 8.2.2.4 b) ii).
[2375] See the description in Section 8.2.2.4 a) ii).

i) Completion of the Beacon network

(2835) The concerns set out in Section 8.2.2.4 c) ii) are not based on the assumption that the merged entity would not complete the Beacon network because the [Plan B] is based on the assumption that the merged entity would complete the Beacon roll-out. Therefore, as mentioned in Recital (1639), the Commission considered harm under the implementation of the [Plan B] caused by a delay or frustration of the roll-out of Beacon sites unlikely. Such harm was, however, discussed as part of the other network consolidation scenarios assessed in Section 8.2.2.4 d), in particular if the merged entity were to rely only on MBNL or were to rely mainly on MBNL.

(2836) The Commission considers the commitment of the Notifying Party to complete the Beacon grid in the East sufficient to address concerns resulting form the delay or frustration of the roll-out of Beacon sites under the network consolidation scenarios assessed in Section 8.2.2.4 d). Even though the target date of […] is later than originally envisaged under the Beacon arrangements, the Commission understands that this is in line with the current planning of O2 and Vodafone.

ii) […]

(2837) The Network Sharing Commitment relating to Beacon is not sufficient to exclude that the Transaction would impair the competitive position of Vodafone following the implementation of the Second Commitments. When entering into Beacon, […] have been a key aspect for ensuring the continued alignment of interests between the network sharing partners to develop the Beacon network jointly.

(2838) When Vodafone and O2 presented the Beacon agreements to Ofcom, Ofcom raised a number of preliminary questions on the draft agreements. One of these questions asked whether the Beacon arrangements (called "Cornerstone arrangements" at that point in time) […]. The parties replied by stating that […].[2376]

(2839) Another question asked for […]. The answer of the parties started with the following paragraph:

[…]"[2377]

(2840) This joint response by Vodafone and O2 underlines the crucial importance of […] for both parties to the Beacon arrangements. It explains that […]is required to ensure for both parties that the potential benefits from […]would be realised given the risk that otherwise the other party could reduce these benefits by […].

(2841) The answer also states that the safeguard of […] is required due to the investment needed to set-up and operate the shared network. If the parties would have needed to only ensure […], they could have provided for […]. However, under the current contractual arrangements, […].

(2842) The risk described in the answer set out in recital (2839) is precisely the risk […] following the Transaction. The merged entity would seek to gain efficiencies similar to a network sharing arrangement by consolidating the networks of Three and O2.

(2843) The Network Sharing Commitment does not address this risk mentioned in the joint response of O2 and Vodafone to Ofcom. Instead, […].

2376 Project Beacon – Response to Ofcom preliminary questions to parties, 29 June 2012, response to question 12a (submitted by Telefónica in response to RFI 110).

2377 Project Beacon – Response to Ofcom preliminary questions to parties, 29 June 2012, response to question 12b (submitted by Telefónica in response to RFI 110).

(2844) […], only the commitment relating to the future network plans could ensure the continued alignment of interests within Beacon. However, these proposed commitments fall short of having the same effect as […]. They only state that the merged entity would use […] Beacon sites and would deploy certain low-frequency spectrum on these sites. The merged entity would be free to use additional sites outside the Beacon network. In addition, they do not ensure the joint development of the Beacon grid as it would happen in the absence of the Transaction.

(2845) Therefore, the Commission considers that there is a material risk that […] as offered by the Notifying Party may not be acceptable to Vodafone in light of […] and the implied lack of protection.

(2846) If, however, Vodafone would have to decline the offer […], the negative effect on its competitive position implied by […] would be largely the same as discussed under the [Plan B]. The commitment to use Beacon sites for […] does not address that Vodafone is likely to […]. For Vodafone, the difference to the [Plan B], whether […], is irrelevant for its increased cost of coverage and capacity.

(2847) Considering that O2 and Vodafone stated in their response to Ofcom that […], the Commission considers that the Network Sharing Commitments do not address the harm to the competition position of Vodafone.

iii) Option to partition transmission

(2848) Higher costs of Vodafone for the joint transmission under the Beacon arrangements did not contribute to the finding of the Commission that the plans presented by the Notifying Party would lead to a significant harm to the competitive position of Vodafone. Therefore, this commitment has no impact on the concerns raised by the Transaction.

iv) Conclusion on harm to competitive position of Vodafone

(2849) Overall, the Commission concludes that the Network Sharing Commitment does not eliminate the risk of the competitive position of Vodafone being impaired by a significant decrease in network quality compared to the Beacon network which is caused by higher costs for coverage increases and by the increased incremental cost of Vodafone for providing mobile services […].

d) Risk of lower industry-wide investments not addressed

(2850) In Section 8.2.2.4 c) iii), the Commission concluded that the [Plan B] would likely lead to less industry-wide investments. The merged entity would learn about network investments by all its competitors and the competitors could also gain a limited understanding of the network investments by all other competitors. These effects would likely decrease the industry-wide investments.

(2851) The consolidated network of the merged entity following the implementation of the Second Commitments would be similar to the one envisaged under the [Plan A]. In its assessment of the [Plan A] in Section 8.2.2.4 b) iii), the Commission concluded that the situation arising under the [Plan A] as presented by the Notifying Party would likely increase the visibility of investments by other MNOs in the market. However, this visibility was considered unlikely to reach a point where it would incentivise all competitors to delay investments.[2378]

[2378] See recital (1562).

(2852) However, the situation following the implementation of the Second Commitments is different if Vodafone would accept the offer […]. The Network Sharing Commitment does not address the concern that, post-Transaction , the merged entity would sit across both network sharing agreements and that it would have much greater visibility and control over the investments of the other MNOs. In this regard, the Commission considers that the enhanced information barriers in relation to MBNL and Beacon do not address the concern that the Transaction might increase the visibility of network investments between all MNOs. In particular, the ring-fencing of employees involved in the operation of MBNL from employees involved in the operation of Beacon does not prevent information on both network sharing agreements to accumulate within the merged entity. This could, for instance happen if employees involved in MBNL and in Beacon were to report to the same hierarchy within the merged entity.

(2853) In addition, the Commission notes that, while the merged entity would be party to both network sharing arrangements, the network sharing situation following the implementation of the Network Sharing Commitment would be different from the situation absent the Transaction as well as the one following the implementation of the [Plan A] or the [Plan B].

(2854) The main difference to the network sharing situation under the [Plan A] or the [Plan B] is that Vodafone and O2 would […] under the Beacon arrangements if Vodafone would accept the respective offer.

(2855) The Notifying Party used the following figure to illustrate the pre-Transaction network situation when presenting the [Plan A] to the Commission:

Figure 133: Overview of pre-Transaction RAN arrangements

[…]

Source: Notifying Party, Annex 1 to response to RFI 64.

(2856) In the same document, the Notifying Party provided the following overview over the post-Transaction network situation:

Figure 134: Overview of post-Transaction RAN arrangements under [Plan A]

[…]

Source: Notifying Party, Annex 1 to response to RFI 64.

(2857) The Notifying Party argued that the implementation of the [Plan A] would result in […].[2379] According to the Notifying Party, the Transaction would therefore result in increased network competition […].[2380]

(2858) The situation following the implementation of the Second Commitments would be very different. According to the Notifying Party, […].[2381] As the commitment in relation to certainty of network plans expressly refer to the description of the grid under the [Plan A] in Annex 1 to the Notifying Party's response to RFI 64, following the implementation of the Network Sharing Commitments, the situation would be as follows:

2379 Notifying Party's response to RFI 64, Annex 1, paragraph 25.
2380 Reply to the Statement of Objections, paragraph 765.
2381 Notifying Party's response to RFI 64, Annex 1, paragraph 19.

Figure 135: Overview of post-Transaction RAN arrangements under commitments

[…]

Source: Commission's compilation.

(2859) Compared to the situation absent the Transaction, this illustration shows that the implementation of the Network Sharing Commitment would lead to a reduction of differentiated mobile networks in the United Kingdom. […].

(2860) By reducing network competition […], the network sharing situation following the implementation of the Network Sharing Commitment, if Vodafone were to accept the offer […], would be less competitive than absent the Transaction.

(2861) Less network competition would provide the MNOs with fewer incentives to differentiate their network from the networks of other MNOs. This increases the likelihood of reduced-industry wide inverstments.

(2862) Overall, the Commission concludes that the Network Sharing Commitment is likely to lead to fewer industry-wide investments. The merged entity would be party to both network sharing arrangements and therefore have lower incentives to invest. In contrast to the [Plan A] or the [Plan B], if Vodafone accepts […]. In that case, by reducing the number of independent networks if Vodafone were to accept the offer to […], the Network Sharing Commitment instead increases these concerns.

9.4.2.4. Wholesale Market Commitment

(2863) The Commission considers that the Wholesale Market Commitment, even taken together with the other elements of the Second Commitments, would not address the competition concerns raised by the Commission in Section 8.3.1 in their entirety and would not be comprehensive and effective from all points of view.

a) Existing MVNOs

(2864) The Commission notes, first, that the Wholesale Market Commitment as regards Existing MVNOs is a mere offer and the Notifying Party is deemed to have complied with that commitment upon having notified Existing MVNOs of the option to obtain access to 4G services. Since the terms of this offer are to a large extent undefined and may be even unfavourable, it is unclear whether MVNOs would find it commercially attractive to take up the offer. The impact of this commitment on the wholesale market is therefore uncertain.

(2865) Second, even if Existing MVNOs were to accept the Notifying Party’s offer, the impact of the Wholesale Market Commitment as regards Existing MVNOs would be limited in the short term but also in the medium to long term.

(2866) The Commission notes that each of Three and O2 already granted 4G access to a number of customers. For instance, O2 granted 4G access to TalkTalk and Three granted 4G access to Dixons. Those MVNOs are not Existing MVNOs according to the definition as set out in the Wholesale Market Commitment. With regards to them, the Wholesale Market Commitment would be moot.

(2867) In addition, the Commission notes that the Wholesale Market Commitment as regards Existing MVNOs is limited to offering access to 4G services. It does not cover future technologies such as for instance 5G. Also, the suggested pricing of 4G services at the same rates as charged for 3G services and under unit pricing wholesale models would likely not allow Existing MVNOs to offer 4G at competitive terms to their customers in the future, as mentioned during the Market Test (see recital (2729)). Indeed, MNOs costs of providing data are continuously declining as data consumption increases and more efficient technologies are being deployed. While MNOs would reflect this in their retail pricing, MVNOs would not be able to benefit from the same reductions under the Wholesale Market Commitment and would thus not be competitive vis-à-vis MNOs in particular in relation to data. Overall, the impact of Wholesale Market Commitment on ensuring favourable access terms to MVNOs in the medium to long term is therefore likely to be very limited.

(2868) Third, as regards the implementation of granting access to 4G services, the Commission considers that the Wholesale Market Commitment as regards Existing MVNOs is formulated in an ambiguous way that creates uncertainty for Existing MVNOs as to the timing of and the costs associated with obtaining 4G access. This might even frustrate an Existing MVNO's incentives to obtain access to 4G services under the Wholesale Market Commitment. Indeed, there would be an implementation plan to be agreed between the Notifying Party and the Existing MVNO. However, the exact scope of this plan is not further defined and there is no time limit by when 4G access would have to be granted at the latest. Moreover, the Existing MVNO would have to bear "reasonable" implementation costs. There are no principles set out as regards those costs and the term "reasonable" leaves room for interpretation and thus uncertainty.

b) New MVNOs

(2869) Also the Wholesale Market Commitment as regards New MVNOs is a mere offer and the Notifying Party is deemed to have complied with that commitment upon having published a principle offer for wholesale access services on its website. According to this wording, the Notifying Party would not even be obliged to ultimately enter into an agreement with a New MVNO. The impact also of this commitment on the wholesale market is therefore, at best, uncertain.

(2870) The medium to long term effects of the Wholesale Market Commitment as regards New MVNOs is questionable as the commitment does not explicitly include future technologies such as, for instance, 5G. The Commission cannot conclude with the requisite degree of certainty that New MVNOs would have access to future technologies in the medium to long term.

(2871) In addition, the terms at which wholesale access would be granted would be benchmarked against the average of those offered by Three and O2 at the date of closing. The Commission notes that, given the offer for access to 4G services to Existing MVNOs would have to be made within one month following the date of closing, the terms for 4G services offered to Existing MVNOs, that is to say 4G at no extra cost, would not be included in the benchmarking exercise. Thus, to the extent that 4G services are currently priced at a premium, such premium would be applicable for New MVNOs throughout the entire [5-10] year term of the Wholesale Market Commitment, even though the Notifying Party also commits to offer 4G services at no additional cost to Existing MVNOs. Moreover, as set out in recital (2867), even offering 4G services to wholesale customers at the same rates as 3G services would not ensure that MVNOs can be competitive in offering such services to retail customers in competition with MNOs whose costs of providing such services are rapidly declining with the increase in data usage and the change in technology. This finding also applies to rates that are benchmarked against the average rates by Three and O2 at the data of closing. In light of this discrepancy between the Wholesale Market Commitments as regards Existing MVNOs on the one hand and New MVNOs on the other and given that it is not possible to predict how wholesale access terms would look like in the United Kingdom in five to ten years, it seems very unlikely that the terms offered to New MVNOs would allow them to be competitive in the short term as well as in the medium to long term.

(2872) In any event, in light of the replies received during the Market Test (see recital (2730), the Commission considers that the Wholesale Market Commitment as regards New MVNOs is not sufficiently clear in relation to the way in which the benchmarking described in recital (2871) would actually be carried out. According to paragraph 62(b) of the Second Commitments, the benchmarking would take into account "*the size and type of the MVNO, type of products and services, volumes, prices, commercial/operational model and other relevant commercial terms*". Those terms remain undefined and most of them, in particular the "*commercial/operational model*" and "*other relevant commercial terms*" leave room for interpretation. This lack of clarity raises uncertainty for New MVNOs, which is likely to limit the likelihood of New MVNOs taking up the Wholesale Market Commitment, and thereby, its effectiveness.

(2873) As regards the implementation of granting wholesale access, the Commission considers that, like the Wholesale Market Commitment as regards Existing MVNOs, the Wholesale Market Commitment as regards New MVNOs is formulated in an ambiguous way that creates uncertainty for New MVNOs as to the timing of and the costs associated with obtaining wholesale access. This might even frustrate a New MVNO's incentives to obtain wholesale access under the Wholesale Market Commitment. Indeed, there would be an implementation plan to be agreed between the Notifying Party and the New MVNO. However, the exact scope of this plan is not further defined and there is no time limit by when wholesale access would have to be granted at the latest. Moreover, the New MVNO would have to bear "reasonable" implementation costs. There are no principles set out as regards those costs and the term reasonable leaves room for interpretation and thus uncertainty.

(2874) The Commission also considers that there is uncertainty as to the network on which wholesale access would be granted. According to clause 63 b) of the Second Commitments, the Notifying Party would no longer be obliged to grant wholesale access if this were to result in more than 50% of its Network Capacity being committed to third parties. Network Capacity is defined as capacity on the Network. The Network is defined as that of O2. There is thus a possibility that wholesale access would only be granted on the network of O2. If that were to be the case, there is even uncertainty as to what would happen to New MVNOs if the O2 UK Divestment Option under the NEO Commitment were to be exercised.

9.4.2.5. Overall assessment of the Second Commitments

(2875) In light of all the considerations set out in Section 9.4.2, the Commission concludes that the Second Commitments do not eliminate the identified competition concerns in the retail market for mobile telecommunications services and in the wholesale market for access and call origination on public mobile networks in the United Kingdom entirely and are not comprehensive and effective in all respects.[2382]

[2382] See Remedies Notice, paragraph 9 and case-law cited.

9.5. Description of the Third Commitments

(2876) Like the Second Commitments, the Third Commitments comprise (1) the Tesco Mobile Commitment; (2) the New Entrant Operator ("NEO") Commitment; (3) the Network Sharing Commitment; and (4) the Wholesale Market Commitment. As described in recital (2643), in the Second Commitments, the Network Sharing Commitment contained a commitment to implement a certain network structure which is a variation of the [Plan A]. In the Third Commitments, this commitment is presented, in amended version, as a stand-alone commitment, the Commitment in Relation to Certainty of Network Plans. Also the other Commitments listed in this paragraph have been amended to some extent compared to the Second Commitments. In addition, the Third Commitments contain a commitment by the Notifying Party to offer a capacity based wholesale agreement to Virgin Media[2383] (the "Virgin Media Commitment"). The Commission will describe the main elements of the amendments and of the Virgin Media Commitment in Sections 9.5.1 to 9.5.6.

(2877) In the Third Commitments, the Notifying Party has amended the definition of a number of terms, as follows.

(2878) First, the Notifying Party has amended the definition of capacity to be made available to Tesco Mobile, the NEO(s) and Virgin Media. Network Capacity is now defined as the capacity of the network operated by O2 and the network operated by Three, "*so that the % Capacity Share made available to the NEO(s) and Tesco Mobile under these Commitments is calculated by reference to the sum of the capacity of the networks operated by O2 UK and Three although delivered via the Network currently operated by O2 UK which will be the base network of the merged business and which will be developed in accordance with the Network Plan*".

(2879) Second, the Notifying Party also amended the definition of the network on which the capacity would be made available. The Network is now defined as "*the mobile communications radio access network operated and/or used by O2 UK in the United Kingdom from time to time (including for the avoidance of doubt as it evolves over time including in accordance with the Network Plan*". The definition is no longer explicitly subjected to "*any limitations contained in national roaming or infrastructure (including site) sharing agreements with third parties*".

9.5.1. Tesco Mobile Commitment

(2880) As regards the Tesco Mobile Commitment, the Notifying Party amended the following elements.

(2881) First, in consideration for the capacity made available, the fixed annual fee paid in years [1-5] to [1-5] would differ from that payable as of year [5-10] as follows: For years [1-5] to [1-5], the annual fee would be (as in the Second Commitments) no less than the total sums paid or payable by Tesco Mobile and O2 for wholesale access services in the 12 months period preceding these [1-5] years. As of year [5-10], Tesco Mobile would pay Ongoing Charges such as those payable by a NEO and they would be no less than those payable by the NEO in accordance with the pricing principles applicable to the Elected Capacity Share of the NEO.

(2882) Second, the Notifying Party would, subject to maintaining any confidentiality obligations vis-à-vis third parties, provide Tesco Mobile […] with its technology and

[2383] In the Third Commitments, reference is made to Virgin Mobile. For the purposes of the present decision, Virgin Mobile is referred to as Virgin Media.

network roadmap plans detailing features and services to be made available within the 12 months following the date of the roadmap and would consult with Tesco Mobile about these plans.

9.5.2. NEO Commitment

(2883) As regards the NEO Commitment, the Notifying Party amended the following elements.

(2884) First, as regards the utilisation of the Capacity Share by a NEO, the Notifying Party specified the minimum Capacity Share, expressed in Gbps, for years [1-5] to [1-5] as follows: […]. At the same time, for years [1-5] to [1-5] a NEO would be entitled to a maximum Capacity Share of […] respectively. A NEO would no longer be able to utilise the full [10-20]% Capacity Share before year [1-5].

(2885) The time period for which a NEO would have to commit to a minimum Capacity Share to be utilised after year [1-5] has been extended by [1-5] years and now applies from year [5-10] to year [10-15].

(2886) Second, the Ongoing Charges to be paid by a NEO were amended as follows: A NEO would pay, on an ongoing annual basis, cost-based charges measured in proportion to the Elected Capacity Share in a given year. The cost basis is to be agreed upon between the Notifying Party and a NEO and would include a cost-based return on capital. Disputes between a NEO and the Notifying Party in connection with the determination of the cost basis which cannot be settled by mutual agreement would be referred to the monitoring trustee for determination. The determination by the monitoring trustee would have to be made in accordance with the principle that the Ongoing Charges are cost-based and reasonable.

(2887) As regards the auditing of the annual statement of the calculation of the Ongoing Charges that is to be provided to a NEO by the Notifying Party, the NEO Commitment now provides the following: the auditor that can be jointly appointed upon request of a NEO would have to "*audit the relevant books and records for the purposes of determining that the Ongoing Charges for the previous fiscal year ending 31 December <u>have been accurately calculated and that all costs are fairly presented</u>*" (*emphasis added*).

(2888) Third, as of year [5-10] a NEO may offer wholesale access to MVNOs up to a maximum of [20-30]% of its Elected Capacity Share at any point in time.

(2889) Fourth, the transfer of the Network Interest is no longer subject to a right of first refusal by the Notifying Party. The Network Interest would now have to be transferred together with the rights and obligations in respect of the Capacity Share. The restrictions on the transfer would not apply if the transfer is intra-group or if it is part of a change of control over the business of a NEO.

(2890) Fifth, unilateral investments requested by a NEO and being implemented by the Notifying Party in line with the consultation and approval process set out in paragraphs 22(o) to 22(p) would be given the same level of priority as investments of the Notifying Party.

(2891) Sixth, in terms of technology and network roadmap plans, the Notifying Party would provide a NEO not only with detailed information on features and services within the following 12 months, but also with the projected cost estimates associated with those features and services. In addition, the Notifying Party would not only consult with the NEO on these plans but also take into consideration the NEO's proposals on the roadmap.

(2892) In addition, the NEO Commitment now provides for a possibility of a NEO to opt out of certain features and investments that can be technically segregated or partitioned on the network and the costs associated with those features or services would not be included in the Ongoing Charges. The opt-out would, however not be possible in respect of features or services which would lead to an improvement in coverage, capacity, speed or cost of the Network.

(2893) Seventh, any dispute between a NEO and the Notifying Party in relation to unilateral investments by that NEO pursuant to the Third Commitments that cannot be settled by mutual agreement would be subject to a fast-track dispute resolution procedure described in Annex 1 to the Third Commitments ("NEO Fast-track Dispute Resolution Procedure").

(2894) Eigth, the request of a NEO to provide the Network Interest to that NEO using air interface prioritisation such as 4G multi-operator core network ("MOCN") or equivalent functionality is no longer subject to the approval of the monitoring trustee.

(2895) Ninth, the O2 UK Divestment Option is modified such that the transfer of O2 would not take effect in advance of completion of the roll out of the so-called "Beacon Single Grid Sites" which is required by […] in accordance with the Beacon agreements.

(2896) Finally, the NEO Commitments is now an upfront commitment, that is to say, the implementation of the Transaction is made conditional upon the Notifying Party having entered into a final binding agreement with a NEO to grant the Network Interest and the Commission having approved the proposed NEO and the terms of the arrangements between the Notifying Party and the NEO.

9.5.3. Virgin Media Commitment

(2897) Under the Virgin Media Commitment, the Notifying Party commits to offer to Virgin Media to enter into a capacity based wholesale agreement with Virgin Media on the basis of an agreement referred to in the Third Commitments as the Virgin Mobile Short Form Wholesale Agreement.

(2898) The Notifying Party would make a Capacity Share available to Virgin Media for a period of [5-10] years. For the amount of capacity that would be made available reference is made to paragraph 2.3.1 of the Virgin Mobile Short Form Wholesale Agreement. That paragraph provides that Virgin Media is entitled to acquire the greater of (i) [10-20]% of capacity of the combined network of Three and O2, delivered on the O2 network or (ii) the minimum capacity as set out in an annex to the Virgin Mobile Short Form Wholesale Agreement in absolute terms.

(2899) In consideration for the capacity, Virgin Media would pay fees to the Notifying Party as specified in the Virgin Mobile Short Form Wholesale Agreement. Paragraphs 2.3.5, 2.3.6 and Appendices 2 and 3 of that agreement stipulate that Virgin Media would pay a fixed Gbps price for its elected Capacity Share until the end of […] and an amount calculated in accordance with the cost and pricing methodology set out in Appendix 3 from […] until the end of the term of the arrangement. Virgin Media can also decide to exercise a so-called capital option pursuant to which it would pay (i) a capital charge on the service start date which can amount to up to […]% of the net book value of the relevant benchmark networks held immediately following the date of closing; and (ii) an adjusted annual fee by reference to the adjusted capacity unit price set out in Appendix 2 and calculated in accordance with Appendix 3. In either case, the minimum financial commitment by Virgin Media amounts to GBP […] million from the service start date until the end of year [1-5].

(2900) The Virgin Media customers would have equivalent quality of service to the retail customers of H3GI on the Network.

(2901) Virgin Media would have non-discriminatory access to all elements of the Network and to all current and future radio technologies, features and services as deployed in the Network as available to H3GI's retail customers.

(2902) In terms of technology and network roadmap plans, the Notifying Party would provide Virgin Media with its network and technology roadmap plans detailing features and services to be made available within the following 12 months. The Notifying Party would consult with Virgin Media about these plans.

(2903) If the NEO were to exercise the O2 UK Divestment Option, H3GI would offer to Virgin Media an equivalent capacity agreement.

(2904) Finally, the Notifying Party commits to make the offer to Virgin Media within [..] days following the date of the adoption of a conditional clearance decision by the Commission. The offer would remain valid for a period of […] months from the date of receipt by Virgin Media .

9.5.4. Commitment in Relation to Certainty of Network Plans

(2905) The Commitments in Relation to Certainty of Network Plans have been part of the network sharing commitments in the Second Commitments. These commitments have been amended such that the Notifying Party commits to (a) the creation of a site grid which includes the site grid set out in the [Plan A] (modified only to the extent required to fulfil the commitment in paragraph 56) in which (1) […] CTIL sites […](c. […] sites) would be used for […]; and (2) a minimum of [5,000-10,000] MBNL network sites would be used; (b) 43.2 MHz of downlink spectrum would be deployed on the Network by 1 January 2017; (c) at a minimum, low frequency spectrum owned by O2 at Closing (the 800 MHz and 900MHz radio frequencies) would be continue to be radiated from the Beacon Single Site Grid and such site grid shall form part of the Network; (d) by no later than: (1) […] the Network shall achieve a 4G population coverage of no less than […]%, measured in accordance with the methodology in the existing Ofcom 4G Commitment; and (2) […] the Network shall achieve the existing Ofcom 4G Commitment; (e) Three customers would be able to roam onto the Beacon Network only to the extent permitted in the current Beacon Agreements; (f) any spectrum deployed on the Network shall be made available to the NEO; and (g) with the exception of small cell networks, any access to any mobile communications radio access network that is owned by H3GI and which is made available to its customers on the Network shall also be made available to the NEO’s customers.

(2906) These commitments have already been included in the Second Commitments with the exception of the commitment to radiate a minimum spectrum from the Beacon sites, the dates for certain 4G coverage thresholds, making spectrum available to the NEO and giving the NEO access to any RAN network owned by the Notifying Party.

9.5.5. Network Sharing Commitment

(2907) Comparing the commitments relating to MBNL contained in the Third Commitments with the ones of the Second Commitments, the Notifying Party amended the description of the offer to BT/EE and added a unilateral commitment in case BT/EE would not accept the offer.

(2908) According to paragraph 47 of the Third Commitments, the offer to BT/EE shall be on substantially the same terms as a draft agreement attached to the commitments. The draft agreement provides for a number of provisions regarding network integrations activities of the merged entity, information barriers, a minimum sites commitment, sites on which Three deploy not more than […] MHz of spectrum, sites on which Three deploys […] spectrum, integration costs, an indemnity for harm caused by integration activities, unilateral deployments, the fast-track dispute resolution mechanisms, the business plan, transmission and […].

(2909) In addition to this draft agreement, the Notifying Party included a commitment that the offer would in particular include provisions in respect of amendments further described in paragraph 48 of the Third Commitments. With regard to unilateral deployments, these principles for the agreements between BT/EE and Three are substantially the same as in the Second Commitments. However, the Notifying Party added a commitment to waive any and all rights […] to object to the implementation and ongoing operation of any unilateral deployment by BT/EE on all sites which do not carry any live customer traffic on behalf of Three. Furthermore, the Notifying Party deleted the principle that neither Three nor BT/EE shall have the ability to unilaterally delay or otherwise frustrate unilateral deployments. For the fast track resolution mechanisms, a reference to Schedule 1 of the proposed agreement between BT/EE and Three is being made. Similarly, the unilateral commitment refers for the MBNL business plan to Schedule 2 of the proposed agreement.

(2910) As a unilateral commitment in case BT/EE does not accept this offer, the Notifying Party commits to waive all rights under the MBNL agreements to object unilateral deployments of BT/EE on sites that do not carry any traffic on behalf of Three, to waive any rights under the MBNL agreements to […], to apply the fast track resolution mechanism set out in Schedule 1 to the proposed agreement for all concerns that are technical or operational in nature which result in a dispute with BT/EE, to approve a […] year business plan in accordance with the one contained in Schedule 2 to the proposed agreement and to […].

(2911) As regards Vodafone, the Third Commitments do not contain any significant amendments compared to the Second Commitments.

9.5.6. Wholesale Market Commitment

(2912) The Wholesale Market Commitment has been amended such as to include also 5G services, provided that 5G is launched commercially by the Notifying Party in the United Kingdom.

(2913) As regards, in particular Existing MVNOs, the Notifying Party therefore commits to offer not only 4G but also 5G services at the same rate as charged for 3G services and to offer equivalent quality of service to other customers on that network with a 5G service.

9.6. Commission's assessment of the Third Commitments

(2914) In light of the circumstances of the present case and for the reasons set out in Sections 9.6.1 to 9.6.6, and in light of paragraphs 13, 14 16 and 17 of the Remedies Notice referred to in section 9.1, the Commission considers that the Third Commitments can be seen as an improvement in some respects but they still do not eliminate entirely the competition concerns identified in this case and would not be comprehensive and effective from all points of view.[2384]

9.6.1. Tesco Mobile Commitment

9.6.1.1. Notifying Party's view

(2915) As regards the competitive impact of the Tesco Mobile Commitment, the Notifying Party argues that the divestiture of Tesco Mobile would immediately reduce the market share increment from the Transaction by 50% as Tesco Mobile has a subscriber share of [5-10]% compared to Three's subscriber share of [10-20]%. This would be a structural element that would go beyond remedies in previous cases.[2385]

(2916) According to the Notifying Party, the Tesco Mobile Commitment would itself almost entirely eliminate the post-Transaction price increase predicted in the Statement of Objections. The Notifying Party argues that in the baseline case of the Commission's quantitative analysis in the Statement of Objections a divestment of Tesco Mobile would eliminate all merger effects in postpaid and the majority of the effect in prepaid. The divestment of Tesco Mobile in the Commission's analysis would lead to overall price effects of only around 1% in the overall private segment.[2386]

(2917) Moreover, the [5-10]% Capacity Share would provide Tesco Mobile with the incentive and ability to compete. The capacity model would provide Tesco Mobile with incentives similar to those of an MNO (in line with the Commission's findings in previous cases) and Tesco Mobile would be well placed to become an important competitive force that could leverage its unique advantages and engage in disruptive tactics. Any other conclusion would be inconsistent with the evidence in the Commission's file.[2387] This would be demonstrated by (i) Tesco Mobile's history as a challenger and by Tesco Mobile's innovative propositions; (ii) the fact that Tesco is a renowned household brand with a nationwide distribution network; and (iv) Tesco Mobile's market share growth having reached a market share of [5-10]% in 2014 since its launch in May 2003.[2388]

(2918) In relation to the subscriber share potential of Tesco Mobile, the Notifying Party argues that a [5-10]% Capacity Share would allow Tesco Mobile to grow rapidly. The Notifying Party develops several arguments to this effect. First, by […], a [5-10]% Capacity Share would give Tesco Mobile access to […] Gbps […]. As this is more than […] times the capacity used by Tesco Mobile today, Tesco Mobile could, according to the Notifying Party, reach a market share in […] that would be at least […] times its current share. As Tesco Mobile currently has a [5-10]% subscriber share in the first half of 2015, the Notifying Party implies that Tesco Mobile could reach a subscriber share of [60-70]% with [5-10]% of the capacity of the merged entity. The second argument by the Notifying Party is that since O2 serves [30-40]% of subscribers with […] Gbps today, Tesco Mobile would, assuming the same average usage pattern as O2's customers base, be able to serve [30-40]% of

2384 The Commission received comments on the Third Commitments from the national competition authorities of Austria [ID5975], Germany [ID5990], Ireland [ID5944], Italy [ID6030], the Netherlands [ID6014] and the United Kingdom [ID5979]. All six competition authorities expressed negative views on the Third Commitments.

2385 Form RM dated 6 April 2016, paragraphs 84, 85.

2386 Form RM dated 6 April 2016, paragraphs 86 to 88.

2387 Form RM dated 6 April 2016, paragraphs 89, 90.

2388 Form RM dated 6 April 2016, paragraphs 91 to 105.

subscribers in […] or, at the very least, half of this share. Third, based on current customer data usage of […]GB, Tesco Mobile could serve over […] million customers (or a more than [20-30]% market share) in […]. Assuming average data usage would double, this would still allow Tesco Mobile to reach a market share of [10-20]% which is twice its current share of [5-10]%.[2389]

(2919) The Notifying Party also argues that the effectiveness of the Tesco Mobile Commitment would not be reliant upon the achievement of a higher market share for Tesco Mobile as the Commission argues in the Statement of Objections that the importance of a competitor is not dependent on its markets share and that Tesco Mobile is already an important competitor. The effectiveness of Tesco Mobile would also not be reliant on Tesco Mobile entering into the proposed capacity agreement.[2390]

(2920) Finally, the Notifying Party considers that the Tesco Mobile Commitment is particularly suitable and effective to resolve concerns as the Statement of Objections finds that Tesco Mobile is a close competitor to Three.[2391]

9.6.1.2. Commission's assessment

(2921) The Commission notes that, with the exception of the definitions of capacity and of the network on which the capacity would be made available to Tesco Mobile under a capacity based wholesale agreement, the Tesco Mobile Commitment has not been significantly amended compared to the Second Commitments. However, the Notifying Party and […]negotiated a term sheet regarding (i) the divestment of O2's 50% stake in Tesco Mobile; and (ii) a capacity based wholesale agreement for up to [5-10]% of the combined capacity of the networks of Three and O2, delivered on the O2 network for an initial [1-5] year term with the option for […]to prolong the agreement by [1-5] additional years. […].

(2922) The term sheet increases the likelihood that the Notifying Party would divest its 50% shareholding in Tesco Mobile and offer a capacity based wholesale agreement to Tesco Mobile and addresses some of the uncertainties, including in relation to some of the key commercial terms at which wholesale access would be granted, that were identified in the Commission's assessment of the Second Commitments (see Section 9.4.2.1). Nevertheless, in particular as regards the offer of a capacity based wholesale agreement, the Commission does not consider that the fact that a term sheet has been agreed between the Notifying Party and […]constitutes circumstances such as those set out in paragraph 63 of the Remedies Notice, where it is sufficiently clear that there would be actual entry of new competitors and that such entry is timely and likely. Indeed, although the term sheet contains certain clauses that the Notifying Party and […]consider to be binding in the sense that they are "*provisions which the parties have commercially agreed not to re-open in the negotiation of the Transaction Documents (**Binding Provisions**) (although further detail and drafting may be required)*"[2392], the term sheet is not a final signed agreement. Also, the provisions that are defined as Binding Provisions do not relate to key commercial terms of a capacity based wholesale agreement such as notably the Capacity Share to

2389 Form RM dated 6 April 2016, paragraph 100.
2390 Form RM dated 6 April 2016, paragraphs 101 to 103.
2391 Form RM dated 6 April 2016, paragraphs 106, 107.
2392 See paragraph 3(c) of the term sheet: "PROJECT RAINBOW Disposal of 50% stake in Tesco Mobile to Purchaser and associated commercial arrangements with Tesco Mobile", [ID5967].

be made available to Tesco Mobile. The Notifying Party has the ability and could therefore still decide to offer very unfavourable terms that Tesco Mobile would not accept and that would result in the absence of a capacity based wholesale agreement. In addition, the term sheet was not submitted as a formal part of the Third Commitments and, therefore, does not form part of the Third Commitments. As a result, the extent to which the term sheet can be relied upon is limited and the term sheet can, thus, not be used as the benchmark for assessing whether a final agreement would be in line with the Commitments. Indeed, there is no certainty that the arrangements agreed upon between […]and the Notifying Party, as submitted to the Commission for approval, would be in line with the term sheet agreed.

(2923) In any event, the Tesco Mobile Commitment is not an upfront commitment neither as regards the divestment of O2's 50% stake in Tesco Mobile nor as regards the capacity based wholesale agreement. In other words, the Tesco Mobile Commitment does not provide that Tesco Mobile and the Notifying Party actually have to enter into a capacity based wholesale agreement on the terms set out in the term sheet and subject to the Commission having an opportunity to verify that this is indeed the case prior to the closing of the Transaction.

(2924) The fact that the […]Board has approved the term sheet also does not alter the conclusion as to the very limited legal value and binding nature of the term sheet.

(2925) Therefore, despite the fact that a term sheet has been agreed between the Notifying Party and Tesco Mobile, in light of the reasons set out in recitals (2921) and (2922), and for the reasons set out in Sections 9.6.1.2.a) to 9.6.1.2d), the Commission does not consider that the Tesco Mobile Commitment, even if taken together with the NEO Commitment and the Virgin MediaCommittment, addresses the competition concerns raised by the Commission in section 8.2.1 in their entirety and would not be comprehensive and effective from all points of view.

a) Uncertainty regarding the divestment of O2's 50% stake in Tesco Mobile

(2926) Whether or not the divestment of O2's 50% stake in Tesco Mobile would actually be implemented continues to be uncertain for the following reasons. First, as indicated in recital (2922), the Tesco Mobile Commitment is not an upfront commitment. There is thus uncertainty whether that stake would actually be sold. In particular as regards […]as a potential purchaser, the term sheet agreed between […]and the Notifying Party does not provide certainty that […]would actually agree to a purchase at all and on the terms provided for in the term sheet. It is also unclear how this would affect […] (see recitals (2737) and (2738)). The Commission, therefore, cannot conclude with the requisite degree of certainty that, despite having approved a term sheet, […]would actually acquire O2's 50% stake in Tesco Mobile pursuant to the Tesco Mobile Commitment or refrain from […]. As a result, the Notifying Party could still maintain a 50% stake in Tesco Mobile (see also recital (2737)). Indeed, according to paragraph 4(a) of the term sheet, the Notifying Party and […]are required to use "*all reasonable efforts to finalise and document the Transaction Documents as soon as reasonably practicable and, in any event, by 30 June 2016*".[2393] There is no legally binding obligation to actually enter into a final signed agreement.

[2393] Term sheet: "PROJECT RAINBOW Disposal of 50% stake in Tesco Mobile to Purchaser and associated commercial arrangements with Tesco Mobile", [ID5967].

b) Wholesale agreement

(2927) The Commission notes that, notwithstanding […]'s approval of the term sheet, the capacity based wholesale agreement contained in the Third Commitments continues to be merely an offer and, for the reasons set out in this Section, does not address the concerns expressed by the majority of respondents to the Market Test (see recital (2650)) with respect to the capacity based wholesale agreement contained in the Second Commitments, that it was unlikely that the capacity based wholesale agreement would be implemented. As such, the Commission considers that it is unlikely that this part of the Tesco Mobile Commitment would be implemented and therefore it cannot be taken into account in assessing whether the Third Commitments would remove the competition concerns in this case entirely, comprehensively and effectively.

(2928) Firstly, the term sheet entered into between the Notifying Party and Tesco Mobile does not prevent such potential circumvention of the commitment to make a capacity offer to Tesco Mobile. It obliges both parties to use reasonable efforts to finalise the documents as soon as practicable and at least until 30 June 2016 but acknowledges that the final agreement is conditional upon board approvals. Once the Notifying Party is no longer obliged to make the offer under the commitment, its board could reject an agreement with Tesco Mobile.

(2929) Secondly, no further clarifications have been made in the Third Commitments as regards the terms of the capacity based wholesale agreement offered under the Tesco Mobile Commitment (see also recital (2755)). Therefore, the Commission maintains its view that those terms are to a large extent not specified and to the extent they are, they are to a large extent uncertain. In particular, on the basis of the Third Commitments, it is uncertain how the capacity on the Network would evolve and what, thus, the [5-10]% capacity offered to Tesco Mobile would account for throughout the term of the agreement. It is therefore, at best, uncertain if Tesco Mobile would be able to compete aggressively on the basis of the wholesale agreement offered by the Notifying Party. A detailed assessment of the subscriber share potential of Tesco Mobile under the Third Commitments and of the alleged competitive impact of Tesco Mobile Commitment in the UPP framework are set out in Sections 9.6.1.2.c) and 9.6.1.2.d) respectively.

(2930) Thirdly and in any event, given that, with the exception of the amended definition of capacity and of the network on which that capacity would be provided, the Tesco Mobile Commitment has not been materially changed, the Commission continues to consider that even if Tesco Mobile were to enter into a capacity based wholesale agreement with the Notifying Party on commercially acceptable terms, the Third Commitments, taken as a whole (that is, also taking account of the NEO Commitment and the Virgin Media Commitment), cannot fully resolve the competition concerns identified by the Commission in Section 8.2.1 of the present Decision.

(2931) As noted in recital (2745), Tesco Mobile would operate on the market as an MVNO and would thus have even less ability to differentiate itself from, and to compete with, the merged entity than the NEO(s) (see Section 9.6.2.2). Tesco Mobile would not even have the options that are available to the NEO(s) to potentially differentiate their offering from that of the Notifying Party. As a result, the same considerations developed in Section 9.6.2.2 as to why the NEO(s) would not be effective competitors post-Transaction apply, even more pertinently, to Tesco Mobile.

c) Subscriber share potential of Tesco Mobile under the Third Commitments

(2932) The Commission considers that the potential market share figures proposed by the Notifying Party which compare current absolute capacity or usage figures with future capacity to derive future market share potential are meaningless in light of the strong historical and expected growth in usage.[2394] Indeed, while O2's current capacity allows the O2 network to serve […]% of subscribers today as argued by the Notifying Party, due to strong expected growth in usage, the same capacity would be grossly insufficient to serve a subscriber share of similar magnitude in […]. Calculations that compare future capacity with current usage patterns are hence misleading. The Notifying Party's claims that a Capacity Share of [5-10]% of the Network would allow Tesco Mobile to serve [30-40]% of subscribers or more is implausible.

(2933) The Commission notes that, as discussed in recital (3007), the definition and measurement of Network Capacity in the Commitments (to which the Capacity Share is applied) remains unclear. If it is assumed that it reflects a measure of actual usage, the capacity made available to Tesco Mobile would be [5-10]% of the total data throughput on the Network.[2395] Assuming for illustrative purposes that the merged entity's network serves [50-60]% of users in the United Kingdom (which the Commission considers to likely overstate the subscriber share of the merged entity's network),[2396] then a Capacity Share of [5-10]% for Tesco Mobile would, at the average usage profile, correspond to a maximum subscriber share of [5-10]% for Tesco Mobile at the average user profile. This is below Tesco Mobile's subscriber market share of around [5-10]% in the first half of 2015.

(2934) The Commission acknowledges that the subscriber share potential also depends on the usage profile of Tesco Mobile and the growth of Tesco Mobile customers' usage relative to the average usage. Tesco Mobile's customers currently use less data than […]. However, growth in data usage is likely to be stronger for low usage customer compared to high usage customers because current low usage customers will likely "catch up" in terms of the adoption of 4G devices, enabling their full data usage potential.[2397] Tesco Mobile's customers, […] should be expected to show significantly faster data growth than the average customer. According to the information submitted by O2,[2398] […]. Furthermore, according to other estimates by O2[2399], […]. Three estimates that usage by Three's customers will […].[2400] As Tesco

[2394] See recital (2918).

[2395] The Commission considers that even if the Capacity Share included any spare capacity of the Network, this would not materially affect the assessment, as the networks are typically expanded gradually, so that the spare capacity at any given point in time is limited.

[2396] The combined subscriber share at the network level of Three and O2 was [40-50]% in 2014. Because of non-coordinated effects at the retail level discussed in Section the Commission considers that Three would likely raise price post-Transaction and would attract a lower subscriber share at the network level. Even with the capacity offered to other parties in the Third Commitments, the Commission considers that the merged entity's network would likely carry less than 50% of subscribers.

[2397] [The Commission considers that the argument developed by the Parties (see growth in usage per user for Three and O2 as assumed in the Capacity Model of the Notifying Party: M.7612 - Frontier Economics - Capacity-related efficiencies model - 11-11-2015.xlsm) would likely apply a fortiori to Tesco Mobile customers].

[2398] O2's response to RFI 84, file "Annex 3 - RFI84Q11_2015 3YP Demand Summary_1_x (2).XLSX".

[2399] O2's response to RFI 45, file "Competitor network analysis_v21b_O2EEVF.XLSX" .

[2400] Capacity Model of the Notifying Party, "M.7612 - Frontier Economics - Capacity-related efficiencies model - 11-11-2015.xlsm". The Commission also notes that, as argued in Annex C, Three's demand

Mobile customers used on average […], the Commission considers it likely that the usage of Tesco Mobile customers would increase significantly faster than […].

(2935) To the extent that the usage by Tesco Mobile's customers would remain significantly below the average data usage by MNOs post-Transaction, any increase in market share by Tesco Mobile post-Transaction would originate most likely predominantly from customers attracted from other non-MNOs than from MNOs. In this event, the competitive pressure exercised by Tesco Mobile on the MNOs would be limited. It is difficult to conceive how any significant increase in share by Tesco Mobile post-Transaction could derive from customers attracted from MNOs, without any significant increase in the average data allowance offered by Tesco Mobile.

(2936) A further limitation is that Tesco Mobile subscribers currently use more voice minutes, on average, than […] customers. As the Commitments foresee a reduction in circuit switched capacity (currently used for voice traffic) over time as voice traffic is migrated to VoLTE, this may constrain Tesco Mobile from growing even if it focussed on users that consume less data and use relatively more voice traffic using older 3G devices (which are not suited for VoLTE).

(2937) In light of these considerations, the Commission considers that even a […] increase in capacity for Tesco Mobile by […], as claimed by the Notifying Party, this is likely to be used up, to a very large extent, by increased usage by Tesco Mobile's current users and would leave Tesco Mobile with only limited potential to grow its subscriber share. Moreover, the claimed […] increase by year [1-5] of the remedy is not guaranteed by the Tesco Mobile Commitment, as it is based on the term sheet, and is, therefore, subject to the same considerations as set out in recitals (2921) to (2925).

(2938) The Commission therefore considers that the Capacity Share of [5-10]% for Tesco Mobile would give Tesco Mobile at best only limited potential to grow its subscriber share. The limited potential to grow under the Tesco Mobile commitment implies that the divestment of Tesco Mobile has likely limited competitive impact because Tesco Mobile has no incentive to become more aggressive post-Transaction if it cannot benefit from such a strategy by significantly growing its subscriber share.

d) Alleged competitive impact of Tesco Mobile Commitment

(2939) Preliminarily to the assessment of the impact of the Tesco Mobile Commitment, the Commission recalls that Tesco Mobile is a 50/50 joint venture between O2 and Tesco. While in the assessment of the post-Transaction market structure, the Commission has considered the whole of the increment brought by Tesco Mobile as part of the merged entity's market share, in the quantitative analysis of the effects of the Transaction the Commission has given due account to the partial ownership of Tesco Mobile by O2.

(2940) In light of this and with respect to the Notifying Party's claim that a divestment of Tesco Mobile would eliminate price effects identified by the Commission in its quantitative analysis (see Section 8.2.1.4.b)), the Commission notes the following.

(2941) First, the Commission's quantitative analysis models competition between MNOs in the market. The inclusion of Tesco Mobile in the analysis was justified by the fact that Tesco Mobile is a joint venture between Tesco and O2 and, hence, it is partially

may be even lower than indicated in the Capacity Model. This would further strengthen the view that usage by Tesco Mobile's customers would be higher than […].

controlled by O2.[2401] Because of the joint venture, Tesco Mobile benefitted from a […], which allowed it to grow. Indeed, the Notifying Party considers that Tesco Mobile *[…]*.[2402]

(2942) The Notifying Party's analysis of the Tesco Mobile divestment does not take account of the fact that post-divestment Tesco Mobile would no longer be jointly controlled by an MNO and hence would no longer benefit from […].[2403] As noted in recital (2741) under a non-capacity based MVNO agreement, Tesco Mobile would likely have significantly higher incremental costs of acquiring additional customers and hence lower incentives to do so. Moreover, even a capacity based agreement such as the agreement envisaged under the term sheet would not lead to Tesco Mobile being able to act as an effective competitive constraint on other market participants – and in particular the remaining MNOs. As discussed in Section 9.6.1.2.c, Tesco Mobile is likely limited in its ability to grow its subscriber share (the consequences of this are discussed in the following recitals). A capacity based agreement would also have further limitations that would limit Tesco Mobile's ability to compete effectively (see recital (2931)). The Commission therefore considers that the Notifying Party's claim about the impact of the Tesco Mobile divestment in the Commission's quantitative framework cannot be accepted as this framework does not reflect the weakening of Tesco Mobile as a competitive constraint compared to the situation where Tesco Mobile is a joint venture with O2.

(2943) Second, the Notifying Party's Tesco Mobile divestment scenarios imply that Tesco Mobile would have an incentive to significantly reduce price post-divestment while O2 and Three would still significantly increase price. The net effect of overall price increases of around 1% results from these two effects almost offsetting one another.[2404] Even accepting that post-divestment, Tesco Mobile, if unconstrained, would have an incentive to be more aggressive than pre-Transaction because it would no longer internalise the effect of its prices on O2, the Commission notes that Tesco Mobile would increase its gross add share from [5-10]% pre-Transaction to [10-20]% post-divestment in the divestment scenario generated by the Notifying Party. This implies that Tesco Mobile would significantly increase the growth of its subscriber share according to the Notifying Party's simulation of the Tesco Mobile divestment.

(2944) However, Tesco Mobile would only be able to benefit from becoming more aggressive if it can actually serve the increased demand generated by its price reductions. As discussed above, with a [5-10]% Capacity Share, Tesco Mobile is unlikely to be able to grow its market share significantly beyond its current share of [5-10]% and may not be able to grow at all. This would significantly limit Tesco Mobile's incentive to become more aggressive post-divestment. In particular, if Tesco Mobile cannot grow at all, then there is no benefit for Tesco Mobile to reduce price post-divestment because lowering prices would lead to lower profits on the existing subscriber base while not bringing any increase in profits from additional subscribers.

2401 Indeed, the Commission quantitative analysis assumes a 50% control by O2 of Tesco Mobile.
2402 Reply to the Letter of Facts of 17 March 2016, paragraph 224.
2403 The Notifying Party did not provide any evidence indicating that the cost structure of Tesco Mobile would be as competitive as in the pre-divestment scenario.
2404 See Form RM, 6 April 2016, Table 1.

(2945) To illustrate this, the Commission has carried out a version of its quantitative analysis where Tesco Mobile's pricing is constrained by the fact that it cannot exceed a given gross adds share. The Commission's quantitative analysis predicts price effects as to maximize the profits post-Transaction of the operators included in the model (for given sets of diversion ratios and margins). The model assumes, however, that operators' sales are not constrained when they make their pricing decisions. The Commission modified its quantitative analysis to take into account possible constraints in Tesco Mobile's sales and growth. Specifically, the model was modified so that Tesco Mobile would no longer set its prices to maximize its profits, but rather it would set its prices to reach a given gross adds share.[2405]

(2946) Figure 136 shows the results of the Commission's quantitative analysis assuming that in the post-Transaction scenario Tesco Mobile's gross adds share would be constrained to the pre-Transaction level. These calculations show that if Tesco Mobile cannot increase its gross adds share relative to the pre-Transaction situation, the divestment would have no price reducing effect. On the contrary, the predicted price effects under this scenario remain significant, in the range of 12.5-15.1% for Three and 8.2-10.1% for O2 in the overall private segment, resulting in an overall price increase of 5.2-7.1%.

(2947) The Commission notes that these price effects are only slightly lower than the predicted price effects in the absence of the divestment. Hence, taking into account the constraints of Tesco Mobile post-divestment, the Commission's quantitative analysis supports the conclusion that the Tesco Mobile Commitment would have a limited effect in preventing price increases post-Transaction.

Figure 136: Commission's quantitative analysis – baseline scenario assuming Tesco Mobile constrained at pre-Transaction gross adds shares.

(a) Network Level				**(b) Provider Level**			
Segment	**Prepaid**	**Postpaid private**	**Overall Private**	**Segment**	**Prepaid**	**Postpaid private**	**Overall Private**
Three	41.4%	12.2%	15.1%	**Three**	31.8%	10.4%	12.5%
O2	18.4%	7.3%	10.1%	**O2**	16.2%	5.9%	8.2%
EE	12.8%	3.4%	4.5%	**EE**	6.9%	2.6%	3.1%
Vodafone	8.7%	3.3%	4.2%	**Vodafone**	5.9%	3.0%	3.4%
Tesco Mobile	11.8%	1.6%	4.5%	**Tesco Mobile**	5.8%	1.0%	2.4%
Segment Effect*	15.9%	5.3%	7.1%	**Segment Effect***	10.1%	4.2%	5.2%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(2948) As the Commission considers that given that Tesco Mobile would have limited potential to grow subscriber share with its [5-10]% Capacity Share, the impact of the Tesco Mobile divestment is likely limited. Moreover, the Commission considers that the Tesco Mobile Commitment would not allow Tesco Mobile to compete on equal footing with MNOs (see recital (2931)).

2405 The model also assumes that the competitors know about Tesco Mobile's constraints, and react accordingly. That is, in setting their prices the competitors internalise that part of the diversion ratios they would have lost to Tesco Mobile is recaptured due to Tesco Mobile's constraints.

(2949) For the same reasons, the Commission considers that, contrary to the Notifying Party's arguments, the contribution made by […], Tesco Mobile's claimed history as a challenger with innovative proposition and Tesco Mobile's past market share growth are of little importance in achieving Tesco Mobile's current position. Rather, the Commission considers that for the reasons set out in footnote 2369, the most important factor that contributed to Tesco Mobile's current position was the fact that it was a joint venture jointly controlled by O2 and does not face the same constraints as other MVNOs. On this basis, the Tesco Mobile Commitment does not allow Tesco Mobile to grow significantly or compete on an equal footing with MNOs. In any event, the Commission notes that Tesco Mobile's historical subscriber growth was only […] that of Three over a similar time horizon (with both companies having launched in the first half of 2003).

(2950) The Commission also rejects the Notifying Party's argument that the ability to increase market share is not required to be an effective competitor as such a conclusion would be inconsistent with the findings in the Statement of Objections that the importance of a competitor is not dependent on its market share and that Tesco Mobile is an important competitor.[2406] The Commission does not consider that a competitor needs to be very large to be effective. However, to be an effective constraint, such a competitor needs to have the potential to grow, as absent the ability to grow significantly, there would be no incentive to significantly reduce prices (see recital (2944)).

(2951) As regards the Notifying Party's argument that the Tesco Mobile Commitment is particularly suitable and effective to resolve concerns as the Statement of Objections finds that Tesco Mobile is a close competitor to Three, the considerations presented in recital (2747) with respect to the Second Commitments applies also to theTesco Mobile Commitment included in the Third Commitments package.

9.6.2. NEO Commitment

9.6.2.1. Notifying Party's arguments

(2952) According to the Notifying Party, the NEO Commitment would lead to the entry of an effective competitor on the market.[2407]

(2953) First, the NEO would have significant capacity reserved for its exclusive use on a perpetual basis and would be able to grow its market share significantly.[2408]

(2954) The NEO's incentives to compete would not decrease once it hits its [10-20]% capacity cap. All operators have capacity limits and the [10-20]% Capacity Share allocated to the NEO would be sufficient for the NEO to compete effectively and to constrain the merged entity and other MNOs. In addition, the NEO's Capacity Share is perpetual and it has been future proofed in that access is granted to a fixed percentage of the merged entity's network as it evolves over time. Thus, the NEO would have certainty regarding the extent to which it would be able to compete effectively against MNOs in the medium to long-term, something which the Notifying Party submits is confirmed by statements of […] made during the Oral Hearing.[2409]

[2406] Form RM, dated 6 April 2016, paragraph 101.
[2407] Form RM, dated 6 April 2016, paragraph 109.
[2408] Form RM, dated 6 April 2016, paragraph 113.
[2409] Form RM, dated 6 April 2016, paragraph 114.

(2955) Also, the Third Commitments now contain a glide path for the minimum committed capacity for years [1-5] to [1-5], thus encouraging the NEO to grow its market share considerably over this period.[2410]

(2956) As regards the market share potential of the NEO, the Notifying Party submits the following:

(2957) The NEO could be expected to reach a subscriber market share of [20-30]%-[60-70]%, depending on usage. The [60-70]% figure is derived by arguing that because the NEO would have a guaranteed capacity of […] at the end of […] and because O2 currently serves […]% of subscribers with approximately […] Gbps the NEO should be able to serve around […] O2's current share in 2021. The [20-30]% figure is derived by assuming that customers in […] would use around twice as much data per customers than today.[2411]

(2958) The Notifying Party has also proposed a third estimate which uses the expected usage of the average customer of the merged entity as a benchmark. Three expects to be around […]GB in […]. Based on this usage, the NEO could serve […] million customers with the capacity of […] Gbps to which […] is committed in […].[2412]

(2959) The Notifying Party also argues that, based on the ability of a NEO to grow its market share, it can be expected that that NEO would be an important competitive force in the United Kingdom. This would therefore address the concerns raised in the Statement of Objections. The Notifying Party states that the Commission considered Tesco Mobile (with a [5-10]% market share) to be an important competitor and Three (with a [10-20]% market share) to be an important competitive force. Similarly, the Commission concluded in case M.6992 – *Hutchison 3G UK / Telefónica Ireland* that a new entrant with a market share potential of 8-15% was sufficient to create effective competition on a market with three MNOs. In case M.7018 – *Telefónica Deutschland / E-Plus*, the Commission concluded that 10.5% market share potential were sufficient.[2413]

(2960) In this context, the Notifying Party clarifies that the competitive pressure exercised by a company is not always a function of its market share. The Notifying Party argues that the Commission itself acknowledged that a retail mobile competitor with a limited market share is capable of exercising constraints on larger MNOs and acting as an important competitive force. The Notifying Party considers that, based on the incentive structure of the NEO Commitment, the NEO would be able to compete effectively for contestable customers and would thus be able to constrain the MNOs.[2414]

(2961) Second, through the payment of fixed fees and commensurate contributions to network operation and development costs, the NEO's incentives would be aligned with those of an MNO and the NEO would be incentivised to grow its customer base and recoup its investment in capacity and act as an important competitive force. The Notifying Party submits that the NEO Commitment not only contains all the elements that the Commission has previously confirmed contribute to recreating the incentives of an MNO, but goes further as the Network Interest exists on a perpetual

2410 Form RM, dated 6 April 2016, paragraph 115.
2411 Form RM, dated 6 April 2016, paragraphs 116, 117.
2412 Form RM, dated 6 April 2016, paragraph 116.
2413 Form RM, dated 6 April 2016, paragraphs 119 to 122.
2414 Form RM, dated 6 April 2016, paragraph 123.

basis, replicates the cost structure of an MNO and provides for minimum capacity commitments.[2415]

(2962) In particular, the NEO would have a cost based structure that replicates that of an MNO. According to the Notifying Party, the cost structure even enhances the ability of the NEO to compete as the NEO does not need to invest in spectrum or network assets, and it can therefore focus its working capital on investing in customer growth. This is not a disincentive to grow because the NEO pays a significant fixed fee upfront which it would be incentivised to recover faster through rapid growth.[2416]

(2963) Also, the NEO would have significant access to cost information and influence over its costs which is claimed to further replicate the MNO-like structure of the NEO Commitment. The Commitments submitted on 6 April envisage: (i) an increase in the volume and type of financial information made available to the NEO; (ii) an increase in the ability of the NEO to influence network investment decisions; and (iii) providing the NEO with the ability to opt-out of certain investments in which it does not wish to participate. The Notifying Party explains that tome investments relating to the delivery of the core RAN network of the merged entity would not be available for the opt-out option. This reflects that any investment where the benefit automatically is provided to both the NEO and the merged entity should not (and cannot) be segregated as between the merged entity and the NEO.[2417]

(2964) The Notifying Party submits that the cost-based formula and the audit mechanism are consistent with Commission precedents.[2418]

(2965) In terms of minimum capacity commitments, the Notifying Party explains that in addition to the minimum capacity share contained in the Third Commitments, its commercial agreement with […] provides for a glide path for years [5-10] to [10-15] and that the Commission's concern that the limitation on the duration of the NEO Commitment to [1-10] years means that the NEO Commitment would lapse into a standard "pay-as-you-go" wholesale access agreement is unfounded, including because the NEO would pay an upfront fixed price to utilise its capacity and the Ongoing Charges would continue to apply. Although a [1-10] year timeframe is in line with standard business planning horizons, the Notifying Party has increased the minimum committed period by [1-5] years.[2419]

(2966) In addition, the Notifying Party submits that some respondents support the suitability of the NEO Commitment to ensure effective competition on the retail mobile telecommunications market in the United Kindgom. In particular […]has confirmed that a Network Interest provides it with every incentive to compete strongly and effectively in the long-term.[2420]

(2967) The Notifying Party also states that the Commission has repeatedly confirmed that capacity-based wholesale access transforms the incentives of an operator to be

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[2415] Form RM, dated 6 April 2016, paragraph 126.

[2416] Form RM, dated 6 April 2016, paragraph 128.

[2417] Form RM, dated 6 April 2016, paragraphs 129, 130.

[2418] Form RM, dated 6 April 2016, paragraph 132; the Notifying Party explicitly mentions Case COMP M.4730 – *Yara/Kemira Growhow*, Commitments para 4.2; case COMP M. 6258 – *Teva/Cephalon*, Commitments para 9; case COMP M.1673 – VERA/VIAG; and case COMP M. 1795 – *Vodafone/Mannesmann*, Annex 4.

[2419] Form RM, dated 6 April 2016, paragraphs 134 to 136.

[2420] Form RM, dated 6 April 2016, paragraphs 137 to 139.

similar to those of an MNO.[2421] As the NEO's incentives would be even more aligned to those of an MNO, than under the commitments in the previous cases as cited, the NEO Commitment must be considered even more suitable to ensure effective market entry to constrain the MNOs.[2422]

(2968) Third, the NEO would be able to offer wholesale access further replicating the abilities and incentives of the NEO to compete as an MNO. With the ability to offer wholesale access, the NEO would be able to use its [10-20]% Capacity Share most efficiently for its business, thus simulating the decision-making required of MNOs. Allowing the NEO to grant wholesale access provides an additional opportunity for the NEO to fill its purchased network capacity.[2423]

(2969) The ability of the NEO to offer wholesale access would also contribute to alleviating the Commission's concerns in the wholesale market as it would create an additional potential provider of wholesale access.[2424]

(2970) Fourth, while underlining that the Commission did not raise competition concerns in relation to a reduction on network quality post-Transaction, the NEO Commitment would facilitate the opportunities and the ability of the NEO to differentiate on network quality as explained in the following paragraphs.

(2971) The NEO could build its own supplemental RAN network using unlicensed spectrum or its own spectrum, which it could acquire in the upcoming spectrum auction. The NEO’s supplemental network could be composed of micro-sites, such as small cells and femto-cells, a WiFi network or other.[2425]

(2972) The Notifying Party also submits that over 80% of mobile traffic happens indoors and that MVNOs with a fixed network infrastructure are building indoor femto-cell or Wi-Fi networks and outdoor small cell networks to offload mobile traffic and reduce their dependence on wholesale costs.[2426]

(2973) Thus, by building its own supplemental RAN network and offloading a significant proportion of its mobile traffic, the NEO would have its own RAN, will be much less dependent on the macro network of the merged entity and will be able to differentiate on capacity, speeds and other quality dimensions in respect of the majority of its mobile traffic.[2427]

(2974) For instance, a micro-cell network would enable the NEO to offer a differentiated service to its customers when they are in a coverage area served by the NEO's supplemental RAN because the NEO would be able to increase its capacity by deploying existing 3G and 4G technology on small cells that would allow it to achieve higher speeds and network performance than the Merged Entity in the geographic area covered by the small cells. This would result in better network experience for NEO customers, and the NEO would be able to achieve even greater quality differentiation as 5G technology develops because small-cell networks are

[2421] Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*; and Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*.
[2422] Form RM, dated 6 April 2016, paragraphs 141, 142.
[2423] Form RM, dated 6 April 2016, paragraph 144.
[2424] Form RM, dated 6 April 2016, paragraph 144.
[2425] Form RM, dated 6 April 2016, paragraph 147.
[2426] Form RM, dated 6 April 2016, paragraph 147.
[2427] Form RM, dated 6 April 2016, paragraph 147.

expected to be crucial to the roll out of 5G as they will be the only effective means to ensure 5G coverage.[2428]

(2975) Irrespective of whether or not the NEO has its own RAN, it can differentiate on the shared RAN by using its own unique Subscriber Profile Identity ("SPID") to identify its customers which would enable the NEO to offer a number of differentiated experiences to its customers when they are in a shared RAN coverage. Those differentiated experiences include (i) cell selection whereby certain customers such as heavy data users could be directed to 4G; (ii) improved user experience for cell handover between the shared network and the NEO's own network area; (iii) configuration of the frequency and nature of contacts between the device and the network to improve power consumption; and (iv) the management of capacity allocation, which would enable the NEO to prioritise certain traffic or to offer higher quality of service to certain customers.[2429]

(2976) The NEO can request investments in the Network that are not part of the network roadmap such as LTE Advanced features aimed at improving capacity and performance. The NEO can also request the Notifying Party to deploy the NEO's spectrum on the Network (subject to regulatory and contractual constraints), additional sites, for instance in order to extend coverage or increase capacity in areas strategic to its operations or transmission.[2430]

(2977) In addition, as regards the option for the NEO to provide the Network Interest to the NEO using air interface prioritisation such as MOCN or equivalent functionality, the Notifying Party submits that MOCN would allow cell capacity to be prioritised for the NEO and would enable even further quality competition from the NEO. The Notifying Party explains that in its commercial agreement with […], the Notifying Party has agreed to make MOCN available by the end of […], but […] has elected to defer its option to take up the MOCN offer until a later date. Given the evident advantages provided by MOCN technology, the Notifying Party expects that the NEO will elect to use this option in due course.[2431]

(2978) The Notifying Party considers that the NEO would be able to influence all network quality parameters listed in the Statement of Objections, namely, (i) rate of adoption and deployment of new technologies; (ii) coverage; (iii) capacity in the RAN; (iv) capacity in the backhaul; (v) traffic prioritisation and RRM; (vi) configuration, performance monitoring and fault management; and (vii) innovative services and applications involving interoperability with Wi-Fi, OTT services, roaming etc..[2432]

(2979) The Notifying Party also reacts to the comments provided by Ofcom on the unsuitability of a capacity-based remedy and considers that Ofcom's concerns are not valid. On the other hand, the Notifying Party submits that the views expressed by potential remedy takers, and in particular […], further substantiate the Notfying Party's views on the suitability of the NEO Commitment.[2433]

[2428] Form RM, dated 6 April 2016, paragraph 147.
[2429] Form RM, dated 6 April 2016, paragraph 147.
[2430] Form RM, dated 6 April 2016, paragraph 147.
[2431] Form RM, dated 6 April 2016, paragraphs 147, 148.
[2432] Form RM, dated 6 April 2016, paragraph 151 and Table 2.
[2433] Form RM, dated 6 April 2016, paragraps 152 to 155 and Table 3.

(2980) Fifth, in relation to the impact of the NEO Commitment on the UPP framework, the Notifying Party submits the following: In the data room report,[2434] the Notifying Party presents a UPP model adapted to account for the impact of entry post-Transaction (the "entry adapted UPP model"). According to the Notifying Party, assuming a post-Transaction entry by an entrant that would attract a gross add share of [10-20]%, would result in a price decrease by 0.2% in postpaid and a price increase by 2.7% in prepaid. The assumed [10-20]% gross add share is a level similar to the level of diversion that BT Mobile is attracting from […]. Due to the NEO's incentives to grow market share, it can be expected that the NEO would be at least as effective as BT Mobile's market entry. The results presented in the Notifying Party's data room report would hence be cogent evidence that the Commission's finding of a SIEC in respect of the retail market in the Statement of Objections would be removed by the NEO Commitment.[2435]

(2981) Sixth, the Notifying Party submits that the Commission has explicitly and repeatedly confirmed that a remedy based on a capacity-based wholesale model is sufficient to remove the concerns arising from the elimination of one of four pre-existing MNOs. This must apply all the more in the present case as the NEO Commitment goes further than the precedents.[2436]

(2982) According to the Notifying Party, the Commission has a legal duty to act in a consistent manner in the application of the Merger Regulation and when assessing the sufficiency of remedy proposals. The Notifying Party also notes that the Commission is defending its conditional clearance decision in case M.7018 – *Telefónica Deutschland / E-Plus* in court.[2437]

(2983) Also, the Notifying Party considers that there is no evidence that the commitments accepted by the Commission in previous cases in the mobile telecoms sector cases are ineffective.[2438]

(2984) There is furthermore no evidence that there are any characteristics in the United Kingdom's mobile market that would justify a different commitment compared to the commitments accepted in case M.6992 – *Hutchison 3G UK / Telefónica Ireland* and case M.7018 – *Telefónica Deutschland / E-Plus*.

(2985) Seventh, the Notifying Party submits that the NEO will be able to compete even more effectively than an MVNO, in particular due to its incentive-based market entry structure. In the Notifying Party's view, MNOs today are already constrained by MVNOs, in particular, a significant number of Three customers switch to MVNOs.[2439]

(2986) In any event, according to the Notifying Party, the five limitations identified in the Statement of Objections on MVNOs' ability to compete do not apply to the NEO. The NEO will not be limited in its ability to compete by any dependency on wholesale access terms of the merged entity because its cost structure and its decision making in relation to the Network are designed to replicate that of an MNO.

2434 Report for the data room that opened on 5 February 2016, prepared by the Notifying Party's economic advisers.

2435 Form RM, dated 6 April 2016, paragraphs 157 and 158.

2436 Form RM, dated 6 April 2016, paragraph 159.

2437 Form RM, dated 6 April 2016, paragraph 160.

2438 Form RM, dated 6 April 2016, paragraph 161.

2439 Form RM, dated 6 April 2016, paragraphs 162, 163.

The NEO will not have difficulties to compete with MNOs on large data packages because of the large amount of capacity it has available and its freedom to design its own tariffs. The NEO will not be put at a disadvantage in terms of access to new technologies as it will have non-discriminatory access to all elements of the Network and future radio technologies, features and services as deployed in the Network. The NEO will also be able to differentiate on network quality. According to the Notifying Party this applies in particular to 5G because small-cell networks are expected to be crucial to the roll out of 5G as they will be the only effective means to ensure 5G coverage. Finally, the NEO is not restricted in the customer groups it would target.[2440]

(2987) Moreover, […]who signed an agreement with the Notifying Party under the terms of the NEO Commitment has committed an investment of GBP […] billion which would be strong evidence of its clear incentive to use its Network Interest in the long-term (even after the [10-15] year minimum period).[2441]

(2988) As regards the O2 UK Divestment Option, the Notifying Party submits that this option would allow the NEO to become an MNO, although it considers that market entry as a NEO would be more effective and that the competition concerns are entirely eliminated irrespective of the exercise of the O2 UK Divestment Option. For this reason, the divestment of O2 is only an option. The Notifying Party notes that similar options have been accepted in the past, including in case M.7018 – *Telefónica Deutschland / E-Plus* and that also there the exercise of the option was not considered necessary. The assets included in the O2 UK Divestment Option are are more extensive than the assets made available in previous cases and it follows from this alone that the option for the NEO to acquire O2 must be sufficient to resolve the competition concerns.[2442]

(2989) The Notifying Party furthermore considers that the assets included, notably O2's 50% stake in CTIL as well as O2's contractual interests and obligations in relation to the Beacon agreements as well as the Target Spectrum are suitable and sufficient. In addition the NEO would have the opportunity to acquire additional spectrum in the upcoming spectrum auctions.[2443]

(2990) As regards the time period of […] months within which the NEO would have to exercise the O2 UK Divestment Option, the Notifying Party explains that this period is not longer as the Notifying Party would have to have clarity within a reasonable time frame whether the option would be exercised.[2444]

(2991) In addition, the Notifying Party submits that the O2 UK Divesmtent Option does not create uncertainty for O2's network sharing partner Vodafone. In particular, the O2 UK Divesmtent Option is without prejudice to the commitment in relation to the Network Plan.[2445]

(2992) The Notifying Party considers that the Third Commitments resolve the competition concerns on the retail market in line with the Remedies Notice and Commission practice. In particular, (i) the Third Commitments must be seen as structural in

[2440] Form RM, dated 6 April 2016, paragraphs 166 to 174.
[2441] Form RM, dated 6 April 2016, paragraphs 118, 119.
[2442] Form RM, dated 6 April 2016, paragraphs 175, 176.
[2443] Form RM, dated 6 April 2016, paragraph 177.
[2444] Form RM, dated 6 April 2016, paragraph 178.
[2445] Form RM, dated 6 April 2016, paragraph 177.

nature. In any event, the categorisation of remedies as behavioural or structural is immaterial; (ii) the NEO and Tesco Mobile will be enabled and incentivised to replicate the constraints 'lost' through the Transaction ; (iii) the Third Commitments resolve the unilateral concerns on the retail market; (iv) the Third Commitments no longer need to address the co-ordinated effects concerns; (v) the Third Commitments enable the NEO, Tesco Mobile and current and future MVNOs hosted on the Network to benefit from the Transaction synergies thereby further enhancing competition on the market; and (vi) the Third Commitments go beyond the commitments accepted in previous mobile mergers.[2446]

(2993) In particular in relation to the last point, the Notifying Party submits that, based on a comparison of UPP predictions, gross adds shares and extent of MVNO competition on the market, the competition concerns in the present case are lower than in previous cases.[2447]

(2994) In relation to the combined impact of the remedies, the Notifying Party claims that the combined effect of the Tesco Mobile and NEO commitments would lead to post-Transaction price decreases. A combination of the Tesco Mobile divestment and assuming a NEO reaching a [5-10]% market share, would result in a 1.9% price decrease in the overall private segment, based on the Commission's assumption in the baseline scenario presented in the Statement of Objections. A combination of the Tesco Mobile divestment and assuming a NEO reaching a [10-20]% market share would result in a 4.9% price decrease in the overall private segment.[2448]

9.6.2.2. Commission's assessment

(2995) The Commission notes that the NEO Commitment contained in the Third Commitments has been amended in several respects (see Section 9.5.2). The Commission also notes that the Notifying Party and […]negotiated a term sheet regarding the grant of a perpetual fractional network right ("Network Right") in the Network. The term sheet was signed on […].[2449]

(2996) The term sheet increases the likelihood that […]could become a NEO and would be granted a Network Right to use [10-20]% of Network Capacity. The term sheet addresses some of the uncertainties, including in relation to some of the key commercial terms at which the Network Right would be granted, that were identified already in the Commission's assessment of the Second Commitments (see Section 9.4.2.2). Nevertheless, the Commission does not consider that the fact that a term sheet has been agreed between the Notifying Party and […]ensures that there will be actual entry of new competitors and that such entry is timely and likely. Indeed, although the term sheet contains certain clauses that the Notifying Party and […]consider to be binding in the sense that they are "*provisions which the parties have commercially agreed not to re-open in the negotiation of the Agreement (**Binding Provisions**) (although further detail and drafting may be required)*",[2450] the term sheet is not a final signed agreement. In addition, the term sheet was not submitted as a formal part of the Third Commitments and, therefore, does not form part of the Third Commitments. As a result, the extent to which the term sheet can be

2446 Form RM, dated 6 April 2016, paragraphs 183 to 212.
2447 Form RM, dated 6 April 2016, paragraphs 200 to 205.
2448 Form RM, dated 6 April 2016, paragraphs 193 to 196.
2449 […].
2450 […].

relied upon is limited and the term sheet can, thus, not be used as the benchmark for assessing whether a final agreement would be in line with the Commitments. Indeed, there is no certainty that the arrangements agreed upon between […]and the Notifying Party as submitted to the Commission for approval would be in line with the term sheet agreed.

(2997) Nevertheless, the term sheet either does not address or does not address fully a number of elements that were already considered problematic in relation to the Second Commitments. The Commission considers, therefore, that those elements, which will be described in the following in Sections 9.6.2.2.a) to 9.6.2.2.g) remain problematic under the Third Commitments.

(2998) Therefore, for the reasons set out in the following in Sections 9.6.2.2.a) to 9.6.2.2.g), the Commission does not consider that the NEO Commitment, even if taken together with the Tesco Mobile Commitment and the Virgin Media Committment, addresses the competition concerns raised by the Commission in section 8.2.1 in their entirety and would not be comprehensive and effective from all points of view.

a) Network Interest

(2999) Despite the fact that the Network Interest is made available to the NEO(s) perpetually, the NEO Commitment is a long term access commitment that, as set out in recitals (3006) to (3013), contains numerous optional elements and uncertainties. As will be further explained in recitals (3000) to (3005), it also entails a long term commercial and technical dependence of the NEO(s) on the host MNO. In light of all those elements, the Commission considers that the NEO Commitment is inadequate to address the competition concerns resulting from the Transaction.

(3000) The Commission acknowledges that the Notifying Party improved the provisions of the NEO Commitment that relate to network investments (see recitals (2890) to (2893)). Nevertheless, the Commission considers that the NEO continues to be technologically dependent on the Notifying Party.[2451]

(3001) In particular, the improvements resulting from the possibility for the NEO to opt out of certain network investments appear to be limited. The possibility to opt out does not apply to features or services which would lead to an improvement in coverage, capacity, speed or cost of the network. While it is unclear what investments exactly would be exempted from the possibility to opt out, it would appear that those investments could be major, such as the acquisition of spectrum. The Commission notes that the exact scope of the limitations to the opt-out is not clearly defined in the term sheet agreed between the Notifying Party and […]either. A NEO's dependency on the investment decisions of the Notifying Party might influence a NEO's decision as to the Capacity Share it would elect to utilize over time. For example, a NEO might decide to not elect more than the minimum capacity in order to keep its financial participation in expensive network investments such as the acquisition of spectrum, for which an opt-out might not be possible, as limited as possible. This dependency constitutes a fundamental difference between a NEO and an MNO in the long run as a NEO would not only be required to reimburse the Notifying Party for the costs for the capacity that it intends to utilise, but also for an undefined return on investment, while an MNO can always invest into capacity and get access to it at

[2451] For the Commission's views rearding the ability of a NEO to differentiate on network quality, please see section 9.6.2.2.c).

cost. As a result, a NEO is unlikely to be able to compete effectively against other market participants, and in particular against MNOs.

(3002) Also, all unilateral investments requested by the NEO and a large number of differentiation possibilities of the NEO must either be carried out by the Notifying Party or require its cooperation. The Notifying Party can oppose them in case of material adverse effect on the carriage of traffic over the Network or on the quality, coverage or availability of the services being provided by the Notifying Party or any other operator using the Network. The NEO would have to resort to the newly introduced fast-track dispute resolution mechanism in case of such opposition. The Commission notes that the mere presence of a fast-track dispute resolution mechanism for disputes relating to unilateral investments by the NEO shows the technological dependency of the NEO on its host MNO and underpins the Commission's view that a NEO's ability to exercise an effective competitive constraint would be limited – especially as compared to the possible competitive constraint exercisable by an MNO. In any event, questions on the existence of a material adverse effect on carriage of traffic over the Network or on quality, coverage or availability of services which the experts would be called upon are highly technical and the NEO Commitment provides little, if any guidance and definition in relation to those terms.

(3003) The Commission also considers that the amendments to the auditing of the Ongoing Charges are insufficient to alleviate the concern that a NEO would be dependent on the merged entity's ability to correctly identify the relevant costs attributable to that NEO. Indeed, the substantive tasks of the auditor that can be jointly appointed by the Notifying Party and the NEO upon request of the NEO have not changed. While the Second Commitments provided that the auditor would have to determine the "*accuracy*" of the Ongoing Charges, the Third Commitments stipulate essentially the same in that the auditor would have to determine that the Ongoing Charges "*have been accurately calculated and that all costs are fairly presented*".

(3004) Moreover, the Third Commitments do not contain any provisions alleviating the Commission's concern in relation to the difficulty to future proof the terms of a NEO. As set out in recital (2771), the possibility that a NEO varies in size over time makes the calculation of its cost over time very complex. Moreover, it is unknown how the mobile telecoms markets in the United Kingdom would develop in the long run. In particular, it is impossible to address, once and for all, all issues that might potentially come up in the future in an agreement to be concluded between the Notifying Party and a NEO and that would be subject to approval by the Commission.

(3005) Finally, as regards the Notifying Party's claim that the NEO would be able to compete even more effectively than an MVNO and that the five limitations identified in the Statement of Objections on MVNOs' ability to compete do not apply to the NEO, the Commission considers the following: The Commission assesses whether the NEO would be able to compete so as to contribute to offsetting the loss of competition resulting from the Transaction and not whether it is more or less competitive than an MVNO. In any event, for the reasons set out in this Section and in Section 9.6.2.2.c), the Commission considers that the NEO Commitment suffers from a number of shortcomings, including the dependency on its host MNO for wholesale access and for its ability to differentiate on network quality that render the NEO Commitment inadequate to contribute to offsetting the loss of competition resulting from the Transaction.

(3006) The Commission considers that, despite the amendments made, many elements of the NEO Commitment as far as the Network Interest is concerned continue to be either optional, with no indication as to whether they are likely to be exercised, or not defined sufficiently to enable the Commission to determine with the requisite degree of confidence whether a NEO could be able to operate viably and compete effectively for retail customers in the short, medium and long term.

(3007) Indeed, the actual amount and the measurement of capacity that would be made available to a NEO over time remains unclear and uncertain with the exception of the minimum figures (in Gbps) specified in the Commitments for year [5-10] onwards. The definition of Network Capacity to which the Capacity Share is applied is defined as "realisable capacity". "Realisable capacity" is in turn defined as the *"peak throughput in the Network busy hour that maintains the desired customer experience […]"*.[2452] This does not give rise to a clear and well defined definition of Network Capacity that could be easily monitored. In particular, it is not clear whether realisable capacity refers to actual peak throughput in the Network busy hour in a given period (which would depend on actual usage and would exclude any spare capacity on the Network) or whether it is based on theoretical forecast of realisable capacity (which might or might not include expected spare capacity on the Network), although it appears likely that the concept of realisable capacity is intended to refer to the former. It is also unclear how realisable capacity would be measured and monitored. Moreover, the forecast realisable capacity in Annex II of the Commitment is also only illustrative without guarantee that the forecast realisable capacity would be reached. It is also unclear how the NEO's usage of the Capacity Share would be measured, in particular whether the NEO's throughput would be based on the busiest hour of a given month (and whether this would be the busiest hour for the NEO or the Network overall) or whether the NEO's throughput would be measured as the average over the weeks of a month.

(3008) The cost structure of the Ongoing Charges as contained in the Third Commitments was amended so as to be "cost-based". However, the elements to be included in those Ongoing Charges are not defined at all anymore but left to "*be agreed upon*" between the Notifying Party and the NEO, with the monitoring trustee stepping in in case of disagreement. The Commission acknowledges that further details on the structure of the Ongoing Charges are set out in the term sheet agreed upon by the Notifying Party and […], notwithstanding the position adopted by the Commission with respect to the term sheet as set out in recitals (2996) and (2997).

(3009) The Ongoing Charges continue to include a return on capital, that is to say a mark-up to be paid by a NEO to the Notifying Party. The NEO Commitment stipulates that this mark-up would be cost-based but based on the wording of the Third Commitments, it is unclear what the mark-up would ultimately amount to. The Commission still considers that such a mark-up could disincentivise the NEO from utilising more than the minimum capacity it is obliged to purchase. Indeed, in the term sheet agreed between the Notifying Party and […], the return on capital is […]%, which is significantly higher than the cost of capital of […]%[2453] which the Notifying Party used in internal calculations. Thus, if […]were indeed to become a

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[2452] Third Commitments, paragraph 1 (Definitions) and Annex 2, Section B.1.

[2453] Internal presentation of Three titled "[…]" (ID010104222.00001).

NEO, it would have higher costs than the Notifying Party, which would put it at a competitive disadvantage vis-à-vis the Notifying Party (see also recital (2759)).

(3010) There is also significant uncertainty as to the future capacity of the NEO. Indeed, there is no guarantee that the NEO would actually obtain the full [10-20]% Capacity Share other than during […] of year [1-5]. Before that date, the available Capacity Share for the NEO is lower (following a glide path starting at [0-10]% in year [1-5] to [10-20]% in year [1-5]). The NEO's minimum commitment follows an even slower glide path that starts with [0-5]% in year [1-5] and reaches only [5-15]% in year [1-5]. For years [5-10] to [10-15] the NEO commits to the higher of the committed capacity (in Gbps) in […] (year [1-5]) and a minimum level in Gbps specified as […] Gbps in years [5-10] to [5-10] and […] Gbps for years [5-10] to [10-15]. While the NEO hence has a minimum committed capacity in Gbps for years [5-10] to [10-15], there is no obligation by the NEO to maintain its share of capacity (in percentage of the combined entity's network capacity). If the realisable capacity of the merged entity's network exhibits stronger growth than expected during these years, the minimum commitment by the NEO might decline to a percentage share that is significantly smaller than [10-20]%. As of year [10-15] the NEO would even be free to agree with H3GI on any minimum Capacity Share that it would deem appropriate with no minimum commitment.

(3011) As regards the Notifying Party's argument that, if […]were to become the NEO, it would have an interest to continue competing aggressively also after year [10-15] in light of its financial commitment of GBP […] billion, the Commission notes that such financial commitment of […]is not included in the Third Commitments. As such, it cannot be taken into account when assessing […]'s incentives to compete after year [10-15] if it were to become the NEO.

(3012) Furthermore, in addition to the Target Spectrum Use Option and the O2 UK Divestment option, a number of other elements offered to the NEO continue to be optional (see also recital (2777)). Those elements include notably the possibility of a NEO to opt for a so-called MOCN solution, to carry out investments in the network at its own cost and to build its own supplemental network. The Commission maintains its view that there is no certainty or even likelihood that a NEO would actually take up those options. They cannot therefore be taken into account when assessing whether the Third Commitments address the competition concerns to the requisite legal standard.

(3013) The Commission notes that all elements that are optional in the NEO commitment remain optional also in the term sheet agreed between the Notifying Party and […]. Thus, notwithstanding the position adopted by the Commission with respect to the term sheet as set out in recitals (2996) and (2997), the Commission is not in a position to assess the likelihood of these options being exercised, and, therefore, the Commission is not able to take them into account for the purposes of its assessment of the Third Commitments (see also recital (2777)). In addition, the O2 UK Divestment Option would have to be exercised within […] months following conclusion of the NEO agreement (foreseen for […] at the latest) while at the same time the term sheet foresees the transition from a national roaming agreement to the NEO agreement for […], and thus more than […] after the conclusion of the NEO agreement. […]would therefore have to decide whether or not to acquire O2 within less than […] following its technical launch, a time period which appears to be very short in light of the significant commitment to become an MNO to be made, and which weighs against the likelihood of this option being exercised.

b) Subscriber share potential of the NEO under the Third Commitments

(3014) The Commission considers that the potential market share figures proposed by the Notifying Party which compare current absolute capacity or usage figures with future capacity to derive future market share potential are misleading and not probative for the reasons set out in Section 9.6.1.1 above. Assuming for illustrative purposes that the merged entity's network serves [50-60]% of United Kingdom users (which the Commission considers to overstate the likely subscriber share of the merged entity's network),[2454] a Capacity Share of [10-20]% for the NEO would, at the average usage profile, correspond to a maximum subscriber share of [10-20]%. The Commission hence rejects the Notifying Party's estimates that the NEO Commitment allows subscriber shares any higher than [10-20]%.

(3015) The Commission considers the third estimate of the Notifying Party that […]could serve […] million potential subscribers with the capacity provided at the end of year [1-5] of the NEO Commitment ([…]) to be more reasonable, although the precise number of subscribers and the corresponding subscriber share depends on usage of […]subscribers. This estimate would correspond to a potential subscriber share for the NEO of [5-10]% circa.[2455]

(3016) The Commission therefore considers that the NEO remedy taker has a greater growth potential than Tesco Mobile, also because […]as a likely remedy taker has not […]. Nevertheless, even for […], the additional subscriber share potential enabled through the remedy is only the difference between the likely subscriber growth with the remedy compared to the likely subscriber growth that […]would obtain absent the remedy.

(3017) Indeed, absent the Transaction, […]expects to acquire a significant number of customers. In the response to the Letter of Facts of 17 March 2016, O2 argues that Sky would acquire […] million customers by the end of 2020. While […]may be able to acquire more customers over the same time horizon under the NEO remedy, only the increment in the estimated number of customers can be attributed to the remedy.

(3018) The Notifying Party argues that, based on the ability of a NEO to grow its market share, it can be expected that that NEO would be an important competitive force in the United Kingdom. The Commission considers that the notion of an important competitive force cannot be reduced to the market share of the player concerned, but has to take into account also the behaviour of this player on the market and its ability to influence the competitive dynamics of the markets beyond its market share. It seems therefore unlikely that the NEO, which as previously explained, would be for a number of aspects largely dependant on its host MNO, would be able to influence the competitive dynamics in the market in a way that is sufficient to address the competition concerns identified.

c) Opportunities and the ability of the NEO to differentiate on network quality

(3019) As regards the arguments put forward by the Notifying Party in relation to the opportunities and ability of the NEO to differentiate on network quality, the Commission recalls that those are indeed only options for the NEO to do so and it is

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[2454] See footnote 2396.

[2455] Based on subscriber forecasts from the GSMA's Wireless Intelligence. See sheet "Operating Model" of Annex 158 to the Form CO.

uncertain whether the NEO would actually have the incentives to exercise those options. As such, the Commission is not able to take those options into account when assessing whether the Third Commitments address the competition concerns to the requisite legal standard (see also recital (3011)).

(3020) Nevertheless, for the reasons set out in recitals (3021) to (3028), the Commission considers that the opportunities and ability of the NEO to differentiate on network quality claimed by the Notifying Party are not capable of addressing the competition concerns raised in the present Decision.

(3021) As regards the Notifying Party's claim that the NEO could potentially differentiate its offer by building its own supplemental RAN network using unlicensed or own spectrum, and which could be composed of micro-sites, such as small/femto cells or Wi-Fi, the Commission first notes that there is a high degree of uncertainty as to whether such plan would be feasible as it would depend on whether the NEO would be able to acquire the necessary spectrum to deploy such micro-sites and would involve significant additional investment on its part, especially in relation to outdoor small cells. The Notifying Party in this respect considers […].[2456] In Annex C, the Commission recognises that there are uncertainties around the cost, benefits and technical developments of 4G and 5G small cells as that technology is still under development.

(3022) Second, as shown by the Notifying Party itself […]. However, as explained in paragraphs 8.2.1.3 b) the difficulties encountered by the non-MNOs to compete on data due to their wholesale costs are not alleviated by such offload. This is because offload via Wi-Fi takes place only indoors and not when the customer is on the move. Moreover, as shown in paragraphs 1074-1075, offloading over Wi-Fi does not procure the non-MNOs with any competitive advantage or help them differentiate on network quality, as the MNOs are also offloading a similar amount of their traffic onto fixed networks.

(3023) The Notifying Party also submits that if the NEO would have its own RAN it would be able to differentiate on capacity, speeds and other quality dimensions. Once more, the Commission notes the significant inconsistency between the Notifying Party's argument that such femto/small cell solutions would help improve capacity on NEO's potential network, but […]. As shown in paragraph 1075, Three considers that femto cells/small cells solutions are "*[…]*".

(3024) As set out in Annex C, the Commission is of the view that these solutions are complementary to improve capacity in targeted areas, where customers are likely to experience congestion. In the future, small cells are likely to be deployed on high frequency spectrum such as 3.4 GHz, which would soon be made available in the United Kingdom, or even on higher frequencies for 5G small cells. This means that their coverage footprint would be relatively small and customers would keep relying significantly on the macro-network for their data connections.

(3025) Finally, the Commission considers that even if the NEO could achieve greater network capacity through the roll-out of small/femto cells based on 5G technology […], at this stage it remains uncertain to what extent this would allow the NEO to complete effectively, especially in the short to medium term. Standardisation process

[2456] Reply to the Statement of Objections, Annex 1, section 3.3.1.

has just begun and 5G standards and associated technology and equipment should be available at the earliest as of 2020.

(3026) In relation to the NEO's ability to identify its customers by making use of the Subscriber Profile Identity ("SPID"), the Commission acknowledges that there are some features offered by the LTE-related standards which would allow the NEO to retain control of a certain number of aspects on the subscriber experience. However, the Commission considers these to have limited impact. In relation to the first feature about heavy data-users being diverted to 4G, the Commission notes that this is irrelevant to customers with 4G-capable handsets in 4G areas who already are the majority of customers. These would likely connect to 4G directly. The Notifying Party itself in the Reply to the Statement of Objections submits that "*[…] the vast majority of customers will have 4G capable devices which will use the 4G network in preference to the 3G network even where the 4G network is congested.*".[2457]

(3027) Some of the remaining features, for example those allowing smooth customers' handover to the NEO's own access network, rely on the existence of such network. As set out in recital (3021), it is very uncertain whether the NEO would deploy its own network, and even if it does, such additional RAN would likely target limited urban areas to provide additional capacity to a limited number of customers. Although access to subscribers' information could allow the NEO to prioritise traffic differently, the Commission remains of the view that these features do not change or shift the NEO's high dependency on the network-related choices and investments of the Notifying Party. For example, if there is insufficient capacity to serve the NEO's customers in a certain area because coverage or new technology deployments have been delayed or postponed by Three, prioritising traffic or allocating capacity may have very limited impact on the customers' experience.

(3028) In relation to the option for the NEO to have the Network Interest provided using air interface prioritisation such as MOCN or equivalent functionality, the Commission considers that next to the NEO's dependence on cooperation by the Notifying Party regarding implementation, that implementation also requires receipt of any third party consents, including likely from Vodafone due to the fact that the air interface prioritisation solution would be implemented on the Beacon network. The Notifying Party itself acknowledges the need for third party consents at paragraph 45 of the Form RM. As a result, it is very uncertain whether a NEO would be able to differentiate itself based on an air interface prioritisation solution.

d) Alleged competitive impact of the NEO Commitments in the UPP framework

(3029) The Commission rejects the Notifying Party's view that its entry adapted UPP model can correctly capture the effectiveness of the NEO Commitment for removing competition concerns on the retail market for the following reasons.

(3030) First, as noted in Section 9.6.1.2.d, the Commission's quantitative analysis presented in the Statement of Objections and in the present Decision models competition between MNOs. The Notifying Party's modelling of the alleged competitive impact of the NEO Commitment in the Commission's quantitative framework does not reflect shortcomings of the NEO Commitment that are discussed in Sections 9.6.2.2.a, 9.6.2.2.c and 9.4.2.2.a. In the Commission's view, this in itself invalidates

[2457] Paragraph 197 of Annex 1 to the Reply to the Statement of Objections.

the Notifying Party's quantification of the alleged competitive impact of the NEO Commitments in the UPP framework.

(3031) Second, the Notifying Party’s adaptions to the Commission’s quantitative model are based on arbitrary assumptions, such as […]. In contrast to the Commission’s quantitative analysis, which is based on measured diversion ratios, margins, and observed gross add shares, the Notifying Party’s modelling of the entrant is hence not based on any observable fact. It is instead purely based on assumptions.

(3032) Moreover, the Notifying Party’s entry modelling ignores the fact that potential remedy takers may be already present in the market or may enter the market even in the absence of the Transaction. For instance, […], which was presented by the Notifying Party as a potential remedy taker, […]. Should the remedy taker be already present in the market or enter the United Kingdom's mobile market even in the absence of the Transaction, the competitive impact of the NEO remedy would be even more significantly overstated by the Notifying Party’s entry modelling. This is because the model assumes that no entry would occur in the absence of the Transaction.

(3033) To illustrate this point, the Commission has modified the Notifying Party's modelling of entry to isolate the incremental competitive impact brought by an entrant under a NEO model compared to the competitive impact that such entrant would have had in any event by entering under a different non-capacity based model (for instance a standard "pay-as-you-go" wholesale access model).

(3034) To this end, the Commission has taken the Notifying Party's calibration of the post-Transaction scenario with an entrant at [10-20]% gross add share and has looked at the impact of jointly (i) de-merging Three and O2 and (ii) changing the marginal costs of the entrant to artificially reduce its share to [5-10]%, as a proxy for an entrant that would have attained a lower gross add share in the absence of the Transaction and absent the NEO remedy.[2458]

(3035) When this scenario is used as a proxy for the situation absent the Transaction (that is Three and O2 remain independent while there would be an entrant that reaches a [5-10]% subscriber share absent the Transaction), it is predicted that the Transaction between Three and O2 would, after entry by a NEO remedy taker that obtains a [10-20]% gross add share, still lead to a 3.6% price increase. This is significantly higher than the Notifying Party's claim that NEO entry (with a [10-20]% gross add share) would reduce the price effects from the Transaction to 0.3% of private customers overall.[2459]

2458 The choice gross add share attained by the entrant with and without the remedy is purely for illustrative purposes. In its purely illustrative example, the Commission has looked at the impact of the NEO in case the taker is a non-merger specific entrant with gross add share of [5-10]% without remedy and of [10-20]% with remedy. A similar illustrative example could be based on an entrant with different gross add shares (for instance 3% without remedy and 6% with the remedy). The purpose is simply to show that even if the remedy allows the entrant to double its share, the fact that the entrant would have in any event been in market significantly reduces the impact of the remedy compared to the impact assuming by the Notifying Party.

2459 The Commission notes that this modelling is based on the use of contribution margins, while the relevant measure of margins adopted by the Commission is the short run incremental margins. This is because the purpose of this illustrative example is simply to produce a revised price increase figure (3.6%) that can be compared to the Notifying Party's estimation (based on contribution marigns) that the price effect of the merger in the context of an entrant with [10-20]% share is only 0.3%.

(3036) As this further modelling remains based on arbitrary assumptions initially introduced by the Notifying Party to model the effect of the NEO entry, the Commission does not consider that this figure would provide a reliable estimate of the impact of the NEO Commitment in the Commission's quantitative analysis. However, the Commission considers that the results illustrate that, even if the Notifying Party's entry model were relied upon for the assessment of the competitive impact of the NEO, the effect of entry by a NEO that would enter the market also absent the Transaction under a less advantageous non-MNO model is much more limited than the Notifying Party's claims suggest and would not *"eradicate the predicted post-merger price increases"* as suggested by the Notifying Party.

(3037) For these reasons, the Commission considers that the Notifying Party's modelling of entry in the data room report is arbitrary and cannot model the effect of the NEO remedy. The Commission also notes that even if it could be relied upon, the Notifying Party's conclusions based on the model would grossly overstate the competitive impact of a NEO entrant if, as in the case of […], the entrant would also enter in the absence of the Transaction. As a result, the Notifying Party's adaptations to the model cannot be taken into account and, therefore, the Notifying Party has not demonstrated that the NEO Commitment would address the competition concerns with respect to the Commission's quantitative analysis.

e) Alleged combined impact of the Tesco Mobile and NEO commitments

(3038) As discussed in Section 9.6.1.2.d, 9.6.2.2.d and 9.6.2.2.e, the Commission considers that the alleged competitive impacts of the Tesco Mobile and NEO commitments as estimated by the Notifying Party in a UPP framework are both overstated. As explained in those sections, the Commission considers that Tesco Mobile would have limited potential to grow with its [0-10]% Capacity Share and would have limited competitive impact for that reasons. The impact of the NEO is also limited, in particular because the NEO candidate with which the Notifying Party has entered into a term sheet, […]. Moreover, the Commission considers that the Tesco Mobile Commitment and the NEO Commitment do not allow Tesco Mobile and the NEO to be as effective competitors as MNOs as is assumed by the proposed modelling by the Notifying Party. The Commission therefore considers that even the combination of such commitments is not enough to address the competitive concerns identified.

f) Target Spectrum Use Option

(3039) The Target Spectrum Use Option remains unchanged as compared to the Second Commitments and the Commission continues to consider that it is merely an option, which is uncertain and unlikely to be exercised and therefore the Commission is not able to take it into account in the assessment whether the Third Commitments, as a whole, would remove the competition concerns in this case entirely and with the requisite degree of certainty. Furthermore, even if a NEO were to exercise the Target Spectrum Use Option, for the reasons set out in recitals (2778) to (2781), the Commission considers that that NEO would not become a more important competitor if it were to provide its retail mobile telecommunications services to customers over the Target Spectrum as opposed to over the Network Interest.

g) O2 UK Divestment Option

(3040) As regards the O2 UK Divestment Option, the Commission notes that also this option remains unchanged with the exception of the fact that the possible transfer of O2 to the NEO is now made conditional upon the completion of the Beacon network in line with the Beacon arrangements. The Commission acknowledges that this element of the NEO Commitment eliminates contradiction with the Network Sharing

Commitments in relation to Vodafone (see Section 9.4.2.3.a)). However, the Commission's assessment as to the remainder of the O2 UK Divestment Option as set out in recitals (2782) to (2785) continues to apply. Indeed, the Commission considers that the O2 UK Divestment Option is merely an option that is unlikely to be exercised and therefore the Commission is not able to take it into account in the assessment of whether the Third Commitments, as a whole, would remove the competition concerns in this case entirely and with the requisite degree of certainty. Furthermore, even if a NEO were to exercise the O2 UK Divestment Option, the Commission considers that that NEO would not be able to operate competitively for the reasons set out in Section 9.4.2.1.c).

h) The Third Commitments and the commitments accepted in previous mobile mergers

(3041) In relation to the Notifying Party's claims, the Commission notes the following.

(3042) The Commission recalls that, according to paragraph 16 of the Remedies Notice, the question of whether a remedy and, more specifically, which kind of remedy is suitable to eliminate competition concerns has to be assessed on a case-by-case basis (see also Section 9.1).

(3043) The Commission notes that those elements of the Third Commitments that constitute capacity based wholesale access agreements or offers to enter into such agreements, as well as the Wholesale Market Commitment, are similar to some elements of the commitments accepted in its decisions in case M.6992 – *Hutchison 3G UK / Telefónica Ireland* and case M.7018 – *Telefónica Deutschland / E-Plus*.[2460] In those cases, both mergers in the mobile telecommunications sector, the Commission considered, at the time of the decision, that the commitments proposed addressed the competition concerns to the requisite legal standard.

(3044) The Commission recalls first that the EU Courts have consistently held that, when the Commission takes a decision on the compatibility of a concentration with the internal market, an applicant is not entitled to call the Commission’s findings into question on the ground that they differ from those made previously in a different case, on the basis of a different notification and a different file, even where the markets at issue in the two cases are similar, or even identical.[2461]

(3045) Additionally, and for the sake of completeness, the Commission notes that, given the national scope of the relevant markets, the different characteristics of each national market (including, but not limited to, the stage of development of each market, the presence or absence of network sharing agreements etc.) the differences between the market players involved in each case (including, but not limited to, the size, market position, competitive strategy, network development, financial strength, etc.), the role played by the other MNOs and the non-MNOs, every case requires a very specific individual assessment. While the framework of analysis used by the Commission in all these cases is consistent, the application of such framework to the specific facts of every given merger in a given Member State may give rise to different outcomes both in terms of competitive assessment and in terms of

2460 Commission decision of 28 May 2014 in case M.6992 – *Hutchison 3G UK/Telefónica Ireland*; Commission decision of 2 July 2014 in case M.7018 – *Telefónica Deutschland/E-Plus*.

2461 Case T-210/01 *General Electric v Commission*, paragraphs 118 and 120 and the case law cited therein. See also Case T-158/00 *ARD v. Commission*, paragraph 169.

assessment of the suitability of the remedies proposed by the parties to address the competition concerns that may be identified.

(3046) Furthermore, despite certain similarities, such as the fact that all these mergers removed an independent MNO from the market, a number of the competition concerns identified by the Commission in the present case differ markedly from those identitifed in case M.6992 – *Hutchison 3G UK / Telefónica Ireland* and case M.7018 – *Telefónica Deutschland / E-Plus*.

(3047) In particular, the case at hand has specificities, which clearly distinguish it from previous transactions in other Member States involving the reduction from four to three in the number of MNOs. In particular, compared to previous cases, the Transaction raises additional unilateral concerns on the retail market to those that the Commission had identified in previous cases, namely those arising from the position of Three and O2 in the network sharing agreements with EE and Vodafone respectively post-Transaction.

(3048) Moreover, in order to fulfil its duties under the Merger Regulation, in particular as regards the acceptance of commitments that address competition concerns to the requisite legal standard, the Commission also needs to continuously take stock of how commitments considered to fulfil this standard at the time of taking the relevant decision are being implemented in practice and whether they have been effective in alleviating the competition concerns.

(3049) The Commission has done so already in the past. For instance the Commission took stock of its experience in the implementation of the remedies offered in the context of case M.6497 – *Hutchison 3G Austria/Orange Austria*.[2462] In that case, also resulting in the removal of the fourth independent MNO from the Austrian market, the Commission considered that the offer of wholesale access to a MVNO under a pay as you go model alleviated the competition concerns identified. However, although the MVNO agreement was signed, in line with the commitments prior to the closing of the transaction, the actual market entry of the first MVNO under the commitments was considerably delayed and only occurred in December 2014 (approximately two years after the approval of the Transaction). In order to avoid similar delays in the future, the Commission considered, when assessing the case M.6992 – *Hutchison 3G UK / Telefónica Ireland* and case M.7018 – *Telefónica Deutschland / E-Plus*, that the wholesale access remedies would have only been adequate in those cases if the remedy takers were to sign their agreements upfront, that is to say, prior to the closing of the respective transactions,[2463] and committed upfront to undertake the necessary investments or the merging parties committed upfront to offer the necessary capacity within a certain period of time.

(3050) In addition, as regards the capacity based wholesale access agreements accepted in case M.6992 – *Hutchison 3G UK / Telefónica Ireland* and case M.7018 – *Telefónica Deutschland / E-Plus*, the Commission decided to adopt this model because it considered at the time of the relevant decisions that the capacity based MVNO model could better address some of the shortcomings of the pay-as-you-go MVNO model and possibly replicate the same incentives of the MNO. Hence, it was considered that a capacity based MVNO could better alleviate than a pay-as-you-go MVNO, like the

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2462 Commission decision of 12 December 2012 in case M.6497 – *Hutchison 3G Austria/Orange Austria*.

2463 In case M.6992 – *Hutchison 3G UK/Telefónica Ireland*, this upfront requirement applied to one of the two MVNOs.

one accepted in the Austrian case, the competition concerns deriving from the removal of an independent MNO from the market.

(3051) However, based on its subsequent experience in the implementation of the commitments accepted in case M.6992 – *Hutchison 3G UK / Telefónica Ireland* and case M.7018 – *Telefónica Deutschland / E-Plus,* as well as the non-MNO component accepted in case M.7018 – *Telefónica Deutschland / E-Plus*, the Commission considers that that type of remedies is extremely complex in terms of implementation and monitoring.

(3052) The complexities in the implementation of this kind of commitments are also raised by the Austrian national competition authority, the Bundeswettbewerbsbehörde ("BWB"), the German national competition authority, the Bundeskartellamt ("BKartA") as well as by the Irish national competition authority, Competition and Consumer Protection Commission ("CCPC") in their respective comments on the Third Commitments.

(3053) The BWB submits that "*in previous mobile telecom mergers (e.g. Austria, Germany), behavioural remedies were insufficient to promote market entry timely and effectively*". The BKartA considers that, to date, it is not possible to assess the competitive impact of the capacity based MVNO commitment. In addition, as regards the non-MNO component, the BKartA notes that there have been several disputes regarding its interpretation and implementation. In light of the numerous uncertainties and complexities, the BKartA sees similar risks arising from the Third Commitments.[2464]

(3054) The Irish competition authority, in its letter dated 7 April 2016, states: "*the Irish experience both pre- and post the implementation of commitments in case M.6992 demonstrates that MVNOs have a limited ability to act as a competitive constraint on MNOs. The new entrant commitment offered by Hutchison effectively delivers, with certainty, only the upfront agreement with the NEO. The realisation of the rest of the offer is speculative. Again the Irish experience is illustrative since in that case the EU Commission clearance decision was predicated on timely MVNO entry. However, this did not occur until 15 months after the decision*."

(3055) In light of the foregoing, taking into account the Commission's own experience in the implementation of the remedies in the above-mentioned cases, as well as the national authorities' feedback, the Commission considers that, the fact that the Commission cleared the proposed transactions in case M.6992 – *Hutchison 3G UK / Telefónica Ireland* and case M.7018 – *Telefónica Deutschland / E-Plus* subject to commitments, certain elements of which are similar to the Third Commitments, does not undermine the Commission's conclusion that the suite of remedies contained in the Third Commitments would not, for the reasons set out in sections 9.6.1 to 9.6.6, adequately address the competition concerns identified in this case.

(3056) Regarding the Notifying Party's argument whereby the price effects predicted by the Commission's quantitative analysis would be significantly lower than the previous merger cases in the mobile telecommunications market, the Commission notes that the Notifying Party based its comparison on incorrect figures. For example, the Notifying Party attributed an overall price increase of 15.6% to the baseline scenario in case case M.7018 – *Telefónica Deutschland / E-Plus*, while the actual figure of the

[2464] Submission of the Bundeskartellamt of 11 April 2016 on the Third Commitments [ID5990].

Commission's baseline scenario of that case is 9.5%.[2465] Similarly, the Notifying Party attributes a price increase of 11.2% to the baseline scenario in case M.6992 – *Hutchison 3G UK / Telefónica Ireland*,[2466] while the actual figure of the Commission's baseline scenario of the case is 6.6%.

(3057) The Notifying Party also failed to appreciate that in the German merger the Commission's quantitative analysis was carried out at network level, and in the Irish merger provider and network levels were essentially equivalent due to the small presence of the MVNOs. Instead, the Notifying Party includes in the comparison with previous cases the price effect of the current case at provider level, rather than at network level.

(3058) Figure 137 shows the correct comparison of the price effects predicted by the baseline scenarios of quantitative analyses in the current and previous merger cases. The figure shows that in terms of magnitude the average price effects predicted for the current case (7.3%[2467]) are in between the price effects predicted for the Irish and the German mergers. Therefore, the Commission considers the Notifying Party's argument that the price effects of the current case are significantly lower than the price effects of previous mergers in the mobile telecommunications market to be unfounded.

Figure 137: Comparison of predicted price effects across merger cases in the mobile telecommunication industry

Predicted average overall price effects in previous merger cases - baseline specifications		
Ireland	**Germany**	**United Kingdom**
6.6%	9.5%	7.3%

Source: Commission's decisions in H3G/ Telefónica Ireland (Ireland), Table 34, Telefónica Deutschland/E-Plus (Germany), Table 38, and Figure 115 of the current Decision.

(3059) In any event, the Commission considers that the price effects predicted by the quantitative analysis are only one of the elements at the basis of the Commission assessment. As such, they should not be taken as to approximate the overall harm (or lack thereof) identified by the Commission during a merger proceeding.

i) Interest in MNO entry

(3060) As set out in Section 9.4.1.2, there were a number of strong players with a significant presence in the market in the United Kingdom (TalkTalk and […]) or in the mobile and fixed telephony market in other Member States (Iliad) who had expressed a concrete interest in entering the market in the United Kingdom as MNOs subject to appropriate commitments. These interested parties consequently regarded the mobile market in the United Kingdom to be sufficiently attractive and capable of sustaining at least four MNOs.

(3061) The Notifying Party argued at several instances that […].

(3062) The documents regarding the contacts with these parties on the Commission's file, as described in Section 9.4.1.2, indicate that H3GI was not particularly forthcoming in discussing the proposals of the interested parties and in meeting their requests for

[2465] Commission decision of 2 July 2014 in case No. M.7018 – *Telefónica Deutschland/E-plus.*

[2466] Commission decision of 28 May 2014 in case No. M.6992 – *Hutchison 3G UK/Telefónica Ireland.*

[2467] The Commission notes that the predicted price effect in the baseline scenario of the Commission's quantitative analysis included in the Statement of Objections is 8.7%, as based on contribution margins.

modifications but rather insisted on strict compliance with the terms set out in the H3GI's term sheet of 26 February 2016. In commercial negotiations, it is standard to have divergent positions in the beginning and, following joint concessions, to progressively reduce the gap to find a mutually acceptable compromise. This was not the case here with H3GI essentially adopting a "take-it-or-leave-it" approach in relation to its proposed "MNO remedy" of 26 February 2016. In particular, H3GI did not seem to even attempt to increase its proposed amount of spectrum in response to the requests from Iliad, TalkTalk and […]. Also, H3GI seemed not to have been amenable to discussing with TalkTalk its proposal for an alternative model of an MNO remedy.[2468]

9.6.3. Virgin Media Commitment

9.6.3.1. Notifying Party's view

(3063) The Notifying Party submits that the Virgin Media Commitment resolves Virgin Media’s fundamental concern that it has a choice of wholesale partner in the future, other than being forced to rely on EE and Vodafone […]. Virgin Media can either accept the offer for a capacity based wholesale agreement made by the Notifying Party or use the terms of it to negotiate more favourable wholesale access terms with another MNO. In light of the signed term sheet, the Notifying Party expects that Virgin Media would ultimately accept the offer under the Virgin Media Commitment.[2469]

(3064) If it were to do so, Virgin Media would enhance its ability to compete with the merged entity and other MNOs in the retail market.[2470]

(3065) In particular, Virgin Media would obtain a significant amount of capacity, amounting to at least […] Gbps in […]and to at least […] Gbps in […]. The Notifying Party reiterates its argument made in relation to the Tesco Mobile Commitment that […]Gbps is sufficient to enable significant market growth and customer acquisition. On this basis and subject to the usage profile of its customers it can be expected that Virgin Media can grow to a significant market share. The Notifying Party repeats that the […]Gbps that Virgin Media would obtain at least in […] are more than the total capacity of the O2 network today and that, today, O2 hosts [30-40]% of subscribers on its network in the United Kingdom.[2471]

(3066) In addition, the Notifying Party considers that the Virgin Media is already well-placed to become an important competitive force in the retail market in the United Kingdom, has ambitious growth plans and the Virgin Media Commitment would enhance the competitive constraint imposed by Virgin Media . First, Virgin Media would benefit from a capacity based wholesale agreement such as that accepted in case M.6992 – *Hutchison 3G UK/Telefónica Ireland* which would transform the ability and incentives of Virgin Media to compete in the same way as applicable to UPC in Ireland. Second, access to significant capacity on the Network would allow Virgin Media to be able to grow its market share significantly. Third, like Tesco Mobile, Virgin Media has historically been a successful challenger brand, bringing innovative propositions to the market in the United Kingdom and exercising a strong

2468 TalkTalk's letter to H3GI of 14 March 2016, page 2 [ID 5299].
2469 Form RM, dated 6 April 2016, paragraph 215.
2470 Form RM, dated 6 April 2016, paragraph 215.
2471 Form RM, dated 6 April 2016, paragraph 217.

pricing constraint on its competitors. Fourth, Virgin Media has a renowned household brand name and a very significant fixed-line customer base which it can use to grow its mobile customer base using the additional network capacity provided by the Virgin Media Commitment.[2472]

(3067) Finally, the Notifying Party submits that, like Tesco Mobile and NEO, Virgin Media would share the Transaction synergies, both in terms of network quality and in terms of network costs, assuming that the O2 UK Divestment Option is not exercised.[2473]

9.6.3.2. Commission's assessment

(3068) First, the Virgin Media Commitment presents a number of unclear aspects that severely impair the Commission's ability to conduct a proper assessment.

(3069) The Virgin Media Commitment makes reference to the Virgin Mobile Short Form Wholesale Agreement, which is attached to the Third Commitments as Annex 4, including for key commercial terms such as the Capacity Share offered to Virgin Media and the fees to be paid by Virgin Media in return. The Virgin Mobile Short Form Wholesale Agreement itself contains terms that are not clearly defined. For instance, as regards the Capacity Share to be provided to Virgin Media , paragraph 2.3.1 of the Virgin Mobile Short Form Wholesale Agreement makes reference to Table 2 of Appendix 1 to that agreement and states that unspecified updates to the figures listed there are possible: "*(ignoring any updates to those figures)*". Moreover, paragraph 2.3.5 stipulates that the annual fee (as defined in Annex 3, an Annex setting out a cost and pricing methodology) for the period from the Service Start Date until the end of […] if a fixed Gbps price for the elected Capacity Share as set out in Appendix 2. Appendix 2, however, only provides an "*Example Calculation of Annual Fees*". Also, point C of the preamble stipulates that, except otherwise specified in the Virgin Mobile Short Form Wholesale Agreement, the Notifying Party and Virgin Media "*wish to adopt the underlying principles and structures*" of an agreement entered into between Hutchison 3G Ireland Limited and UPC Communications Ireland Limited ("UPCI") to provide UPCI with capacity on its network in Ireland to enable UPCI to operate as an MVNO (the "Irish Framework"). This agreement has not been formally submitted to the Commission in the context of the present case and the practical implications of this reference on the functioning of the Virgin Media Commitment are unclear.

(3070) Moreover, it is unclear to what extent, according to the Virgin Media Commitment or according to the Virgin Mobile Short Form Wholesale Agreement Virgin Media is obliged to commit to a minimum Capacity Share. Paragraph 2.3.9 of the Virgin Mobile Short Form Wholesale Agreement merely provides that Virgin Media would "*in any year, be able to increase or decrease the quantity of its Capacity Allocation in accordance with the procedures set down in the Irish Framework for years [5-10] to [5-10], provided that by way of minimum guarantee to CTUI, VM must at all times take a Capacity Allocation which represents at least [70-80]% of its actual usage of the Capacity Allocation of the Network in the immediately preceding year*". It is unclear how the Irish Framework would interact with the principles set out in paragraph 2.3.9 of the Virgin Mobile Short Form Wholesale Agreement. It cannot therefore be excluded that Virgin Media could thus simply retain its current customer base without competing aggressively for new customers.

[2472] Form RM, dated 6 April 2016, paragraphs 218, 219.
[2473] Form RM, dated 6 April 2016, paragraph 220.

(3071) Second, the Virgin Media Commitment is merely an offer for a capacity based wholesale agreement and, given the uncertainty of its implementation, it cannot be taken into account in assessing whether the Third Commitments would remove the competition concerns in this case entirely and with the requisite degree of certainty.

(3072) Third, as regards the potential subscriber share achievable by Virgin Media under the capacity based option, the general considerations discussed in Section 9.6.1.2.c) for the subscriber share potential of Tesco Mobile apply. In particular, the Commission considers that a [0-10]% Capacity Share should equate to a potential subscriber share in the order of no more than [5-10]% at current average usage of users on the merged entity's network. As Virgin Media has an existing subscriber share of [0-5]% today, the Commission therefore considers that the [0-10]% Capacity Share would allow Virgin Media to grow its subscriber share by at most [0-5] percentage point. Moreover, the Commission notes that, since Virgin Media currently does not offer 4G, the usage by its users would likely increase more quickly than that of the average users as Virgin Media customers start to adopt 4G with increased download speed relative to 3G.

(3073) The Commission therefore considers that the Virgin Media would have at best limited potential to grow their respective subscriber market share with a Capacity Share of [0-10]%. For this reason, the Commission considers that the competitive impact of the capacity option to Virgin Media would be limited, even if it was exercised.

(3074) Fourth, the Commission notes that the Virgin Media Commitment relates to an operator (Virgin Media) that is already active in the United Kingdom's mobile market. As such, the competitive impact of such remedy should be interpreted to be the difference between the performance of Virgin Media under this remedy (should Virgin Media opt to benefit from such remedy) compared to the performance that Virgin Media would have had absent the remedy. This could be for instance the difference between the market share achieved by Virgin Media under the remedy compared to the market share that Virgin Media would have otherwise achieved. While any such comparison is inevitably speculative, as noted in recital (3072), the Commission notes that the [0-10]% Capacity Share would allow Virgin Media to grow its subscriber share by at most [0-5] percentage point.

(3075) The Virgin Media Commitment would at best give Virgin Media increased leverage when renegotiating terms for a wholesale access agreement with EE (or Vodafone). However, Virgin Media would have to come to terms with another MNO rather quickly as the offer for a capacity based wholesale agreement expires within […] months following receipt of the offer.

(3076) Last, like Tesco Mobile, Virgin Media would be commercially and technically dependent on the merged entity and would have even less ability to differentiate itself from, and to compete with, the merged entity than the NEO (see Section 9.6.2.2). Virgin Media would not even have the options that are available to the NEO to potentially differentiate their offering from that of the Notifying Party. As a result, the same considerations developed in Section 9.6.2.2 as to why the NEO would not be effective competitors post-Transaction apply, even more pertinently, to Virgin Media.

9.6.4. Certainty of Network Plans

9.6.4.1. Notifying Party's view

(3077) The Notifying Party submits that the commitment relating to certainty of network plans addresses the Commission's concerns based on the uncertainty as to the future network sharing situation.[2474] The Notifying Party argues that these commitments would provide certainty to both the Commission and the MBNL and Beacon network partners.[2475] Together with the Network Sharing Commitments, they would ensure the merged entity's continued dependence on and commitment to both the MNBL and Beacon networks.[2476]

9.6.4.2. Commission's assessment

(3078) The commitment to a network plan reduces the uncertainty about the merged entity’s site grid and planned spectrum deployment and coverage. However, significant uncertainty remains about the timing and the extent of network integration as discussed in Section 8.4.2.1.

(3079) The revised text of the commitment in relation to certainty of network plans does not remove to a sufficient degree the uncertainties around the future network situation. Compared to the Second Commitments, the Notifying Party added a commitment to deploy 43.2 MHz of downlink spectrum on its network as well as 4G population coverage targets for 31 December 2017 and 31 December 2018. The Notifying Party also included a commitment to make any spectrum deployed on the network available to the NEO as well as any access to any mobile communications radio access network other than small cell networks.

(3080) The last two amendments demonstrate the purpose of the changes compared to the Second Commitments. Instead of addressing the harm caused by the uncertainty of the network sharing situation to the competitive position of BT/EE and Vodafone, the Notifying Party aimed for amending the NEO Commitment. This is also reflected by the changed position of this commitment that has been moved between the commitments relating to capacity-based wholesale agreements and the network sharing commitments.

(3081) Therefore, the assessment of the Second Commitment in Section 9.4.2.3 a) and in particular the reasons set out in Recital (2791) also applies to the Third Commitments. The commitment relating to the certainty of network plans is still subject to the network sharing commitments. There is still an option for the NEO to acquire O2. The remedy still offers no certainty whether BT/EE and Vodafone would accept the unilateral offers committed to be made of Three. The […] as described in recital (2797) makes the implementation uncertain.

9.6.5. Network Sharing Commitment

9.6.5.1. Notifying Party's view

(3082) The Notifying Party argues that the Network Sharing Commitment removes the concerns in relation to increased costs for BT/EE by its commitment to a new business plan that sets out the annual funding obligations for MBNL's CAPEX and

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[2474] Form RM dated 6 April 2016, paragraphs 227 and 228.

[2475] Form RM dated 6 April 2016, paragraph 230.

[2476] Form RM dated 6 April 2016, paragraph 231.

OPEX requirements for the period until […].[2477] The Notifying Party points out that these figures have been accepted by BT/EE in a draft agreement sent to Hutchison. Even if the offer to agree to this business plan would not be accepted, the Notifying Party would commit itself unilaterally to approve a business plan on this basis. For this reason, the Notifying Party argues that it would be bound to agree to a new business plan and would therefore have no scope to reduce its funding commitments under MBNL.[2478] The Notifying Party further claims that its commitment to the business plan would increase the alignment between the incentives of BT/EE and Three.[2479]

(3083) Regarding the concern relating to a degradation of BT/EE's network quality, the Notifying Party argues that the fast-track dispute resolution procedure would address these concerns. According to the Notifying Party, this procedure has been modelled on the process accepted by the Commission in the T-Mobil/ Orange merger and corresponds with a wording proposed by BT/EE.[2480] The Notifying Party explains that certain veto rights of the shareholders have not been included in the matters subject to this mechanisms following criticism from BT/EE.[2481]

(3084) On BT/EE's ability to make unilateral deployments, the Notifying Party argues that it waives its relevant contractual rights relating to unilateral deployments and to offer BT/EE to amend the terms of the MBNL agreements to remove these concerns.[2482] If this offer is not accepted by BT/EE, the Notifying Party points out that it unilaterally committed to certain elements of this offer.[2483] Following the implementation of these commitments, there would therefore be no possible means of Three being able to block unilateral deployments by BT/EE.[2484]

(3085) The Notifying Party further argues that the commitment to act in good faith in relation to the MBNL agreements would further reinforce the other commitments towards BT/EE and would give the Commission and BT/EE confidence that Three would not attempt wrongfully to block or frustrate BT/EE in relation to any aspect of MBNL.[2485]

(3086) In addition to these arguments in the Form RM, the Notifying Party submitted a note to the Commission regarding the commitments in relation to BT/EE on 8 April 2016. In this note, the Notifying Party states that the Third Commitments have been based on a proposal by BT/EE of 5 April 2016 and that there is a large degree of agreement between the parties in particular on the issues relating to the new business plan, unilateral deployments and the fast-track dispute resolution mechanism.[2486]

(3087) Regarding the concerns in relation to an increase in Vodafone's costs, the Notifying Party submits that the offer […] would address these concerns. Due to the option of Vodafone to […].[2487] This commitment would also address the concerns relating to

2477 Form RM dated 6 April 2016, paragraph 243.
2478 Form RM dated 6 April 2016, paragraph 244.
2479 Form RM dated 6 April 2016, paragraph 247.
2480 Form RM dated 6 April 2016, paragraph 252.
2481 Form RM dated 6 April 2016, paragraph 257.
2482 Form RM dated 6 April 2016, paragraph 265.
2483 Form RM dated 6 April 2016, paragraph 268.
2484 Form RM dated 6 April 2016, paragraph 276.
2485 Form RM dated 6 April 2016, paragraph 278.
2486 Submission of the Notifying Party regarding the BT/EE commitments, 8 April 2016, paragraph 1.
2487 Form RM dated 6 April 2016, paragraph 288.

the quality of Vodafone's network.[2488] In the following, the note explains the differences between the positions of BT/EE and the Notifying Party.

(3088) On 19 April 2016, the Notifying Party submitted a second note to the Commission regarding the commitments in relation to BT/EE together with an amended draft of the proposed agreement between BT/EE and Three. In this submission, the Notifying Party explains that the revised draft of 19 April 2016 is based on a mark-up by BT/EE dated 11 April 2016 of an earlier draft.[2489] According to the Notifying Party, the remaining outstanding points would not relate to the Transaction.[2490] The Notifying Party states that this draft submitted on 19 April 2016 would represent the agreement it is prepared to sign.[2491]

(3089) On a potential congestion of Vodafone's network, the Notifying Party argues that the offer to partition the transmission of O2's and Vodafone's traffic would remove any possible concern in relation to congestion.[2492] The Notifying Party further argues that the commitment to act in good faith in relation to the Beacon agreements would further reinforce the other commitments towards Vodafone.[2493]

(3090) Concerning the effects of the Transaction on industry-wide investements due to increased transparency, the Notifying Party argues that the proposed commitments would prevent any sharing of competitively sensitive information concerning EE and Vodafone's strategic network investments.[2494]

9.6.5.2. Commission's assessment

(3091) The Commission considers that the Network Sharing Commitment submitted as part of the Third Commitments is not materially different from the respective element of the Second Commitments other than the elements relating to BT/EE.

(3092) In particular the concern that the interests between the network sharing partners in MBNL and Beacon would become significantly (more) misaligned than absent the Transaction is not addressed. The decrease in alignment would incentivise the merged entity to undermine the position of BT/EE and Vodafone in a way that absent the Transaction would not have been feasible.

a) Harm to competitive position of BT/EE not fully addressed

(3093) To assess the Network Sharing Commitments relating to BT/EE, the Commission takes account of a submission by BT/EE. While BT/EE has not been made available by the Notifying Party the text of the Third Commitments including the proposed agreement between BT/EE and Three, Three has provided BT/EE with a draft of such agreement on 6 April 2016, the same day the Notifying Party submitted the Third Commitments to the Commission. This draft provided to BT/EE is not the same as the one submitted to the Commission as annex to the Third Commitments but many clauses have the same or similar wordings.

2488 Form RM dated 6 April 2016, paragraph 293.

2489 Second submission of the Notifying Party regarding the BT/EE commitments, 19 April 2016, paragraph 1.

2490 Second submission of the Notifying Party regarding the BT/EE commitments, 19 April 2016, paragraph 2.

2491 Second submission of the Notifying Party regarding the BT/EE commitments, 19 April 2016, paragraph 3.

2492 Form RM dated 6 April 2016, paragraph 299.

2493 Form RM dated 6 April 2016, paragraph 301.

2494 Form RM dated 6 April 2016, paragraph 308.

i) Submission of BT/EE

(3094) […].[2495] […].[2496]

(3095) […].[2497] […].[2498] […].[2499]

(3096) […].[2500]

(3097) […].[2501] […].[2502]

(3098) […].[2503]

(3099) […].[2504]

ii) Assessment of the commitment to offer an amendment of MBNL to BT/EE

(3100) As noted in recital (3093), the proposed agreement submitted as annex to the Third Commitments is not exactly the same as the proposal sent by Three to BT/EE on the same day. BT/EE has not seen the proposed agreement submitted by Three to the Commission as part of the commitments. These two drafts are not identical. For example, the Commission notes that the draft agreement that was sent to BT/EE contained a clause with unilateral undertakings of BT/EE that was not included in the agreement text submitted to the Commission. Provisions under the clause "business plan" in the agreement sent to BT/EE form a separate clause in the text submitted with the commitments. Therefore, the comments provided by BT/EE to the Commission do not directly relate to the draft agreement relevant for the Commission's assessment of the Third Commitments. The Commission notes that in particular the concerns described in recital (3095) do not apply to the text of the draft agreement submitted as part of the Third Commitments.

(3101) The Notifying Party submitted an amended draft agreement between Three and BT/EE on 19 April 2016. This revised proposal of an agreement amending MBNL has been submitted more than a month after the deadline for remedies under the Merger Regulation and almost two weeks after the submission of the Third Commitments. The Notifying Party states that the revised draft is based on a proposal by BT/EE. Whether this proposal by BT/EE addressed all concerns of BT/EE or merely provided drafting suggestions on a limited number of issues is not known to the Commission.

(3102) The Commission notes, however, that the Third Commitments refer to the draft agreement annexed to the commitments. Therefore, the assessment of the Third Commitments will focus on the proposed agreement as submitted as annex to the Third Commitments on 6 April 2016.

(3103) Also regarding this draft agreement, the Commission notes that due to the reasons set out in recital (2797), it seems uncertain whether Three would actually make such an offer to BT/EE.

2495 […].
2496 […].
2497 […].
2498 […].
2499 […].
2500 […].
2501 […].
2502 […].
2503 […].
2504 […].

Unilateral Deployments

(3104) […].

(3105) The Commission notes that in the draft agreement submitted to the Commission as annex to the Third Commitments, the Notifying Party accepted the request of BT/EE […].[2505] However, this statement is being made subject to several conditions according to which EE

"(i) provides to MBNL and H3G all information necessary to […]; (ii) provides certification in writing to H3G (and H3G is entitled to rely upon such certification) that […]; and (iii) […]."

(3106) By conditioning a "pre-approval" upon an implementation and operation of such unilateral deployment in accordance with the provisions of the MBNL agreements, which […], does not change much compared to the previous situation. If Three would want to frustrate or delay unilateral deplyoments, it could argue that the unilateral deployment is not in line with […]. If this would be the case, the "pre-approval" would not be valid and BT/EE would have deployed the unilateral investment without […]. These conditions therefore rather increase the uncertainty and risk in making unilateral deployments than decreasing them.

(3107) In this regard, the Commission notes that […].

(3108) The wording in the proposed agreement submitted after the Third Commitments on 19 April 2016 does not contain a "pre-approval" anymore. However, by reverting to a text similar to the one underlying the comments of BT/EE, the Commission notes that […]. This seems to contradict the fact that based on the compare version submitted by the Notifying Party on 19 April 2016, Three seemed to have left the provisions relating to unilateral deployments as suggested by BT/EE. Whether this contradiction could be resolved in the short timeframe for remaining after the submission of the revised agreement can be left open as, in any case, the Notifying Party only committed to make an offer in accordance with the proposed agreement attached to the Third Commitments, and is therefore not obliged to use the wording in its later submission.

(3109) The clause in the proposed agreement to waive all rights to object unilateral deployments by BT/EE in relation to sites not used by the merged entity effectively addresses the concerns relating to unilateral deployments for all sites without any traffic. However, this element is insufficient to remove the concerns raised by the Transaction for several reasons. First, the number of sites affected by this commitment would be limited. Three commits to use at least […] MBNL sites. […]. In addition, […]. Second, the sites Three would continue to use would likely be […]. However, the ability to make unilateral deployments is of particular importance in high-traffic areas to keep up with growing customer demand. Third, whereas some deployments can be made on selected, specific sites, others need to be rolled-out over a significant or even the entire site grid. These investments could still be blocked by Three.

[2505] Notifying Party's note to Commission regarding Commitment in relation to BT/EE of 8 April 2016, page 4.

MBNL Business Plan

(3110) The Commission notes that on the basis of the same figures as contained in the draft business plan attached as a Schedule to the draft agreement, BT/EE stated that […].[2506] However, BT/EE claims that […].[2507] The Commission understands that […].

(3111) As explained by BT/EE in response to the Market Test of the Second Commitments, […].[2508]

(3112) […].[2509] […].[2510] […].[2511] […].[2512]

(3113) […].

(3114) As already discussed in Section 9.4.2.3 b) ii), a binding business plan can prevent Three from avoiding costs committed to under the business plan following the Transaction and thereby would have the potential to address the concern that the merged entity could decrease its costs under the MBNL arrangements compared to the situation absent the Transaction.

(3115) As of the date of this Decision, both BT/EE and Three use MBNL sites to provide 3G and 4G mobile services to their customers. As long as the MBNL arrangements remain in force, and therefore until at least […], both parties would have used MBNL sites for the mobile services they offer to their customers.[2513] Therefore, the Commission considers that the sharing of passive infrastructure cost for the MBNL sites would have applied irrespective of whether or when the parties would discontinue offering 3G services to their customers.

(3116) Therefore, the Commission concludes that the proposed business plan would address only some of the concerns relating to higher cost under the MBNL arrangements for BT/EE. In particular in the long run, the disalignment of incentives created by the Transaction would nevertheless cause BT/EE to incur significantly increased costs that would aggravate the harm to BT/EE's competitive position.

Likelyhood of BT/EE accepting the offer to amend the MBNL agreements

(3117) In its submission to the Commission on 9 April 2016, BT/EE […][2514] and submits that […].[2515] This would suggest that […].

(3118) However, as already set-out in recital (3100), these comments refer to an agreement text different from the one submitted by the Notifying Party as annex to the Third Commitments.

(3119) Out of the concerns raised by BT/EE in its submission to the Commission dated 9 April 2016, the concerns described in recital (3095) do not apply to the draft agreement that forms part of the Third Commitments as the clause "unilateral undertakings of BT/EE" is not included. As discussed in this Section 9.6.5.2 a) ii),

2506 […].
2507 […].
2508 […].
2509 […].
2510 […].
2511 […].
2512 […].
2513 See Section 8.2.2.3 a).
2514 […].
2515 […].

the concerns relating to unilateral deployments and to the business plan are likely to continue to apply.

(3120) Therefore, […], the Commission considers it rather unlikely that BT/EE would accept the proposed agreement to amend the MBNL arrangements.

iii) Assessment of the unilateral commitment

(3121) If BT/EE would reject the offer to amend the MBNL agreements, the Notifying Party unilaterally commits to certain elements of the proposed agreements. These elements include a waiver of all rights under the MBNL agreements to object unilateral deployments of BT/EE on sites that do not carry any traffic on behalf of Three, to waive any rights under the MBNL agreements […], to apply the fast track resolution mechanism set out in Schedule 1 to the proposed agreement for all concerns that are technical or operational in nature which result in a dispute with BT/EE.

(3122) The first of these unilateral commitments relating to unilateral deployments on sites not used by Three is ineffective to address the competitive concerns as discussed in Recital (3109). The others have also been included in the Second Commitments and their ineffectiveness is discussed in Section 9.4.2.3 b) i). Therefore, the unilateral "backup" commitment does neither address the competitive concerns.

(3123) On the unilateral commitment to approve the business plan attached as Schedule 2 to the proposed agreement between BT/EE, the Commission notes that the business plan would be the same as discussed under Section 9.6.5.2 a) ii) and would only become effective if BT/EE also agrees to the plan. As stated in recitals (3110) and (3112), […].

(3124) The commitment text states that the Notifying Party commits to approve a business plan "on the basis of the business plan sent by BT to H3G on 5 April 2016" (paragraph 51), implying that the business plan addresses all concerns of BT/EE. However, the concern of BT/EE […]. For example, in the mark-up provided by the Notifying Party together with the revised agreement of 19 April 2016, the Notifying Party deleted the proposal of BT/EE in clause 12.3 (b) that […].

(3125) The concerns of BT/EE show that BT/EE proposed this business plan only in the context of an agreement with Three, that would prevent Three from […]. Therefore, even if the figures contained in the business plan Three commits to approve are the same as in a business plan proposed by BT/EE, this neither means that BT/EE would also approve such business plan without the agreement in the context of which this proposal has been made, nor that such business plan would address the competitive concerns. Regarding the latter, the Commission refers to the conclusion in recital (3116) where the Commission found that the business plan would address only some of the concerns relating to higher costs under the MBNL arrangements.

(3126) Overall, on the assessment of the commitments towards BT/EE, the Commission concludes that it is at best uncertain which of the proposed agreements the Notifying Party would offer to BT/EE and whether BT/EE would accept the proposed agreement. Even if BT/EE were to accept the draft agreements, they would be unlikely to effectively and clearly address the Commission's competition concerns. If BT/EE does not agree to enter into the draft agreement, the implementation of the unilateral commitments is also uncertain and would, in addition, be insufficient to remedy the likely harm of the proposed Transaction to the competitive position of BT/EE.

b) Harm to competitive position of Vodafone not fully addressed

(3127) The commitments relating to Vodafone are materially unchanged compared to the Second Commitments. The Commission considers, therefore, that the Network Sharing Commitment under the Third Commitments suffers from the same shortcomings with respect to Vodafone as already identified in the assessment of the Network Sharing Commitment under the Second Commitments (see Section 9.4.2.3 c)).

c) Risk of lower industry-wide investments not addressed

(3128) The commitments relating to lower industry-wide investments are not changed at all compared to the Second Commitments. The Commission considers, therefore, that the Network Sharing Commitment under the Third Commitments suffers from the same shortcomings with respect to the risk of lower industry-wide investments as already identified in the assessment of the Network Sharing Commitment under the Second Commitments (see Section 9.4.2.3 d)).

9.6.6. Wholesale Market Commitment

9.6.6.1. Notifying Party's view

(3129) The Notifying Party argues that, considered in conjunction with the commitment in relation to the wholesale market concerning guaranteed access to 4G and (where applicable) 5G on non-discriminatory terms, the ability of the NEO to elect to use a proportion of its [10-20]% Capacity Share to host MVNO customers entirely eliminates the concerns articulated in the Statement of Objections regarding the impact of the Transaction on the wholesale market.[2516]

(3130) The Notifying Party submits, first, that due to the inclusion of 5G services, the Wholesale Market Commitment exceeds the non-MNO commitment accepted in case M.7018 – *Telefónica Deutschland/E-Plus* which only extended to 4G services and was still accepted by the Commission.[2517]

(3131) According to the Notifying Party, the Commitment to continue to make available 4G and 5G services (where applicable) to MVNOs is sufficient to maintain effective competition on the wholesale market in the United Kingdom because MVNOs would be able to continue to rely on the Notifying Party providing access to the latest radio technology currently available in the United Kingdom and leverage the Wholesale Market Commitment to increase the pressure on EE and Vodafone to offer 4G (and, if applicable 5G) services as part of their wholesale packages. Accordingly, the bargaining power of MVNOs would improve post-Transaction . The Wholesale Market Commitment would likely also change the incentives of EE and Vodafone as, in order to be competitive at the wholesale level, Vodafone and EE would also have to provide access to 4G (and 5G, where applicable). This reasoning is said to be consistent with the Commission's reasoning in case M.7018 – *Telefónica Deutschland/E-Plus*.[2518]

[2516] Form RM, dated 6 April 2016, paragraph 325.

[2517] Form RM, dated 6 April 2016, paragraph 312.

[2518] Form RM, dated 6 April 2016, paragraph 313.

(3132) The Notifying Party furthermore considers that the commitment to provide 4G and 5G (where applicable) to MVNOs has the further effect of improving competition on the retail market.[2519]

(3133) As regards the NEO's ability to offer wholesale access, the Notifying Party submits that the NEO Commitment intensifies competition in the wholesale market by increasing the options available to potential wholesale customers seeking a network capacity agreement.[2520]

(3134) As regards the market share that the NEO could achieve on the wholesale market based on […]% of its Elected Capacity the Notifying Party explains that if the NEO were to have 55Gbps for wholesale access in […] it could sustain approximately 12 million customers using average usage of […]GB per month or […] million customers using average usage of […] GB per month.[2521]

(3135) The Notifying Party explains that by reference to O2's existing wholesale business, it is also evident that the network capacity available to the NEO for hosting wholesale partners is significant. O2's existing network capacity at the end of 2015, was approximately […] Gbps, and the NEO would have in […] Gbps of its Capacity Share available to host MVNOs customers. Based on this reference point, the NEO would have […] network capability of O2 today for the benefit of wholesale partners. O2 has a market share on the wholesale market in excess of […]% with a total network capacity of […].[2522]

(3136) The Notifying Party also notes that the Commission considered in the Statement of Objections that the mere presence of Three on the wholesale market (however limited) exerted an important competitive pressure on the other wholesale providers. Thus, according to the Notifying Party the NEO would also have an important impact on the market and entry of a new wholesale player (with cost-based access to the network) would strengthen competition on the wholesale market.[2523]

9.6.6.2. Commission's assessment

(3137) The Wholesale Market Commitment has been amended such that it now also includes access to 5G services for Existing and for New MVNOs. Existing MVNOs would have equivalent quality of service to other customers on the network with a 5G service. While the Commission considers that this amendment would make the Wholesale Market Commitment more viable in the medium to long term, the Commission also considers that the Wholesale Market Commitment continues to suffer from other shortcomings already identified in the assessment of the Second Commitments (see Section (2853))

(3138) The Commission therefore considers, for the reasons set out in Sections 9.6.6.3 and 9.6.6.4, that the Wholesale Market Commitment, even taken together with the other elements of the Third Commitments, would not address the competition concerns raised by the Commission in Section 8.3.1 in their entirety and would not be comprehensive and effective from all points of view.

2519 Form RM, dated 6 April 2016, paragraph 316.
2520 Form RM, dated 6 April 2016, paragraph 318.
2521 Form RM, dated 6 April 2016, paragraphs 319, 320.
2522 Form RM, dated 6 April 2016, paragraph 321.
2523 Form RM, dated 6 April 2016, paragraph 322.

9.6.6.3. Existing MVNOs

(3139) The Wholesale Market Commitment as regards Existing MVNOs continues to be an offer and, for the reasons set out in recital (2864) the impact of this commitment on the wholesale market is uncertain.

(3140) Moreover, under the Third Commitments, the impact of the Wholesale Market Commitment as regards Existing MVNOs would be limited.

(3141) As explained in recital (2866), each of Three and O2 already granted 4G access to a number of customers. Those MVNOs are not Existing MVNOs according to the definition as set out in the Wholesale Market Commitment. With regards to them, the Wholesale Market Commitment would be moot in relation to 4G services but more importantly in relation to 5G services as those MVNOs would not be eligible to be granted 5G access under the Wholesale Market Commitment.

(3142) Moreover, as also explained in recital (2867), the suggested pricing of 4G and 5G services (which would be at the same rates as charged for 3G services) may be unattractive in the future given the increasing data consumption and declining costs per GB of MNOs of providing data services. As a result, under the usual unit pricing wholesale models, the Existing MVNOs may not be able to offer products than can compete with those of MNOs, in particular in relation to data. Thus, overall, the impact of Wholesale Market Commitment on ensuring favourable access terms to MVNOs in the medium to long term is likely to be limited.

(3143) In addition, as it has not been amended, also under the Third Commitments the Wholesale Market Commitment as regards Existing MVNOs is formulated in an ambiguous way as regards the implementation of granting access to 4G and 5G services (see recital (2868)). Indeed, the formulation continues to create uncertainty for Existing MVNOs as to the timing of and the costs associated with obtaining access to 4G and 5G services. This might even frustrate an Existing MVNO's incentives to obtain access to such services under the Wholesale Market Commitment. The implementation plan to be agreed between the Notifying Party and the Existing MVNO adds further uncertainty as its exact scope is not further defined and there is no time limit by when access to 4G and 5G services would have to be granted at the latest. Moreover, also under the Third Commitments, the Existing MVNO would have to bear "reasonable" implementation costs. Also under the Third Commitments there are no principles set out as regards those costs and the term "reasonable" leaves room for interpretation and thus uncertainty.

9.6.6.4. New MVNOs

(3144) Also the Wholesale Market Commitment as regards New MVNOs continues to be a mere offer and the Notifying Party is deemed to have complied with that commitment upon having published a principle, non-detailed offer of wholesale access on its website. As explained in recital (2869), according to this wording, the Notifying Party would not even be obliged to ultimately enter into an agreement with a New MVNO. The impact also of this commitment on the wholesale market is therefore, at best, uncertain.

(3145) The Notifying Party has furthermore not amended the terms at which wholesale access would be granted. Those terms would continue to be benchmarked against the average of those offered by Three and O2 at the date of closing. As explained in recital (2871), given that the offer for access to 4G services to Existing MVNOs would have to be made within one month following the date of closing, the terms for

4G services offered to Existing MVNOs, that is to say 4G at no extra cost, would not be included in the benchmarking exercise. Thus, to the extent that 4G services are currently priced at a premium, such premium would be applicable for New MVNOs for 4G as well as for 5G services throughout the entire ten year term of the Wholesale Market Commitment, even though the Notifying Party also commits to offer 4G and 5G services at no additional cost Existing MVNOs. Moreover, as also explained in recital (2776), the suggested pricing of 4G and 5G services may be unattractive in the future given the increasing data consumption and declining costs per GB of MNOs of providing data services. As a result, under the usual unit pricing wholesale models, the Existing MVNOs may not be able to offer products than can compete with those of MNOs in the medium to long term, in particular in relation to data. In light of this discrepancy between the Wholesale Market Commitments as regards Existing MVNOs on the one hand and New MVNOs on the other and given that it is not possible to predict how wholesale access terms would look like in the United Kingdom in five to ten years, the Commission continues to take the view that it seems very unlikely that the terms offered to New MVNOs would allow them to be competitive in the short term as well as in the medium to long term.

(3146) In any event, as it was not further amended, the Commission considers that the Wholesale Market Commitment as regards New MVNOs continues to be unclear in relation to the way in which the benchmarking described in recital (3145) would actually be carried out, which raises uncertainty for New MVNOs.

(3147) As regards the implementation of granting wholesale access, the Commission considers that, like the Wholesale Market Commitment as regards Existing MVNOs, the Wholesale Market Commitment as regards New MVNOs continues to be formulated in an ambiguous way that creates uncertainty for New MVNOs as to the timing of and the costs associated with obtaining wholesale access (see recital (2873). This might even frustrate a New MVNOs' incentives to obtain wholesale access under the Wholesale Market Commitment. Indeed, there would be an implementation plan to be agreed between the Notifying Party and the New MVNO. However, the exact scope of this plan was not further defined and there is no time limit by when wholesale access would have to be granted at the latest. Moreover, also under the Third Commitments, the New MVNO would have to bear "reasonable" implementation costs. There are no principles set out as regards those costs and the term reasonable leaves room for interpretation and thus uncertainty.

(3148) In the absence of further amendments to the Wholesale Market Commitment in relation to New MVNOs, the Commission also continues to consider that there is uncertainty as to the network on which wholesale access would be granted (see recital (2874). According to clause 66 b) of the Third Commitments, the Notifying Party would no longer be obliged to grant wholesale access if this were to result in more than […]% of its Network Capacity being committed to third parties. Network Capacity is defined as capacity on the Network. The Network is defined as that of O2. There is thus a possibility that wholesale access would only be granted on the network of O2. If that were to be the case, there is additional uncertainty as to what would happen to New MVNOs if the O2 UK Divestment Option under the NEO Commitment were to be exercised.

9.6.7. *Overall assessment of the Third Commitments*

(3149) In light of all the considerations set out in Section 9.6, the Commission concludes that the Third Commitments do not eliminate all the identified competition concerns in respect of the retail market for mobile telecommunications services and in the wholesale market for access and call origination on public mobile networks in the United Kingdom entirely, and are not comprehensive and effective in all respects.[2524]

(3150) In addition, the Commission recalls that the Third Commitments were submitted on 6 April 2016, thirteen working days after expiry of the deadline for submitting commitments established by Article 19(2) of the Implementing Regulation.[2525] As regards commitments submitted after the deadline established by Article 19(2) of the Implementing Regulation, the Remedies Notice states that "[t]*he Merger Regulation does not impose any obligation on the Commission to accept commitments after the legal deadline for remedies, unless the Commission voluntarily undertakes to assess commitments in specific circumstances. In view of this, where parties subsequently modify the proposed commitments after the deadline of 65 working days, the Commission will only accept these modified commitments where it can clearly determine – on the basis of its assessment of information already received in the course of the investigation, including the results of prior market testing, and without the need for any other market test – that such commitments, once implemented, fully and unambiguously resolve the competition concerns identified and where there is sufficient time to allow for an adequate assessment by the Commission and for proper consultation with Member States. The Commission will normally reject modified commitments which do not fulfil those conditions*".[2526]

(3151) In the light of Article 19(2) of the Implementing Regulation, the Commission rejects the Third Commitments also on the grounds that, for the reasons set out in Sections 9.6.1 to 9.6.6, while the Third Commitments address some of the ambiguities and uncertainties identified in relation to the Second Commitments, the Third Commitments do not allow the Commission to conclude that – "*on the basis of its assessment of information already received in the course of the investigation, including the results of prior market testing, and without the need for any other market test*" – they would fully and unambiguously resolve the competition concerns identified in the present Decision.

10. CONCLUSION

(3152) The Commission has come to the conclusion that the Transaction is incompatible with the internal market.

2524 See Remedies Notice, paragraph 9 and case-law cited.

2525 "*Commitments offered by the undertakings concerned pursuant to Article 8(2) of Regulation (EC) No 139/2004 shall be submitted to the Commission within not more than 65 working days from the date on which proceedings were initiated*.", see Article 19(2) of the Implementing Regulation.

2526 See Remedies Notice, paragraph 94 and case-law cited. In particular, see Case T-87/05 *EDP v. Commission*, [2005] ECR II-3745, paragraphs 162 and following.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby the undertaking CK Hutchison Holdings Limited, through its indirect subsidiary CK Telecoms UK Investments Limited, would acquire sole control of the whole of the undertaking Telefónica Europe Plc within the meaning of Article 3(1)(b) of the Merger Regulation is incompatible with the internal market.

Article 2

This Decision is addressed to:

CK Telecoms UK Investments Limited
Star House
20 Grenfell Road
Berkshire
SL6 1EH
United Kingdom

Done at Brussels, 11.5.2016

For the Commission
(Signed)
Margrethe VESTAGER
Member of the Commission

ANNEX A: THE COMMISSION'S QUANTITATIVE ANALYSIS

TABLE OF CONTENTS

1. INTRODUCTION[1]

(1) As discussed in Section 8.2.1.4 of the Decision, the Commission has carried out a quantitative analysis to assess the likely change in pricing incentives resulting from the elimination of horizontal competition between Three and O2. This Annex contains the details of this analysis.

(2) The Commission's preliminary quantitative assessment was presented in Annex A of the Statement of Objections. It consisted of an extension of the methodology used in the Article 6(1)(c) Decision.

(3) The quantitative analysis is based on a careful measurement of the key empirical inputs for the analysis of pricing incentives, in particular of the measures for the degree of substitutability between the product propositions by different suppliers available to consumers and of the margins earned by suppliers on new customers they acquire. As explained in Horizontal Merger Guidelines, the degree of substitutability and margins are two important determinants of the likelihood that the elimination of competition between the merging parties will lead to significant price increases.

(4) The price effects presented in the Decision and in this Annex summarise the interaction between the measured degree of substitution and margins. They are point estimates representing the Commission's best estimate of the effect of the merger on prices using a standard framework of analysis. As such, these price effects are informative on the likelihood of significant non-coordinated price increases as a result of the Transaction. A number of further sensitivity analyses are also presented to test the robustness of the estimates on which the Commission relies for its assessment of the transaction.

(5) This Annex is structured as follows: Section 2 presents the Bertrand-Nash framework underlying the analysis; Section 2.5 introduces in more detail the calibration-based approach to merger simulation and presents the results of the Commission's baseline and sensitivity analyses; Section 4 presents a discussion of the arguments put forward by the Notifying Party in the Reply to the Statement of Objections; Finally, Section 5 presents the Commission's conclusions drawn from the quantitative analysis. The relevant references quoted in this Annex are included in Section 6.

(6) The Commission's assessment of the efficiency claims raised by the Notifying Party[2] is contained in Section 8.4 of the Decision.

2. THEORETICAL FRAMEWORK: BERTRAND-NASH COMPETITION IN DIFFERENTIATED PRODUCTS

(7) The Commission's quantitative analysis rests on the standard analytical framework of Bertrand-Nash competition with differentiated products. The framework assumes that firms set price in a non-coordinated fashion in order to maximise their own

[1] All abbreviations and capitalised terms used in this Annex shall have the same meaning as in the Decision.

[2] See Notifying Party, Phase 2 submission to the European Commission, "Efficiencies from the proposed Hutchison 3G UK/O2 UK merger", 06 November 2015 (the "Frontier Efficiencies Paper").

profits. This estimation approach was also used on other recent cases involving mobile telecommunications services.[3]

(8) The starting point of the analysis assumes that the pre-merger situation constitutes a Bertrand-Nash equilibrium. As a result of the merger, Three's and O2's products are brought under common ownership. This eliminates competition between these products and generates incentives for the merged entity to raise prices. Post-merger, the merged entity will take into account the effect on the profitability of all of its tariffs when considering whether to change the price of one of its tariffs. For example, if in the pre-merger situation Three increased the price of one of its tariffs, it would lose subscribers. A number of these lost subscribers would go to the O2 tariffs. After the merger, when the Three and O2 tariffs are jointly controlled, these subscribers would no longer be lost from the point of view of the merged entity. Moreover, the more there is substitution between the Three and O2 tariffs (that is to say the higher the diversion ratio), the stronger the unilateral incentive for the merged entity to raise price. Unilateral price changes by the merged entity will also lead to price reactions by rivals (the so called "feedback effects") so that in the post-merger equilibrium all firms' prices may change. The overall extent of the price increases will depend on the closeness of competition between the merging parties and on the degree of competition from rivals.

(9) The framework used also allows assessing the effect of reductions in marginal costs or increases in quality as a result of the merger on the merged entity's incentives to raise price (provided that such effects can be verified and quantified to the required standard set out in the Horizontal Merger Guidelines[4]).

2.1. The model of Bertrand-Nash competition in differentiated products

(10) Bertrand-Nash competition in differentiated products is formally modelled as follows. Each firm f is assumed to have a portfolio of products, J_f. The total (variable) profits of firm f are given by the sum of profits for each product in its portfolio:

$$\Pi_f(p) = \sum_{j \in J^f} \left(p_j - mc_j\right) q_j(p).$$

(11) Here, p_j denotes the price of product j, p is the vector with the prices of *all* products by all firms, mc_j is the constant marginal cost of product j, and $q_j(p)$ is the demand of product j which depends on all prices offered.

(12) The effect of a change in the price of product j that is owned by firm f for given prices of other products is given by the derivative of the firm f's profit function with respect of the price of product j:

$$\frac{\partial \pi^f\left(p_j, p_{-j}\right)}{\partial p_j} = q_j(p) + \sum_{j' \in J^f} \left(p_{j'} - mc_{j'}\right) \frac{\partial q_{j'}(p)}{\partial p_j},$$

3 Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*, Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*.

4 See paragraphs 77 and 78.

(13) Where p_{-j} is a vector of price of all products other than *j*. A price increase of product *j* hence has three effects on profits. First, it directly raises profits, proportional to current demand, $q_j(p)$. Second, it lowers the product's own demand which decreases profits proportional to the current mark-up, $(p_j - mc_j)$. Third, as other products are substitutes, it raises the demand for the other products, including the firm's other products. This rise in the demand of the firm's other products in its portfolio partially compensates for the reduced demand of the firm's product *j*, and hence it has a positive effect on the firm's profits.

(14) At profit maximising prices, the positive and negative effects of further price rises by firm *f* must exactly offset one another. This implies that for each product *j* belonging to firm *f*, and for given prices of rivals firms, $\frac{\partial \pi^f\left(p_j, p_{-j}\right)}{\partial p_j} = 0$. This is the first order condition for p_j to be a profit maximising price given the prices of other products.

(15) If the first-order conditions hold simultaneously for each product *j* (across all firms) then the price vector *p* defines the Bertrand-Nash equilibrium of the overall market. In matrix notation, the first order conditions for the equilibrium can be expressed as:

$$q(p) + \left(\Theta \bullet \nabla(p)'\right)(p - mc) = 0,$$

where *q(p)* is a *J*x1 vector with the demand for each product, $\nabla(p) \equiv \partial q(p) / \partial p'$ is the *JxJ* Jacobian matrix of first derivatives, and *mc* the vector of marginal costs. Θ denotes the product ownership matrix, that is, a *JxJ* matrix, whose element in its row *i*, column *j* is equal to 1 if product *j* and *i* are supplied by the same firm pre-merger and to 0 otherwise. The symbol ● denotes element-by-element multiplication of two matrices of the same size. The ownership matrix is multiplied (element-by-element) with the transpose of the Jacobian matrix to account for the fact that each firm only takes account the effect of a price change on its own products but not that on rival products.

(16) Inverting this equation yields an expression of the Bertrand-Nash equilibrium price vector:

$$p = mc - \left(\Theta \bullet \nabla(p)'\right)^{-1} q(p). \quad \textbf{(1)}$$

(17) The first element on the right hand side is the marginal cost component of the equilibrium price, while the second is the markup. The markup depends on the own- and cross-price elasticities of demand. The lower the own-price elasticities and the greater the cross-price elasticities, the greater will be the mark-up over marginal cost.

2.2. Measures of merger effects

(18) As the merger brings together the products of the merging parties under common ownership. In the model this implies a change in the ownership matrix, with the post-merger ownership matrix Θ^{post} reflecting that post-merger all Three and O2 tariffs are owned and controlled by the merged entity. Elements of this matrix which refer to the interaction between Three and O2 tariffs and which took the value 0 pre-merger are changed to 1.

(19) This change in ownership implies that the first order conditions for a Bertrand-Nash equilibrium no longer hold for the merged entity's products at the pre-merger price. Also, it has to be noted that in these merger effect calculations it is assumed that the merged entity keeps all the products of the merging firms (no tariffs or brands are shut down). A post-merger price is calculated for each existing tariff of the merging firms. Consequently, in the tables in the subsequent sections price increase predictions are given separately both for Three and O2, even if these two firms will no longer exist as separate entities on the United Kingdom's mobile communications services market after the implementation of the Transaction.

2.2.1. Gross Upward Pricing Pressure Index (GUPPI)

(20) The Gross Upward Pricing Pressure Index (GUPPI) provides a first measure of the extent to which (absent synergies) the merged entity has an incentive to unilaterally raise price.

(21) The GUPPI is derived from the post-merger first order conditions when evaluated at the pre-merger price. For the GUPPI, the first order conditions are divided by the own price derivative of demand and are also normalised by the price. As at the pre-merger prices, the pre-merger first order condition equals to zero, the GUPPI for the merged entity's product *j* reduces to the "new" terms in the first order condition (in its diversion ratio formulation):

$$GUPPI_j = \frac{1}{p_j^{pre}}\left(\sum_{i \in J^{otherParty}} \left(p_i^{pre} - mc_{j'}\right) DR_{ji}\right), \text{ where}$$

$$DR_{ji} = -\frac{\partial q_i\left(p^{pre}\right)}{\partial p_j^{pre}} \Bigg/ \frac{\partial q_j\left(p^{pre}\right)}{\partial p_j^{pre}}$$

is the diversion ratio from product *j* to product *j'* and where the sum is taken over the set of products which pre-merger belonged to the other merging party.

(22) To compute the GUPPI one therefore only requires information on the diversion ratios between the merging parties' products, and the merging parties' margins and prices. No information on the demand for products or margins of non-merging firms is required. The computation also requires no assumption on the shape of the demand function as prices change.

(23) GUPPIs are frequently computed under the assumption of single product firms pre-merger. However, the above formulae can equally be applied to compute GUPPIs for multi-product firms.

2.2.2. Compensating Marginal Cost Reduction (CMCR)

(24) Alternatively one can ask what level of marginal cost reduction is required for each of the merged entity's products to exactly offset the incentive to raise price. In other words, the question is establishing at what level of marginal costs will the pre-merger price still be a Bertrand-Nash equilibrium post-merger.[5] This required level of compensating marginal cost can be computed as:

[5] See also Werden, G. J., (1996): "A Robust Test for Consumer Welfare Enhancing Mergers Among Sellers of Differentiated Products," *Journal of Industrial Economics*, 44, pages 409-413 [ID4224].

$$mc^{comp} = p^{pre} + \left(\Theta^{post} \bullet \nabla\left(p^{pre}\right)'\right)^{-1} q(p^{pre}).$$

(25) The compensating marginal cost reduction for product *j* is then

$$CMCR_j = mc_j - mc_j^{comp} \text{ per subscriber, or}$$

$$CMCR_j^{\%} = \frac{mc_j - mc_j^{comp}}{mc_j} \text{ in percentage terms.}$$

(26) As with the computation of the GUPPI, the CMCR only requires information for the merged entity's products at the pre-merger price and diversion ratios between the merging parties' products. This is because at pre-merger prices the post-merger first order conditions for non-merging firms equate to zero. CMCR also requires no specific assumption on the shape of the demand function as prices change.

(27) Although GUPPIs are sometimes used to approximate required marginal cost efficiencies, CMCRs provide a better indication for the required marginal cost reductions, because they take account of the fact that a marginal cost reduction of product *j* will, via an increase in the margin of product *j*, also have a feedback effect on the first order conditions for other products. This effect is ignored in approximations based on GUPPI. As the informational requirements for both approaches are the same, CMCRs are to be preferred as a benchmark for required marginal cost efficiencies.

2.2.3. Indicative price rises and merger simulation

(28) Within this framework the post-merger first order conditions, which takes account of the change in ownership of products induced by the merger (via the post-merger ownership matrix Θ^{post}) can be expressed as:

$$p^{post} = mc^{pre} - \left(\Theta^{post} \bullet \nabla\left(p^{post}\right)'\right)^{-1} q(p^{post}). \qquad \textbf{(2)}$$

(29) The predicted post-merger prices within this framework are the prices which satisfy these post-merger first order conditions.

(30) With linear demand, first order conditions can be inverted to directly provide the post-merger price as a function of marginal costs and demand parameters. In general, however, this is not possible and one must solve p^{post} as the solution to a non-linear system of first order conditions numerically. One strategy to do this is to express the first order equations as in equation (2) and then, starting from an initial guess for the new equilibrium price on the right hand side iterates this equation to update the value p^{post} until convergence is achieved.

2.2.3.1. Indicative price rise

(31) If it is assumed that rivals do not react to post-merger price changes by the merged entity, then this problem reduces to finding post-merger prices for the merged entity's products on the basis of the merged entity's first order conditions post-merger. This approach is often called an Indicative Price Rise (IPR). It requires information on the elements in post-merger first order conditions for the merged entity's products as well as an assumption of the functional form of demand. However, as the approach

assumes there are no rival reactions, no information on demand derivatives of rival's products is required.

2.2.3.2. Merger simulation

(32) A full merger simulation which also takes account of price reactions by rival amounts to finding the post-merger price vector which corresponds to the new post-merger Bertrand-Nash equilibrium for all firms, that is, the price vector which satisfies the above equation (2) for all products of all firms simultaneously.

(33) In addition to an assumption on the functional form of demand, this approach hence requires information on the elements in the first order equations for all firms' products, not just for the merging firms' products.

2.3. Efficiencies

(34) The effect of reductions in marginal costs as a result of the merger on the merged entity’s incentives to raise price can be accounted for by replacing the marginal cost estimate in the equation (2) with the marginal cost after efficiencies.

(35) Quality improvements can also be accounted for. However, the appropriate technique depends on the assumption on the functional form of demand. If demand is assumed to be linear (as is done in the analysis performed by the Commission), quality improvements that lead to a shift in the demand curve become equivalent to analysing competition in quality adjusted prices with reduced marginal cost.[6]

(36) The Commission therefore considers that synergies in the form of demand side efficiencies (quality) and in the form of supply side efficiencies (costs) can in principle be accounted for in the framework adopted. However, in order to be taken into account in the Commission's quantitative assessment, the potential demand side or supply side efficiencies arising from the merger must satisfy the conditions in the Horizontal Merger Guidelines.

(37) The Commission's detailed assessment of the Notifying Party's efficiency claims is provided in Section 8.4 of the Decision.

2.4. Cross ownerships

(38) The merger simulation approach adopted by the Commission allows taking account of any cross ownerships across the mobile operators. In the context of the United Kingdom’s mobile telecommunications market, O2 notably holds a 50% share in the Tesco Mobile. In the modelling performed by the Commission, this share is taken into account pre-merger and it is assumed that post-merger this share would be transferred to the merged entity.

(39) Specifically, it is assumed that the 50% share gives O2 50% of Tesco Mobile's profits and also 50% control over Tesco Mobile. As a result, all rows (respectively columns) in the ownership matrix relating to Tesco Mobile’s products take the value 0.5 in columns (respectively rows) relating to O2 or Tesco Mobile’s products. This

[6] Willig, R., (2011): ”Unilateral Competitive Effects of Mergers: Upward Pricing Pressure, Product Quality, and Other Extensions”, *Review of Industrial Organization*, 39, pages 19-38 [ID4225].

corresponds to the proportional control scenario of a 50% financial interest in Salop-O'Brien (2000).[7]

2.5. Calibration of demand parameters

(40) Using the model to compute measures of merger effects for a specific transaction requires a quantification of the demand parameters. If measures of diversion ratios and margins and quantities are available for the pre-merger situation, demand parameters can be calibrated following the approach described in this sub-section.

(41) A diversion ratio is a measure of the degree of substitutability between two products. The diversion ratio from product *j* to *i* (DR_{ji}) is defined as:

$$DR_{ji} = -\frac{\partial q_i}{\partial p_j} \bigg/ \frac{\partial q_j}{\partial p_j}.$$

(42) It measures the number of customers switching from product *j* to product *i* following a price increase of product *j* expressed as a percentage of customers of product *j* that would stop purchasing product *j* following the price increase.

(43) With this definition, the pre-merger first-order condition for product j can be rewritten as:

$$q_j \bigg/ \frac{\partial q_j}{\partial p_j} - \sum_{i \in J^f} (p_i - mc_i) DR_{ji} = 0.$$

(44) Observed diversion ratios, margins and quantities hence imply values of $\partial q_j / \partial p_j$, which then imply values for $\partial q_i / \partial p_j$ via the definition of diversion ratios.

(45) Under the assumption of linear demand, the first derivatives do not change as prices change and it is also straightforward to calculate demand changes and compute price increases either by assuming no price reactions from competitors (UPPs) or by solving the full equilibrium effect which takes account of and predicts price reactions by rivals.

3. Quantification of the Likely Price Effects of the Transaction

(46) This section explains the details of the calibrated merger simulations performed and presents the results of such analyses.

(47) The quantification relies on empirical measures of diversion ratios and margins as well as on observed quantities and prices pre-merger. The Commission's quantification of these measures relies on two key data sources: (i) segment level monthly data on each mobile operator's[8] subscribers, revenues and margins in the respective segments at the retail level; and (ii) switching information collected from a survey conducted by the Commission or from the operators' MNP data. The Commission obtained further information regarding the mobile operators' estimates

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[7] Salop S. and O'Brien D., (2000): "Competitive Effects of Partial Ownership: Financial Interest and Corporate Control", *Antitrust Law Journal*, Vol. 67, pp. 559–614 [ID5804].

[8] The analysis focuses on Three, O2, EE, Vodafone and Tesco Mobile.

of avoidable operating expenditures (OPEX) and avoidable capital expenditures (CAPEX) in the hypothetical case of a significant reduction of the subscriber base.

(48) In the following, the Commission first discusses in detail the inputs used for its quantitative assessment, that is, the construction of diversion ratios, margins and proxies for quantities and prices (Sections 3.1-3.3). The Commission then presents the results of its main analysis (Section 3.4) and the results of the sensitivity analyses (Section 3.5).

3.1. Diversion ratios

(49) In the Article 6(1)(c) Decision, the Commission derived diversion ratios based on MNP data. The Commission considers MNP data to be a reliable source of customer switching behaviour, and used it also in recent merger cases in the mobile telecommunication sector.[9]

(50) However, the use of MNP data for the purpose of the quantitative analysis of non-coordinated effects also has a number of limitations. In particular, the MNP data (i) includes only switching behaviour of customers who ported their mobile phone number; (ii) requires assumptions on either the customers' first or second choice of mobile operator; and (iii) does not necessarily represent the preferences of marginal consumers (which are the more relevant for the purpose of the analysis).[10] These shortcomings were noted by the Notifying Parties in previous merger cases in the mobile telecommunication sector[11], and by the Notifying Party in the current case in its Response to Article 6(1)(c) Decision. The Commission has no prior as to whether these shortcomings bias the diversion ratios and, if so, in what direction. The extent of bias, if any, also depends on the particular case. Absent an alternative source of information that addresses these limitations, the Commission considers that MNP data are a reasonable basis to measure diversion ratios for its quantitative assessment.

(51) Nevertheless, in the present case, the Commission investigated during the phase II investigation whether the above limitations of the MNP data lead to inaccuracies in the measurement of diversion ratios. To this end, the Commission conducted a customer Survey among mobile phone subscribers in the UK (the "Survey").[12] The Survey was designed to investigate the question of closeness of competition as described in the Horizontal Merger Guidelines, that is, in terms of customers' first and second choices;[13] in addition, it provides insights on the preferences of the marginal consumers.

(52) The Survey targeted *informed* customers of the Parties (and Tesco Mobile) who recently made a switching decision to either change provider to one of the Parties

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9 See Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*.

10 Being representative of all past switching events (in which customers ported their number), the MNP data does not necessarily represent the preferences of those consumers who would switch operator in the event of an increase in price (that is, the marginal consumers).

11 See, for example, Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*.

12 See Annex D and E to the Decision, containing the survey's questionnaire and methodology. Prior to implementing the survey, Three and O2 have been given the opportunity to comment on the survey's questionnaire.

13 See Horizontal Merger Guidelines, paragraph 28.

("gross adds"), or modify/renew their contract with one of the Parties ("internal switchers").[14]

(53) The Survey focused on customers of Three, O2 and Tesco Mobile as the degree of substitutability between the Parties' products (including Tesco Mobile which is at least partially controlled by O2) is the main driver of the change of pricing incentives arising from the elimination of competition between the Parties through the Transaction. Non-coordinated incentives for post-merger price increases can arise because customers that following a price increase by one merging party would have been lost to the other merging party in the absence of the merger are no longer lost for the merged entity post-merger. The degree of substitutability between the merging parties' products a key determinant of the strength of this most direct loss of competition effect of a merger.[15]

(54) To ensure that the customers were *informed* at the time of the switching decision, the Survey focused on respondents who had chosen a new tariff plan (or renewed the tariff plan) within the most recent 12 months available, that is, between July 2014 and June 2015. Furthermore, the Survey screened the respondents with a number of questions. The Survey proceeded only if (i) the phone number called was the respondent's primary personal mobile phone plan; (ii) the respondent had chosen the tariff personally; and (iii) if at the time of choosing the current provider/payment plan, the respondent had actively considered tariff plans of other providers.

(55) Customers who recently made a switching decision (to one of the Parties, or within one of the Parties) revealed the operator they switched to (or with which they chose to remain) as their first choice alternative. Hence, the Survey ensured that the customers interviewed had as their first choice one of the Parties or Tesco Mobile. The Survey then investigated these customers' second choice with two questions.

(56) The first question investigated the respondents' switching behaviour in the hypothetical event that the tariffs of their most recently chosen provider (i.e. their first choice) had been 10% more expensive at the time they made their choice ("intensive question").[16] The second question investigated the respondents' switching behaviour in the hypothetical event that their most recently chosen provider had not been available at the time they made their choice ("extensive question").

(57) Both questions elicit information on the distribution of respondents' second choices at the time they made their first choice. That is, the questions are informative on what the respondents considered their second best mobile operator at the time they chose their first best mobile operator. Furthermore, the intensive question is able to identify the second choices of the marginal consumers, i.e. of those that are most likely to change their behaviour following a price increase. In contrast, the extensive question

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14 The Survey was conducted over the telephone and has been designed and implemented in cooperation with the specialised survey agency BDRC Continental. The Commission has obtained from Three, O2 and Tesco Mobile data on mobile phone numbers of all gross adds and internal switchers in the pre-paid and post-paid private segments over the period between January 2014 and June 2015. The Survey interviewed a sub-sample of those customers who made a switching decision in the period between July 2014 and June 2015.

15 Horizontal Merger Guidelines, paragraphs 24 and 28.

16 The consumers were asked about their most recent choice of mobile telephone brand and which brand they would have chosen in case the price of the chosen brand had been approximately 10% higher per month at the time they made their choice.

provides information of the distribution of second-best choices of average consumers including those that would likely not change their behaviour following a 10% price increase.

(58) The Commission considers that the ability of the Survey to disentangle customers' first and second choices captures the essence of closeness of competition as it is described in the Horizontal Merger Guidelines, and its ability to provide insights on the preference of the marginal consumers is valuable for the purpose of the quantitative analysis. Moreover, the Survey is not dependent upon other costumers' choices unrelated to closeness of competition (e.g. to port their number).

(59) Overall, therefore, the Commission views the Survey as a superior source of information for the purpose of assessing closeness of competition, compared to other sources based on past switching behaviour, such as the MNP data.

3.1.1. Diversion ratios from the Commission's Survey

(60) The Survey targeted a total of 1,200 respondents who had changed their mobile provider (the "gross adds"[17]) or payment plan (the "internal switchers") between July 2014 and June 2015 (that is, during the most recent 12 months for which data is available). The survey was stratified as follows. It was designed to obtain 400 respondents from each of Three, O2 and Tesco Mobile. Also by design, for each operator, half of the respondents (200) were pre-paid customers while the other half were post-paid private customers. Finally, of the 200 respondents for each operator-segment combination, 100 were gross adds while 100 were internal switchers.[18]

(61) The Commission has computed two sets of diversion ratios from the responses to the Survey. The first set of diversion ratios is based on the responses to the intensive question only. The second set of diversion ratios is based on an aggregation of the responses to the intensive and to the extensive question.

(62) Focussing only on the responses to the intensive question significantly reduces the number of observations that can be used as the basis for the calculation of diversion ratios (compared to the case in which all responses, to the intensive and to the extensive question, are used). This is because only a proportion of the respondents replies that they would have changed their choice of operator had the price of their first choice been higher.

(63) In light of the greater statistical precision, the Commission has used the diversion ratios calculated based on all responses (intensive and extensive) in its baseline analysis' scenarios.

(64) In calculating the diversion ratios based on the Survey data, the Commission assumed that switching takes place within the same segment. In the Commission's view, excluding the cross segment switchers would imply an unnecessary loss of information given that the resulting diversion ratios excluding the cross segment switchers are similar to the diversion ratios following the Commission’s approach.

[17] Note that gross adds in this context include individuals who had switched mobile operators, as well as individuals who had acquired their first mobile connection.

[18] Tesco PAYG quotas did not include separate quotas for Gross Adds and Internal Switchers due to Tesco's small number of Internal Switchers for PAYG. Three did not have any internal switchers for PAYG so the entire sample of 200 respondents for Three PAYG has been constructed using gross adds.

This approach is also consistent with the one followed in the computation of the diversion ratios based on MNP data.[19]

(65) Given the stratification of the survey between gross adds and internal switchers for each operator-segment combination, the answers in the raw Survey data have been re-weighted in order to reflect the actual distribution of gross adds and internal switchers in the respective original populations from which the phone numbers for the interviews have been drawn.

(66) For a given combination of operator j[20] and segment z[21], each survey cohort of answers i (internal switchers or gross adds) has been reweighted using the ratio between the proportion of i in the population ($P_{i|jz}{}^{pop}$), and the proportion of ijz in the survey's sample ($P_{i|jz}{}^{sample}$).

$$\boldsymbol{weight_{ijz}} = \frac{\boldsymbol{P_{i|jz}^{pop}}}{\boldsymbol{P_{i|jz}^{sample}}}$$

(67) Table 1 and Table 2 show the diversion ratios based on intensive and extensive survey questions at network and provider level, respectively.[22] The tables are divided by segment: pre-paid[23], and post-paid private.[24]

Table 1: Diversion Ratios based on intensive and extensive survey questions, 2014H2-2015H1, network level

Pre-paid	**Three**	**O2**	**Tesco**	**EE**	**Vodafone**
Three	-	[50-60]%	[5-10]%	[20-30]%	[10-20]%
O2	[20-30]%	-	[10-20]%	[30-40]%	[30-40]%
Post-paid private	**Three**	**O2**	**Tesco**	**EE**	**Vodafone**
Three	-	[40-50]%	[0-5]%	[20-30]%	[20-30]%
O2	[10-20]%	-	[0-5]%	[40-50]%	[30-40]%

Source: Commission calculations based on the Survey's responses.

19 See Section 3.1.2.

20 Three, O2 or Tesco Mobile.

21 Pre-paid or post-paid.

22 In previous cases concerning the mobile telecommunications sector, the Commission has used diversion ratios at the network level in its baseline scenario analysis (Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*).

23 In this analysis, the pre-paid segment consists of pre-paid voice&data and pre-paid data only.

24 The post-paid private segment consists of post-paid private voice&data and post-paid private data only.

Table 2: Diversion Ratios based on intensive and extensive survey questions, 2014H2-2015H1, provider level

Pre-paid	Three	O2	Tesco	EE	Vodafone
Three	-	[40-50]%	[5-10]%	[10-20]%	[10-20]%
O2	[20-30]%	-	[10-20]%	[20-30]%	[20-30]%
Post-paid private	**Three**	**O2**	**Tesco**	**EE**	**Vodafone**
Three	-	[30-40]%	[0-5]%	[20-30]%	[10-20]%
O2	[10-20]%	-	[0-5]%	[30-40]%	[30-40]%

Source: Commission calculations based on the Survey's responses.

(68) Appendix A of this Annex presents the diversion ratios tables based on the intensive survey question only. The diversion ratios between Three and O2 based on all responses (intensive and extensive) are generally lower than those based on the responses to the intensive question only. Section 3.5 presents the results of a sensitivity analysis that estimates the price effects of the merger using diversion ratios based on the responses to the intensive question only.

(69) The Survey was conducted among customers of Three, O2 and Tesco Mobile. Therefore, in order to complete the full matrix of diversion ratios needed to perform the merger simulation, this information has been complemented by the MNP data available from Vodafone and EE.[25]

3.1.2. Diversion ratios using MNP data

(70) The Commission has also computed the diversion ratios based on Mobile Number Portability ("MNP") data. These are calculated from information on port out requests in each mobile operator's MNP database. These represent the number of porting requests an operator receives from other operators relating to customers who want to port their number to the other operator. This data is available for the pre-paid and for the post-paid private segment.

(71) The diversion ratio from segment z of firm j to firm i is then computed as the number of port out requests received by firm j from firm i relating to segment z divided by the total number of port out requests received by firm j relating to segment z.

(72) In order to calculate the diversion ratios based on the MNP data provided by the MNOs, the Commission took a number of simplifying assumptions.

(73) First, the MNP data provided by the mobile operators contain information on the segment of origin but do not contain information on the segment of destination. The Commission has assumed that for each port out the segment of destination is the same as the segment of origin.

[25] Diversion ratios from Vodafone and EE have only a secondary effect to the price predictions of the model because they only affect feedback effects, that is, the competitors' reaction to the merged entity's unilateral price effect. Such feedback effects are also recognised in the Horizontal Merger Guidelines (para 24) and are taken into account in the quantitative analysis. However, the precise measurement of the degree of substitutability between the Parties and their rivals is much less important for the magnitude of price effects than the measurement of the degree of substitutability between the Parties.

(74) Second, certain operators' MNP data only contain information on the network of destination of the port but did not contain information on the brand/provider of destination (this is the case for the data provided by Three and Vodafone). In these cases, the Commission has split the diversion ratios to the operator's network into the diversion ratio to the MNO itself and to that MNOs' non-MNOs based on the respective gross add share.[26]

(75) Third, Vodafone did not have any disaggregated port out data for the pre-paid segment for the period July 2013-June 2015. The Commission has therefore assumed that in the pre-paid segment for 2014 and for 2015H1 the diversion ratios from Vodafone to the other operators are equal to the benchmark diversion ratios calculated from the gross add shares.

(76) Fourth, the ports out for EE in pre-paid are not available for May and June 2015. Therefore, for each of these months, the ports out of EE have been assumed to be equal to the average of the previous three months.

(77) Overall, the Commission considers that the switching information available from the Survey is superior in this case. Therefore, the MNP data is used for sensitivity analyses only.

(78) The diversion ratios based on MNP data for 2014 are reported in Table 3 and Table 4, at the network and provider levels, respectively. The diversion ratios between Three and O2 based on MNP data are generally lower (sometimes to a significant extent) than those based on the Survey. Section 3.5 presents the results of a sensitivity analysis that estimates the price effects of the merger using diversion ratios based on MNP data as opposed to the baseline scenario which uses diversion ratios based on intensive and extensive survey questions.

Table 3: Diversion Ratios based on MNP data, 2014, network level

Pre-paid	**Three**	**O2**	**Tesco**	**EE**	**Vodafone**
Three	-	[…]	[…]	[…]	[…]
O2	[…]	-	[…]	[…]	[…]
Post-paid private	**Three**	**O2**	**Tesco**	**EE**	**Vodafone**
Three	-	[…]	[…]	[…]	[…]
O2	[…]	-	[…]	[…]	[…]

Source: Commission calculations based on mobile operators' data.

[26] For instance, in the case of ports out of Three, the diversion ratio from Three to the O2 network has been split across O2, Tesco Mobile and Lycamobile based on the respective proportion of gross adds.

Table 4: Diversion Ratios based on MNP data, 2014, provider level

Pre-paid	Three	O2	Tesco	EE	Vodafone
Three	-	[…]	[…]	[…]	[…]
O2	[…]	-	[…]	[…]	[…]
Post-paid private	**Three**	**O2**	**Tesco**	**EE**	**Vodafone**
Three	-	[…]	[…]	[…]	[…]
O2	[…]	-	[…]	[…]	[…]

Source: Commission calculations based on mobile operators' data.

3.1.3. *The Parties' approach to the construction of diversion ratios*

(79) The Notifying Party based its analysis of the closeness of competition between Three and O2 on its own computation of the diversion ratios (the "Parties' diversion ratios"). The Parties' diversion ratios are primarily derived from the quarterly survey that the Notifying Party commissions from the specialised survey agency Kantar (the "Kantar diversion ratios") and from the MNP data.

(80) For the switching from Three to O2, the Parties' diversion ratios are entirely based on Kantar data and exclude any cross segment switching events. The Notifying Party's argument for using the Kantar data instead of the MNP data of Three is that the ports out of Three record the destination network only and therefore do not disaggregate switches from Three to O2 and switches from Three to an non-MNO of O2.

(81) For the switching from O2 to Three, the diversion ratios are based on O2's ports out adjusted using information from the Kantar data in order to eliminate cross segment switching.[27] The Notifying Party's argument for using the adjusted MNP data of O2 instead of the Kantar data is that (i) the ports out data of O2 does capture the destination provider/brand (contrary to the ports out data of Three) and (ii) the ports out data are more complete compared to Kantar (which is based on a much smaller sample of churners).

(82) The Commission disagrees with the approach taken by the Notifying Party for a number of reasons.

(83) First, despite its more detailed level of disaggregation, the Kantar data maintains many of the MNP's limitations. For instance, as the MNP data, the Kantar data only provides information on consumers' past switching behaviour and are not informative as to these consumers' first and second choices. At the same time, as the Notifying Party acknowledges, the Kantar's diversion ratios are based on a smaller number of observations compared to the MNP diversion ratios. Indeed, the Commission notes that in particular the Kantar diversion ratios for the pre-paid segment present a large variation over time. Overall, the Commission considers that the MNP diversion ratios provide a more reliable source of information for assessing past switching behaviour.

27 For O2, the Notifying Party has used overall segment diversions from the MNP data as the basis for this calculation. The Kantar data has been used to establish what proportion of post-paid private diversions away from O2 to other operators involve a switch from O2's post-paid private tariffs to another operator's pre-paid tariff. These diversions are then excluded in order to calculate diversion ratios only for customers who switch within the post-paid private segment.

(84) Second, the Commission notes that if the Notifying Party had used the Kantar data for estimating also the diversion ratios from O2 to Three, it would have concluded that Three attracts […] of O2's ports out as opposed to the […] estimated based on the adjusted MNP data for O2.

(85) Third, the Commission considers that the diversion ratios used in its baseline scenarios (that is, those based on the Survey replies to the intensive and extensive questions) address a number of limitations of both the MNP and the Kantar data. Therefore, even abstracting from the above critiques to the hybrid methodology chosen by the Notifying Party, the baseline scenarios' diversion ratios used by the Commission are considered in this case superior to both the diversion ratios based on MNP and based on Kantar.

3.2. Margins

(86) For each mobile operator and Tesco Mobile, the Commission has calculated three types of economic margins: (i) the contribution margins, (ii) the contribution margins including the short run incremental network costs (the "short run incremental network margins") and (iii) the margins including an account for all potential short run incremental costs (the "full short run incremental margins"). These have been calculated based on accounting data at the segment level provided by Three, O2, EE, Vodafone and Tesco Mobile.

3.2.1. Contribution margins, short run incremental network margins

(87) Contribution margins are calculated by subtracting from the total recurrent subscriber revenues (mainly airtime revenues, that is, revenues from voice, SMS, and data, and recurrent revenues from the sales of the handsets) the following costs: interconnection costs, outbound roaming costs (national and international), bad debt (such as non-retrievable costumer debt) and customer acquisition and retention costs (including handset subsidies).

(88) The revenues relating to mobile termination are not included amongst the recurrent revenues from subscribers (as these are technically not paid for by the subscribers) but are included as a negative cost in the calculation of margins. The handset subsidies are calculated as the difference between upfront revenues received by subscribers for the handsets and the cost incurred by the operator for the procurement of handsets.[28]

(89) For the purpose of expressing the margins in percentage terms, the Average Revenue Per User ("ARPU") is used as a price measure. The calculation of ARPU is discussed in Section 3.3.2.

(90) Table 5 below presents the contribution margins calculated by the Commission based on the methodology discussed above.

28 The Commission notes that this computation of the contribution margins is based on handset subsides that potentially overestimate the total costs of the handsets and underestimate the recurrent revenues from handsets. This is because when the customer base is growing (as is the case notably for Three and O2 in the post-paid private segment), proportionally more costs of handsets are captured in a given year (as these relate to the new subscribers) and proportionally less recurrent handset revenues are captured (as these relate to the existing subscribers). As such, the approach adopted here is likely to underestimate the margins of Three and O2 in the post-paid private segment.

3.2.2. Short run incremental network margins and full short run incremental margins

(91) The Commission has calculated the short run incremental network margins by further subtracting the short run incremental network costs from the contribution margins.

(92) The Commission has also calculated the full short run incremental margins, that is, margins that account for a proportion of those non-directly attributable operating and capital expenditures (“indirect costs") that are considered to be avoidable with a change in the number of retail subscribers[29] ("the avoidable indirect costs") in the short-run.

(93) To this end, the Commission has requested each MNO[30] and Tesco Mobile to provide estimates of the avoidable indirect costs resulting from a 10% change in subscriber numbers (absent the proposed transaction).

(94) The indirect avoidable costs consist in avoidable operating costs and avoidable costs relating to investments in fixed assets. As the relevant measure for the investment in fixed assets in a given year, the Commission has used the sum of depreciation and an allowance for the cost of capital (consisting in the product between the Net Book Value of the asset and the WACC, the Weighted Average Cost of Capital).[31]

(95) Table 5 below presents the short run incremental network margins and the full short run incremental margins calculated by the Commission based on the methodology discussed above.

3.2.3. The relevant measure of margins

(96) For the analysis of the price effects of the Transaction, the Commission considers that the short run incremental network margins constitute the most appropriate approximation for the economic margins driving the pricing decisions of each mobile operator. As a robustness test to its quantitative analysis, the Commission also presents sensitivity analyses based on contribution margins and based on conservative estimates of the full short run the incremental margins.

(97) For the purposes of the merger simulation analysis, the Commission is primarily interested in the margin measure that best reflects marginal costs, that is, those costs that are usually taken into account by firms when setting prices. The most intuitive starting point is therefore the contribution margins.

(98) The contribution margins are based on the direct variable costs only, that is, those costs that naturally vary in direct proportion to each customer acquired or lost. To the contrary, incremental margins include a proportion of indirect costs and the extent to which these costs vary with subscriber numbers is prima facie less intuitive.

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[29] In the following discussion of avoidable indirect costs, the change in subscribers under consideration is a change in *retail* subscribers.

[30] Vodafone however has not been able to provide the estimates required. For the most relevant cost categories such as network, customer operations and sales and distribution, the Commission has applied to the Vodafone indirect costs the same variability levels as the ones used for EE.

[31] The Commission considers that using the sum of depreciation and cost of capital as the proxy for measuring the amount of investments in fixed assets that is economically relevant for a given year is a very conservative approach. Neither Three nor O2 […].

(99) In the Statement of Objections, the Commission considered contribution margins as the most appropriate measure of operators' profitability.[32] However, in the Reply to the SO, the Notifying Party reiterated that […][33] […].

(100) In light of the above, the Commission considers it appropriate to partially revisit its position in the Statement of Objections and account for the short-run incremental network costs in the calculation of the mobile operators' margins. However, the Commission considers that the Notifying Party's claim in the Reply to the Statement of Objections according to which also other […].

(101) Finally, while the Commission presented in the Statement of Objections a sensitivity analysis based on the long-run incremental margins, it considers that for the purposes of the calibrated merger simulation analysis the short-run incremental margins are the most relevant measure of the firms' profitability. This is in line with the Notifying Party's submission that short run incremental margins are the relevant measure of profitability driving operators' short term pricing decisions.[34] The long run incremental margins are therefore omitted from this Decision and Annex.

3.2.4. The construction of the incremental margins

(102) In order to verify the incremental cost estimates received from the mobile operators, the Commission has asked each MNO to submit explanations/justifications for their calculations underlying the incremental costs reported. In particular, the Commission has asked Three and O2 to provide their detailed calculations and assumptions, as well as any internal documents supporting these assumptions.

(103) Based on the information collected from the mobile operators, the Commission has constructed a best estimate of the total incremental costs for each operator. The total incremental costs have then allocated to the pre-paid and post-paid private segments based on the shares of total service revenues accounted for by each segment.

(104) For each MNO and segment, the estimated incremental margins are obtained by deducting the avoidable indirect costs from the contribution margins.

(105) Three has submitted a number of Excel spreadsheets and O2 has submitted a number of contracts[35] in support of their claims as to what costs are variable and what costs are not. In particular, this supporting material related to network[36], customer operations[37] and sales and distribution[38] costs.

(106) After a review and analysis of the underlying calculations and documentations submitted, the Commission has performed a number of adjustments to the incremental cost estimates provided by the MNOs. In particular, the adjustments to

[32] This was consistent with the approach adopted in the Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus* (see recital 716) and the Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland*, (see recital 664).

[33] Internal presentations of Three titled […] (ID021301085.00001).

[34] See for instance paragraph 265 of the Reply to the SO.

[35] These documents have been submitted in response to RFI 47 to Three and RFI 48 to O2 (both of 4 November 2015).

[36] See document […].

[37] See document […].

[38] See document […].

the incremental costs provided by Three and O2 have been motivated by a number of considerations.

(107) First, there are a number of statements in the Form CO confirming that the mobile telecommunications industry is characterised by significant fixed costs in a number of areas of the business. For instance, the Notifying Party notes in the Form CO[39] that *"the mobile market is a business in which scale economies play an essential role with the principal cost impact of scale being on the fixed costs of the business. The costs of building and operating a mobile network are to a large extent independent from the number of customers using it. By way of example, network coverage costs are fixed and largely independent of the number of customers. The same applies to other expenses like marketing, IT and many overhead costs. There are also significant fixed costs in retail distribution."*

(108) Second, the relevance of fixed costs for the mobile telecommunications industry emerges from a financial model[40] prepared by HSBC and based on Three's and O2's standalone investment plans as well as the merged entity's plan. The model's results suggest that according to the Notifying Party's financial advisers significant fixed cost savings are expected from the transaction in areas such as (i) Network; (ii) Customer Operations; Sales and distribution; (iii) Marketing and Advertising; (iv) Retail; and (v) G&A. This would suggest that there is an upper bound to the amount of costs that can be considered variable in these business functions. If all costs were variable with subscriber numbers in these business functions, then no fixed cost savings could arise as a result of the transaction.

(109) Third, the Notifying Party submitted an econometric analysis[41] of the relationship between OPEX per subscriber and the number of subscribers. In the Notifying party's views, this analysis shows that a […]. In the Commission’s view, the result indicates the existence of significant economies of scale which imply the existence of significant fixed (i.e. non-incremental) costs in the industry. This result suggests that it is highly unlikely that OPEX and CAPEX are fully proportional to subscriber numbers. More specifically, the estimated […] in OPEX per subscriber following a […] in subscriber numbers implies that a […] in subscribers increases OPEX by […]. In other words, the Notifying Party's analysis suggests that only around […] of OPEX can be considered variable.

(110) Fourth, after a detailed review of the material supporting Three's and O2's assumptions and calculations, the Commission has concluded that (i) there is a general lack of evidence in support of the levels of cost variability claimed by Three and O2 and (ii) some of the evidence available suggests that certain cost categories are variable to a lesser extent than indicated by Three and O2. The Commission hence made a number of adjustments to the figures proposed by the Parties. A high level overview of the adjustments and the motivations behind them is provided in Sections 3.2.4.1 and 3.2.4.2.[42]

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[39] Form CO, Section 6, paragraph 333 and subsequent.

[40] See HSBC’s financial model submitted by the Notifying Party as Annex 158 to the Form CO.

[41] See Notifying Party's Efficiencies Paper.

[42] The Notifying Party has been given access to the full detail of the Commission's adjustments to each MNOs' avoidable indirect cost figures (as well as the detailed rationales and motivations for these adjustments) in the Data Room that opened on 5 February 2016.

3.2.4.1. Network costs

(111) In general, the Commission considers that the incremental network cost estimates provided by the Notifying Party likely overestimate the actual incremental network costs faced by the two operators on a standalone basis. Therefore, the Commission has used in its quantitative analysis a revised version of the short-run incremental network costs provided by Three and O2.

(a) Three's short run incremental network costs

(112) Three has proposed a "cost deferral approach"[43] to estimate the network costs that are avoidable in the short run in terms of OPEX and CAPEX that can be avoided over the period 2015-2017 in the event of a 10% decrease in subscribers. The underlying idea is that a hypothetical 10% reduction in the number of subscribers will provide an MNO with a one off 10% increase in capacity per subscriber relative to the situation absent the hypothetical reduction in subscribers. This allows the MNO to delay certain CAPEX and OPEX expenditures for a period of time until demand's growth makes such investments necessary again.

(113) The incremental network costs are based on a computation of the months of delay in investments that a 10% reduction of subscribers would imply due to the reduced demand forecast that the operator’s investments must "catch-up" with. The model effectively pushes forward in time the CAPEX and OPEX planned by the number of delayed months and calculates the NPV of the stream of CAPEX and OPEX saved over 2015-2017.

(114) The forward-looking nature of the exercise means that in order to incorporate these avoidable network costs into a static calculation of variable profit margins for a single given year, the estimated avoidable network costs over 2015-2017 must be annualized. To this end, Three compares the NPV of the CAPEX and OPEX savings from deferred network investment to the NPV of the corresponding avoided revenues. This enables expressing avoidable network costs as a percentage of avoided revenues. The resulting avoidable costs of network congestion for Three are […] of the avoided revenues ([…] OPEX and […] CAPEX).[44]

(115) The Commission considers that the cost deferral approach as presented by Three is not unproblematic, as explained below. However, the Commission considers that subject to the modification described below, the model provides nevertheless the most detailed information available in this case to construct a meaningful estimate of the avoided network costs.

(116) First, as regards the quantification of the avoidable costs relating to investments in fixed assets, the Commission notes that these are generally based on depreciation figures as opposed to CAPEX figures. This is because CAPEX tends to be a rather volatile measure of investments (meaning that large investments are made in certain years and significantly less are made in other years) and therefore the total CAPEX in a given year is unlikely to correctly proxy for the amount of investments that are economically relevant for that year. Depreciation instead “spreads” CAPEX over a number of years (i.e. over the so called useful asset life), and therefore the total

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43 […].

44 On a per subscriber per month basis, the avoidable costs of network congestion calculated by Three amount to GBP […] for post-paid and GBP […] for pre-paid.

depreciation relating to a given year is significantly more likely to correctly proxy for the amount of investments that are economically relevant for that year.

(117) Second, the Commission notes that the time horizon considered by Three for the calculation of the avoidable CAPEX is 2015-2017 while projected CAPEX figures are available for 2015-2020. As explained above, the use of CAPEX in the context of a three-year time frame is potentially problematic because CAPEX figures refer to possibly very lumpy investments that are made in one year but which refer to assets with an economic life of several years. Indeed, the CAPEX figures provided by Three […].

(118) Therefore, in the absence of any corresponding figures relating to the economic depreciation of the capital expenditure, the Commission has extended the time frame considered by the model to account for OPEX and CAPEX figures for the full period 2015-2020.

(119) This modification generates a reduction in the incremental network costs compared to those estimated by Three over the shorter 2015-2017 period. The resulting avoidable costs of network congestion for Three amount to […] of the avoided revenues.[45]

(120) […][46] […].[47]

(121) Third, the Commission also found that Three's cost deferral model contains a mechanical error which, depending on the profile of demand and expenditures, introduces counterintuitive results whereby deferring costs can overall lead to higher expenditures than not deferring. This implies that in Three's modelling the incremental network costs can even become negative. Correcting this error[48] generates, everything else being equal, higher incremental network costs for Three. Assuming a 2015-2020 time horizon, correcting for this error results in avoidable network costs for Three equal to […][49] of the avoided revenues (as opposed to […][50], if the error is not removed).

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45 On a per subscriber per month basis, the avoidable costs of network congestion for Three calculated by the Commission amount to GBP […] for post-paid and GBP […] for pre-paid. These figures appear to be broadly in line with […].

46 Reply to the SO, paragraph 268.

47 Internal presentations of Three titled […] (ID021301085.00001).

48 The Commission considers that the mechanical error of the model primarily relates to the calculation of the number of months by which expenditures can be delayed under the lower demand scenario (that is, in case subscribers are 10% lower). If the number of months of delay increase over time, it can often happen that a counterintuitive result is obtained in which costs are higher under the lower demand scenario. The Commission has fixed this problem mainly by assuming that a lower demand scenario implies a deferral of costs by a fixed average number of months over the period considered.

49 The Commission notes that this updated figure also reflects another correction applied by the Commission to the Three's cost deferral model. The Commission found that due to some imprecision in the Excel matching formula used in the model to estimate demand in the 10% scenario, Three's model often overestimates by one month the number of months by which costs can be deferred (and in no instance does the model underestimate such number of months of delay). The Commission has adjusted this formula to ensure that no over-prediction (nor under-prediction) occurs.

50 The figure used in the Statement of Objections.

(122) Finally, the Commission has changed the WACC assumed by Three from […] to […], which is the level appearing in Three's internal documents.[51]

(123) Assuming a […] time horizon, a WACC of […] and correcting for the mechanical error found by the Commission, results in avoidable network costs for Three equal to […] of the avoided revenues (as opposed to the […] calculated by Three).

(124) In the Reply to the Statement of Objections, the Notifying Party explains that the incremental cost estimates previously provided for Three absent the Transaction were based on an investment plan that is insufficient to deal with the demands on the network going forward so as to keep congestion at acceptable levels.

(125) The Notifying Party claims that based on congestion levels and cost inputs sourced from Three's Capacity model (as modified for the purpose of assessing the transaction) the incremental costs of Three required to keep congestions constant would be […]of revenues instead of the original figures provided (corresponding to […] of revenues).

(126) The Commission considers that the original investment plan provided by the Notifying Party for Three was the correct basis on which the incremental costs should be calculated.

(127) First, the new higher incremental cost figure (of […] of revenues) is based on the Capacity model which the Commission does not consider to produce reliable results. As discussed in Annex C, the model overestimates demand and congestion for Three and does not fully account for cost-effective opportunities to expand capacity which are available to Three.

(128) Second, the new updated investment plans that are claimed to be necessary to keep quality constant are not consistent with Three's internal assessments[52], where significantly lower investment profiles are reported to be sufficient to keep up with the demand forecasts over the period up to 2020.

(129) Therefore, the Commission considers that the updated incremental cost figures provided by Three in its Reply to the Statement of Objections overestimate the investments that Three would need to carry out over 2015-2020 to keep up with demand and maintain its quality at acceptable levels.

(130) Overall, over the 2015-2020 time horizon, the Commission considers that its revised estimate of Three's short run incremental costs (equal to […] of the avoided revenues) based on a revision of Three's cost deferral model as described above is, based on the available evidence, the best estimate of the short run incremental network costs of Three.

(b) O2's short run incremental network costs

(131) O2 claims that the incremental costs of […].

51 […].

52 […].

(132) The corresponding costs are set out in the reply to data RFI.[53] However, the Commission notes that all […] and it is not possible to check how O2 has modelled the effect of a 10% reduction in subscribers on its network costs in the short run.[54]

(133) It is therefore not possible for the Commission to assess the reliability of the assumptions and calculations carried out by O2.[55] In the absence of sufficient underlying documentation, the Commission has assumed that the indirect network costs of O2 (OPEX, depreciation and cost of capital) have the same level of variability as implied by the revised calculations applied to Three.[56] The Commission also notes that applying to the limited 2015-2017 data available from O2 a similar cost deferral methodology as the one proposed by Three (see Section 3.2.4.1.a) generates […] costs compared to those used by the Commission assuming that the indirect network costs of O2 (OPEX, depreciation and cost of capital) have the same level of variability as implied by the revised calculations applied to Three.

3.2.4.2. Other indirect costs

(134) The cost category **IT & Technology** contains costs relating to internal permanent and contractor staff working on IT projects and costs relating to software and workpackages.

(135) Three and O2 argue that these costs are mostly fixed, but there is a small component which relates to increasing capacity to deal with more subscribers over time.

(136) The Commission also considers that at most a small fraction of these costs may vary with the number of subscribers due to […].[57]

(137) Three itself acknowledges in the Form CO[58] that "*the incremental cost of IT over and above the set up and maintenance for a small number of customers is relatively small*".

(138) For the cost category **Content & Product**, Three and O2 have not provided any detailed disaggregation nor justification as to why costs should be variable with subscriber numbers.

(139) The Commission notes that direct variable costs relating to licenses and payments to content providers are already included (if any) amongst the direct variable costs factored into the calculation of contribution margins. Therefore, the remaining indirect content and product development costs are not expected to be variable with subscriber numbers.

(140) For instance, as regards potential costs relating to staff working on content and product development, the Commission does not consider that a 10% reduction in

53 O2's response to RFI 48 of 4 November 2015.

54 […]

55 On a per subscriber per month basis, the […] calculated by O2 amount to GBP […] for post-paid and GBP […] for pre-paid.

56 On a per subscriber per month basis, the […] for O2 calculated by the Commission amount to GBP […] for post-paid and GBP […]for pre-paid. The Commission notes that footnote 42 of the Statement of Objections reported the […] for O2 calculated by the Commission as GBP […]for post-paid and GBP […]for pre-paid. However, these were in fact GBP […] and GBP […], respectively, as reported in the material available in the Data Room that opened on 5 February 2016.

57 […].

58 Form CO, Section 6, paragraph 333 and following.

subscriber numbers would lead to a decrease in product development efforts and in the range of product offerings by mobile operators. Indeed, the Commission considers that the evidence available suggests that Three was not a less innovative competitor in terms of product offering in the past years compared to its situation today, when the scale of its operations has arguably increased.

(141) Overall, Three and O2 have not provided any reasoning nor evidence suggesting that their expenditures on content and product development vary with subscriber numbers. The Commission has therefore adjusted downwards the incremental cost estimates provided by Three and O2.

(142) The cost category **Marketing & Advertising** includes cost positions such as advertising and promotions, as well as marketing costs.

(143) While Three and O2 have not provided a detailed disaggregation of the cost positions in this category, a large proportion of this category generally relates to nation-wide advertising such as on internet, television and billboards. The Commission considers that this advertising spend is mostly driven by strategic management decisions and would generally not change with a 10% change in subscribers.

(144) The Commission recognises that a small fraction of Marketing & Advertising may vary with subscriber numbers. For instance, this could be the case for costs relating to direct marketing communications to existing customers or relating to discounts and other promotion costs incurred on a "per acquired subscriber" basis.[59] However, the bulk of the Marketing and Advertising costs are considered fixed in nature and consequently Three's and O2's incremental cost estimates have been adjusted downwards.

(145) The Commission notes Three itself acknowledges in the Form CO[60] that *"[...] network coverage costs are fixed and largely independent of the number of customers. The same applies to other expenses like marketing, IT and many overhead costs". And further: "a large part of marketing costs are fixed and are driven by brand building instead of being volume-driven."*

(146) The cost category **Customer Operations** includes cost positions such as handset returns and repairs, call centre costs and pre-paid top-up commissions.

(147) Three and O2 have provided underlying evidence showing that […][61] […].

(148) The cost category **Sales and Distribution** includes cost positions relating to sales logistics and inventory and relating to supply chain management (e.g. handsets distribution).

(149) Three and O2 have provided underlying evidence[62] showing that in the short run […][63] […].

59 For instance, the costs relating to direct marketing communications to existing customers have been recognised as fully variable. Full variability has also been assumed for the online spend such as "third party click costs", which are incurred whenever a customer accesses O2's website via an advert elsewhere and completes a transaction.

60 Form CO Section 6, paragraph 333 and subsequent.

61 See document […] for Three (response to RFI 47 of 4 November 2015) and document […] for O2 (response to RFI 48 of 4 November 2015).

(150) The cost category **Retail** includes cost positions such as costs relating to the personnel (e.g. travel and accommodation costs) and costs relating to retail estates (e.g. leases and other property costs).

(151) Three has provided underlying evidence[64] showing that […].

(152) In the Commission's view, retail costs relating to personnel vary significantly less than proportionally with changes in subscriber numbers. The variability of these personnel costs also depends on the extent to which the company resorts to external contractors and partners as opposed to own staff. It is often observed that in response to a 10% decrease in the workload staff is devoted to other activities within the company.

(153) The Commission notes Three itself acknowledges in the Form CO[65] that *"There are also significant fixed costs in retail distribution."* In addition, as noted in Three's response to the Commission's request of 16 June 2015, […].

(154) Overall, the Commission broadly agrees with the evidence provided and has performed a limited amount of changes to the assumptions put forward by Three.

(155) The Commission has not included any **General and Administrative ("G&A")** costs in its calculation of the incremental margins. G&A costs are mainly overhead costs and the Commission is of the view that these costs would not be adjusted in response to a decrease of the subscriber base of 10%. The Parties have not provided convincing evidence indicating that their G&A costs would be adjusted in the event of a change in the subscriber numbers.

(156) The Commission notes Three itself acknowledges in the Form CO[66] that *"the costs of head office functions, including property costs, finance costs, legal costs and supporting HR function costs are largely fixed irrespective of an MNO's number of customers."*

(157) Finally, as regards the costs incurred in relation to **License and Spectrum**, the Commission agrees with the Notifying Party's assumption that these costs are fixed cost incurred upfront irrespectively of the subscriber numbers. They are therefore not incremental with respect to a 10% change in subscriber numbers. While the spectrum costs may be considered incremental to a certain extent in the longer term, these are most likely considered fixed in the short-run.

(158) Table 5 below presents the incremental margins calculated by the Commission based on the methodology and adjustments discussed above.

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62 See document […] (reply to RFI 47 of 4 November 2015) and document […] (response to RFI 48 of 4 November 2015).

63 See document […] (reply to RFI 47 of 4 November 2015).

64 See document […] for Three (response to RFI 47 of 4 November 2015).

65 Form CO Section 6, paragraph 333 and subsequent.

66 Form CO Section 6, paragraph 333 and subsequent.

3.3. Proxies for quantities and prices

3.3.1. Pre-merger demand measure: gross adds

(159) The Commission's approach is intended to capture competition for customers which are contestable in the sense that they are in a position and willing to consider moving to a different provider.

(160) To proxy for these customers, the Commission used the number of customers gained by each mobile operator in the pre-paid and post-paid segment in any given period (the gross adds).

(161) The analysis based on gross adds is particularly important for the assessment of the likely price effects of the Transaction because competition takes place for those customers that are contestable and, in this context, the contestable customers are proxied by the customers gained in any given period (the gross adds).

3.3.2. ARPU as price measure

(162) The Commission has used the average revenue per user ("ARPU") as the relevant proxy for prices.

(163) The ARPU used proxies the average monthly price of the typical mobile phone bundle offered by each operator for a given segment (either via invoices or as pre-pay top up amounts). It is hence the appropriate basis to compute percentage increases of the prices paid by consumers.

(164) The use of ARPU implies that usage is assumed to be exogenous[67] and that customers choose between brands, i.e. that the customer chooses the provider with the most convenient offer given his or her exogenous needs. In the Commission's view, it is appropriate to work with this simplifying assumption, as consumption is taking place more and more within the bundle due to the large and increasing bundle sizes.[68]

(165) The ARPU has been calculated by dividing the total recurrent revenues from subscribers (including the handset recurrent revenues but excluding the revenues from mobile termination[69] and revenues received in relation to the subscribers' one-off upfront payments for handsets) by the average number of active subscribers over the period.

(166) As regards the monthly recurrent payments that subscribers make in relation to the handsets, the Commission notes that (i) EE and Vodafone include these payments into the unified monthly charge to the customer, (ii) O2 and Tesco Mobile charge customers separately for the handsets (e.g. Refresh customers of O2 and Anytime Update customers of Tesco Mobile) and (iii) Three records internally the payments relating to the handsets separately from the revenues attributed to airtime, even if the operator does not charge customers separately for the handsets.

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67 This implies that usage needs are given, that is that they are not a function of pricing.

68 The Commission computes a yearly average ARPU figure. Usage needs over a period of one year can be reasonably expected not to change as significantly as to be not represented by the yearly average ARPU anymore.

69 As these are not related to the customers' payments.

(167) Moreover, each of O2, Tesco Mobile and Three record in any given month the entire sum of expected future recurrent monthly handset payments relating to the customers that signed-up in the month a new tariff including a handset. For these operators, in order to ensure that ARPU calculations are based on the revenues reflecting the actual payments made by subscribers for handsets in any given month (as opposed to the sum of all expected future handset recurrent revenues), in any given month the Commission has only considered an amortization of the handset recurrent revenues that Three, O2 and Tesco record in that month.

(168) This approach to the calculation of ARPU is consistent with the one followed in previous merger cases in the mobile telecommunications sector. There is a trend in the United Kingdom's mobile market towards separating handset related consumer revenues from the service/airtime related revenues (O2 does this fully transparently via its Refresh tariffs, while Three does it internally). Using only airtime related revenues would substantially increase the relative margins (that is, the absolute margins relative to the ARPU), thereby increasing the estimated percentage price effects.

(169) The Commission's calculation of ARPU differs from the methodology put forward by the Notifying Party in a number of ways.

(170) First, contrary to the Commission's approach, the Notifying Party includes the upfront payment for handsets in the ARPU. All else being equal, the inclusion by the Notifying Party of the upfront payment for handsets in the ARPU leaves the absolute margins unchanged compared to the margins calculated by the Commission but lowers the margins expressed as a proportion of ARPU. In the Commission's view, in this context the ARPU should represent a proxy for the monthly price paid by the MNOs' customers for the mobile services they receive. As such, the ARPU relating to upfront handset payments should not be included or at most an amortisation thereof could be included.

(171) Second, the Notifying Party includes in the ARPU the cumulative recurrent revenues relating to handsets sold with Refresh tariffs. The Commission instead uses an amortisation of these cumulative revenues (as a proxy for the monthly recurrent revenues from the handsets sold with Refresh tariffs). The Commission considers that the latter approach constitutes a better approach to overcome the accounting rules limitations of Three and O2 (and Tesco Mobile), which record in a given month *all* the future expected monthly recurrent revenues from the handsets sold in the month.

(172) Third, the Notifying Party includes in the ARPU the revenues relating to termination, while the Commission includes these only in the computation of margins (as a negative cost). In the Commission's view, in this context the ARPU should represent a proxy for the monthly price paid by the MNOs' customers for the mobile services they receive. As such, the revenues from termination, which are payments made across operators at the wholesale level, are better treated as a negative cost rather than as a component of the price paid by consumers.

(173) Table 5 presents an overview of the key indicators forming the inputs for the calibrated merger simulation (in addition to the diversion ratios).

Table 5: Overview of the key indicators, 2014

Segment	MNO	Gross adds	ARPU	Contribution margin (% of ARPU)	Short run incremental network margin* (% of ARPU)	Full short run incremental margin (% of ARPU)
Pre-paid	Three	[…]	[…]	[…]	[…]	[…]
	O2	[…]	[…]	[…]	[…]	[…]
Post-paid private	Three	[…]	[…]	[…]	[…]	[…]
	O2	[…]	[…]	[…]	[…]	[…]

3.4. Results of the calibrated merger simulation

(174) The Commission has analysed the effects of the merger on prices in the pre-paid[70], post-paid private[71], as well as in the overall private segment[72]. The effects of the proposed transaction in the market for retail telecommunication services for business customers (the "business segment") have not been analysed because Three is not active to a significant extent in this segment.

(175) The baseline scenarios of the Commission's calibrated merger simulation is based on 2014 data using short run incremental network margins and diversion ratios based on intensive and extensive survey questions.

(176) The results of the analysis are reported for the case in which diversion ratios at the network level and at the provider level are used.[73]

(177) In the Commission's view, an analysis based on diversion ratios at the provider level is useful to analyse the effect of the merger at the retail level holding wholesale conditions for non-MNOs fixed and treating non-MNOs as fully independent at the retail level (with the exception of Tesco Mobile which is jointly owned and controlled by O2 and Tesco). Therefore, the analysis at the provider level does not account for the effects on the retail market of any reduction of competition at the wholesale level which would undermine the effectiveness of the non-MNOs. Furthermore, the analysis at provider level assumes no price reaction from the market participants not included in the analysis (i.e. all the non-MNOs except Tesco Mobile), and hence, in this respect, it is a conservative measure of the likely price effects post-transaction.

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70 In this analysis, the pre-paid segment consists of pre-paid voice&data and pre-paid data only.

71 The post-paid private segment consists of post-paid private voice&data and post-paid private data only.

72 The overall private segment is computed as the revenue weighted average of the price effects in the pre-paid and post-paid private segments for each operator.

73 In terms of precedent cases in the mobile telecommunications sector, in Telefónica Deutschland/E-Plus, the Commission has used diversion ratios at the network level in its baseline scenarios analysis (Commission decision of 2 July 2014 in case No M.7018 – Telefónica Deutschland/E-Plus). In Hutchison 3G UK/Telefónica Ireland, the Commission has used diversion ratios at the provider level (with diversions to and from Tesco Mobile disaggregated from O2 but modelling, as in the present Decision, a 50% stake and control by O2 in Tesco Mobile) in its baseline scenarios analysis but de facto non-MNOs other than Tesco Mobile accounted for circa 2..4% of the market –the network level analysis was hence equivalent to the provider level analysis. (Commission decision of 28 May 2014 in case No M.6992 – Hutchison 3G UK/Telefónica Ireland).

(178) An analysis based on diversion ratios at the network level instead assumes that the effect of the elimination of competition between Three and O2 is best captured by their positions at the network level rather than by the pure retail level interaction between their respective brands. The Commission considers that the network level analysis proxies to a certain extent the wider anti-competitive effects of the Transaction, in particular in relation to possible detrimental effects on the wholesale competition, as it assumes that MNOs fully control non-MNOs on their network both pre- and post-merger (again, for Tesco Mobile only partial control and ownership is assumed). This partly accounts for the identified harm relating to reductions in competition at the wholesale level.

(179) The Commission has carried out a number of sensitivity analyses to test the robustness of its baseline analysis. The results of the sensitivity analyses are discussed in Section 3.5.

(180) Table 6 presents the results of the baseline scenarios. Part (a) on the left-hand side of the table reports the results at network level (that is, using diversion ratios at network level), while part (b) on the right-hand side of the table reports the results at provider level (that is, using diversion ratios at provider level). For each of the market participants included in the analysis (Three, O2, EE, Vodafone and Tesco Mobile) the Commission has computed the effects of the merger on prices in the prepaid and in the postpaid private segment, as well as in the overall private segment. The segment-wide effect in the baseline scenarios (as well as in the sensitivity analyses) is the revenue weighted[74] average of the price effects of each market participant in that segment. The segment-wide price effect for the overall private segment is the revenue weighted average of each market participant's price effect in the overall private segment.[75,76]

74 The Commission uses as weights the pre-merger revenue shares. In the Data Room report, the Notifying Party claims that the Commission's model overstates the average price increases in a given segment because these average price increases would be lower if the post-merger subscriber shares were used as weights. The Commission considers that using the pre-merger revenue shares is the most appropriate approach because (i) combining volume weights with percentage price increases as suggested by the Notifying Party does not account for the fact that the level of prices may be different across different segments or operators and (ii) using the pre-merger revenue shares allows interpreting the average price increases as the percentage increase in price that consumers would have to pay if they did not change their choice of supplier. Using post-merger shares as a weight ignores the harm to those customers who, to avoid a stronger price increase by their preferred operator as a result of the merger have to move to a second best operator.

75 This is equivalent to the revenue weighted average of the segment-wide price effects in pre-paid and post-paid private segments.

76 The Commission notes that the large price effects for Three in the pre-paid segment are partly driven by the inclusion of giffgaff in the pre-paid segment of O2. If giffgaff were included in the post-paid segment of O2, Three's price increase in pre-paid would be lower than indicated in the table and, conversely, Three's price increases in post-paid would be higher.

Table 6: Calibrated merger simulation baseline scenario results[77], 2014

(a) Network Level				(b) Provider Level			
Segment	**Pre-paid**	**Post-paid private**	**Overall Private**	**Segment**	**Pre-paid**	**Post-paid private**	**Overall Private**
Three	40.5%	12.6%	15.4%	**Three**	32.1%	10.8%	12.9%
O2	17.8%	8.2%	10.7%	**O2**	16.7%	6.8%	9.0%
EE	10.9%	3.5%	4.4%	**EE**	6.4%	2.9%	3.3%
VF	7.5%	3.3%	4.0%	**VF**	5.7%	3.4%	3.7%
Tesco Mobile	12.4%	7.0%	8.5%	**Tesco Mobile**	9.3%	6.0%	6.9%
Segment Effect*	14.9%	5.7%	7.3%	**Segment Effect***	10.3%	4.8%	5.7%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(181) Table 6 part (a) shows that in the baseline scenario at network level the segment-wide effects are approximately 14.9% and 5.7% in the pre-paid and post-paid private segments, respectively, with an overall private average of 7.3%. The model estimates that Three will increase prices by 40.5% in the pre-paid segment, by 12.6% in the post-paid private segment and by 15.4% in the overall private segment. For O2, the model predicts price increases of 17.8% in the pre-paid segment, 8.2% in the post-paid private segment and 10.7% in the overall private segment.

(182) As regards the baseline scenario at the provider level, which is reported in part (b) of Table 6, the segment-wide effects are 10.3% in pre-paid and 4.8% in post-paid private, with an average of 5.7% in the overall private segment. The predicted price effects for Three are 32.1% in the pre-paid segment, 10.8% in the post-paid private segment and 12.9% in overall private. For O2, the model predicts a price increase of 16.7% in pre-paid, 6.8% in post-paid private and 9.0% in overall private.[78]

(183) These baseline scenarios indicate that the Transaction is likely to generate a sizeable incentive to increase prices on average in each of the pre-paid, post-paid segments, as well as in the overall private segment. The Commission also notes that the approximately […] million customers of Three and O2 are expected to face price increases that are significantly higher than average.

3.4.1. Compensating marginal cost reductions for the baseline scenarios

(184) The Commission has also computed the CMCRs for the Parties and for Tesco Mobile. The CMCRs represent the marginal cost reductions required to offset the incentive for the Parties (and Tesco Mobile, which is at least partially controlled by O2) to increase prices resulting from the direct elimination of competition between them.

77 Vodafone is indicated as "VF".

78 There are a number of reasons that explain the differences in the predicted price effects of the Commission's baseline scenarios and the price effects presented by the Notifying Party. Most notably, (i) the methodology of the Notifying Party (GUPPI divided by two) does not account for feedback effects between the Parties' and among market participants, (ii) the diversion ratios used are different, (iii) the margins used are different, and (iv) the Notifying Party methodology does not account for O2's partial ownership of Tesco Mobile.

(185) Table 7 presents the CMCRs for the pre-paid segment and the post-paid private segment using diversion ratios from the baseline scenario at network level (part (a) on the left-hand side) and at provider level (part (b) on the right-hand side). As the CMCR represents the marginal cost reduction required to offset the incentive to increase prices by the Parties absent any reaction of the competitors, Table 7 also presents the Indicative Price Rise (IPR) for the Parties and Tesco Mobile. As explained in paragraph (31), the IPR assumes no price reaction from the competitors (EE and Vodafone).

Table 7: CMCR of the baseline scenarios (GBP/sub/month), 2014

CMCR							
(a) Network Level				**(b) Provider Level**			
Segment	**Pre-paid**	**Post-paid private**	**Overall Private**	**Segment**	**Pre-paid**	**Post-paid private**	**Overall Private**
Three	[…]	[…]	[…]	**Three**	[…]	[…]	[…]
O2	[…]	[…]	[…]	**O2**	[…]	[…]	[…]
Tesco Mobile	[…]	[…]	[…]	**Tesco Mobile**	[…]	[…]	[…]
Indicative Price Rise (IPR)							
(a) Network Level				**(b) Provider Level**			
Segment	**Pre-paid**	**Post-paid private**	**Overall Private**	**Segment**	**Pre-paid**	**Post-paid private**	**Overall Private**
Three	[…]	[…]	[…]	**Three**	[…]	[…]	[…]
O2	[…]	[…]	[…]	**O2**	[…]	[…]	[…]
Tesco Mobile	[…]	[…]	[…]	**Tesco Mobile**	[…]	[…]	[…]

Source: Commission calculations based on data provided by the MNOs.

(186) At the network level, to eliminate any incentives to increase prices, Three's incremental costs would need to decrease by about […] GBP/sub/month in pre-paid, and by […] GBP/subscriber/month in post-paid private; while O2's incremental costs should decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private.

(187) At the provider level, the incremental costs of Three would need to decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private; while the incremental costs of O2 should decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private.

(188) As the model assumes a 50% financial interest and control of O2 to Tesco Mobile, it is possible to compute the CMCR of Tesco Mobile. The marginal cost reductions needed to offset Tesco Mobile's incentives to increase prices should be interpreted as the necessary cost reduction that O2 would have to pass-through to Tesco Mobile in order to offset Tesco Mobile's incentive to increase price. However, […].

(189) The IPR shows that ignoring the price reactions of EE and Vodafone reduces somewhat the predicted price increases compared to those reported in Table 6 (which

instead account for the reactions of the Parties' rivals) but still shows that the Parties would have significant incentives to increase prices post-Transaction. The IPR predicts price increases in the range of […] and […] for Three and O2, respectively, in the overall private segment. Significant price increases also result for the prepaid and postpaid segments.

3.5. Sensitivity analyses of the calibrated merger simulation

(190) This section presents sensitivity analyses that the Commission has carried out to investigate the robustness of the baseline scenarios. The sensitivity analyses can be categorised as follows:

(a) Analyses using contribution margins;

(b) Analyses using incremental margins;

(c) Analyses using the diversion ratios based on the intensive survey question only;

(d) Analyses using the diversion ratios based on MNP data;

(e) Analyses assuming a diversion to the outside good;

(f) Analyses using 2015H1 data;

(g) Analyses using the Parties' diversion ratios and Kantar diversion ratios.

3.5.1. Sensitivity analyses based on contribution margins

(191) The analysis presented in this section consist in performing the baseline scenario analysis but using the contribution margins instead of the short run incremental network margins as the relevant profitability measure.

(192) The contribution margins are the measure of economic margins that has been used by the Commission in previous cases regarding the mobile telecommunications sector[79] and therefore the Commission considers this sensitivity particularly relevant for the assessment of the likely effects of this transaction.

[79] Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus*, Commission decision of 28 May 2014 in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland.*

(193) **Table 8: Calibrated merger simulation sensitivity results using contribution margins[80], 2014**

(a) Network Level				(b) Provider Level			
Segment	**Pre-paid**	**Post-paid private**	**Overall Private**	**Segment**	**Pre-paid**	**Post-paid private**	**Overall Private**
Three	44.5%	15.5%	18.4%	**Three**	35.0%	13.0%	15.2%
O2	19.7%	10.9%	13.2%	**O2**	18.5%	8.6%	10.8%
EE	11.1%	4.2%	5.0%	**EE**	6.5%	3.3%	3.6%
VF	7.7%	4.1%	4.7%	**VF**	5.8%	4.0%	4.2%
Tesco Mobile	13.0%	8.5%	9.8%	**Tesco Mobile**	9.9%	7.0%	7.9%
Segment Effect*	16.1%	7.2%	8.7%	**Segment Effect***	11.2%	5.8%	6.7%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(194) The sensitivity analysis based on the contribution margins predicts segment-wide price effects in the overall private segment in the range of 6.7-8.7%. These effects are approximately 1-1.5 percentage points higher than the effects of the baseline scenarios.

(195) The Commission notes that price effects of the Parties in the overall private segment are significantly higher, in the range of 15.2-18.4% for Three and 10.8-13.2% for O2.

(196) This sensitivity results in higher estimated price effects compared to the baseline scenarios, thereby strengthening the robustness of the baseline scenarios' results.

(197) Table 9 presents the CMCR figures for this sensitivity analysis based on contribution margins.

Table 9: CMCR of the sensitivity analyses using contribution margins (GBP/sub/month) , 2014

(a) Network Level			(b) Provider Level		
Segment	**Pre-paid**	**Post-paid private**	**Segment**	**Pre-paid**	**Post-paid private**
Three	[…]	[…]	**Three**	[…]	[…]
O2	[…]	[…]	**O2**	[…]	[…]
Tesco Mobile	[…]	[…]	**Tesco Mobile**	[…]	[…]

Source: Commission calculations based on data provided by the MNOs.

(198) At the network level, to eliminate any incentives to increase prices, Three's incremental costs would need to decrease by about […] GBP/sub/month in pre-paid, and by […] GBP/subscriber/month in post-paid private; while O2's incremental costs should decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private.

80 Vodafone is indicated as "VF".

(199) At the provider level, the incremental costs of Three would need to decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private; while the incremental costs of O2 should decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private.

3.5.2. *Sensitivity analyses based on full short-run incremental margins*

(200) The analyses presented in this section consist in a very conservative estimate of the effects of the merger. The Commission considers that the short run incremental network margins rather than incremental margins (either short-run or long-run) constitute a better approximation to the economic margins driving the pricing decisions of each MNO. This is because the short run incremental network margins are based on costs that either naturally vary in direct proportion to each customer acquired or lost or have been clearly shown to be accounted for in the firms' pricing decisions (as emerges from certain internal documents of Three). To the contrary, incremental margins include a proportion of indirect costs, and the Commission has not received supporting material to uphold the view that these costs are relevant for pricing decisions.

(201) Nevertheless, the Commission has carried out two sets of sensitivity analyses using the incremental margins as the underlying margin figures.[81] Table 10 and Table 11 report the results using, respectively, short-run and long-run incremental margins. As for the baseline scenarios, the tables present the results using network level diversion ratios (part (a)), and the results using provider level diversion ratios (part (b)).

Table 10: Calibrated merger simulation sensitivity results using <u>full short run incremental margins</u>[82], 2014

(a) Network Level				(b) Provider Level			
Segment	**Pre-paid**	**Post-paid private**	**Overall Private**	**Segment**	**Pre-paid**	**Post-paid private**	**Overall Private**
Three	38.7%	11.4%	14.1%	**Three**	30.7%	9.9%	11.9%
O2	16.9%	7.3%	9.8%	**O2**	15.9%	6.1%	8.2%
EE	10.4%	3.1%	4.0%	**EE**	6.1%	2.6%	3.0%
VF	7.1%	2.9%	3.6%	**VF**	5.5%	3.0%	3.3%
Tesco Mobile	12.2%	6.5%	8.1%	**Tesco Mobile**	9.1%	5.5%	6.6%
Segment Effect*	14.2%	5.1%	6.6%	**Segment Effect***	9.9%	4.3%	5.2%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(202) The sensitivity analysis based on the full short run incremental margins predicts segment-wide price effects in the overall private segment in the range of 5.2-6.6%.

(203) The Commission notes that the customers of Three and O2 would face price increases significantly higher than average. The price effects in the overall private segment are in the range of 11.9-14.1% for Three and 8.2-9.8% for O2.

81 The details of these margins calculations are described in Section 3.2.2.

82 Vodafone is indicated as "VF".

(204) This sensitivity results in slightly lower estimated price effects compared to the baseline scenarios. Overall, however, this sensitivity confirms the robustness of the baseline scenarios' results.

(205) Table 11 presents the CMCR figures for this sensitivity analysis based on the full short run incremental margins.

Table 11: CMCR of the sensitivity analyses using full short run incremental margins (GBP/sub/month), 2014

(a) Network Level			(b) Provider Level		
Segment	**Pre-paid**	**Post-paid private**	**Segment**	**Pre-paid**	**Post-paid private**
Three	[…]	[…]	**Three**	[…]	[…]
O2	[…]	[…]	**O2**	[…]	[…]
Tesco Mobile	[…]	[…]	**Tesco Mobile**	[…]	[…]

Source: Commission calculations based on data provided by the MNOs.

(206) At the network level, to eliminate any incentives to increase prices, Three's incremental costs would need to decrease by about […] GBP/sub/month in pre-paid, and by […] GBP/subscriber/month in post-paid private; while O2's incremental costs should decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private.

(207) At the provider level, the incremental costs of Three would need to decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private; while the incremental costs of O2 should decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private.

(208) This indicates that even when using a conservative margin measure such as the full short run incremental margins, the marginal cost reductions required to offset the incentives of the merging parties (and Tesco Mobile) to increase prices is still likely to be significantly above the short run incremental network costs per subscriber per month, which are the basis of any claimed efficiencies.[83]

3.5.3. Sensitivity analyses using diversion ratios based on the intensive survey question only

(209) As explained in Section 3.1, the diversion ratios based on the responses to the survey intensive question would be the most relevant for the purpose of the analysis because the intensive question is designed to capture the second best alternative MNO of the marginal customers (i.e. those customers who are more likely to switch operator after a price increase). However, due to the lower number of answers gathered from the intensive question,[84] the diversion ratios are estimates less precisely under this approach. For this reason, the Commission has decided to use the diversion ratios based on the aggregation of the intensive and the extensive survey questions as the baseline scenarios (for which the number of valid answers, and therefore the

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83 See Section 3.2.4.1

84 That is, respondents who indicated that they would have switched in response to a price increase.

precision of the diversion ratios, is higher). The Commission notes that the diversion ratios between Three and O2 tend to be higher when based on the responses to the intensive question only.

(210) The diversion ratios based solely on the intensive survey question are used as a robustness test for the baseline scenarios. Table 12 presents the results of such sensitivity analysis. Part (a) of Table 12 presents the results at network level, while part (b) of Table 12 presents the results at provider level.

Table 12: Calibrated merger simulation sensitivity results using diversion ratios based on the intensive survey question only[85], 2014

(a) Network Level				(b) Provider Level			
Segment	**Pre-paid**	**Post-paid private**	**Overall Private**	**Segment**	**Pre-paid**	**Post-paid private**	**Overall Private**
Three	45.4%	14.6%	17.7%	**Three**	33.8%	13.0%	15.1%
O2	23.6%	11.6%	14.7%	**O2**	21.4%	10.2%	12.7%
EE	13.4%	4.4%	5.5%	**EE**	6.6%	4.1%	4.4%
VF	8.3%	4.4%	5.0%	**VF**	4.6%	5.1%	5.0%
Tesco Mobile	19.3%	8.9%	11.9%	**Tesco Mobile**	13.8%	8.0%	9.7%
Segment Effect*	18.8%	7.4%	9.3%	**Segment Effect***	12.1%	6.7%	7.6%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(211) This sensitivity analysis using diversion ratios based on the intensive survey question only predicts segment-wide price effects in the overall private segment in the range of 7.6-9.3%.

(212) The price effects of Three and O2 in the overall private segment are in the range of 15.1-17.7% and 12.7-14.7%, respectively.

(213) This sensitivity results in higher estimated price effects compared to the baseline scenarios, thereby strengthening the robustness of the baseline scenarios' results.

3.5.4. Sensitivity analyses using diversion ratios based on MNP data

(214) This section presents the sensitivity analyses using the diversion ratios based on MNP data.

(215) Compared to the diversion ratios based on survey data, the diversion ratios based on MNP data present three shortcomings. First, the MNP data maps the past switching behaviour of those customers who port their number when changing operator. Although porting the phone number when switching operator is an established practice in the mobile telecom industry, the MNP data do not capture the totality of customers' switching behaviours in the market. Furthermore, switching in the post-paid private segment is generally better represented by MNP data than switching in the pre-paid segment where porting the phone number is less common. Second, the MNP data capture switching behaviour that is not necessarily price-driven. Third, it

85 Vodafone is indicated as "VF".

is not possible to infer the customers' second-best alternative from the MNP data, as they capture only the customers' best alternative.

(216) In addition, in the present case there are several limitations to some of the MNP data provided by the operators, as explained in Section 3.1.

(217) Notwithstanding these shortcomings, the Commission believes that the MNP data still constitute a valuable source of information on customers' past switching behaviour, and the sensitivity analyses using the diversion ratios based on MNP data are still informative to infer the robustness of the baseline scenarios. Table 13 presents the results on these sensitivity analyses. Part (a) on the left-hand side shows the results at network level, while part (b) on the right-hand side shows the results at provider level.

Table 13: Calibrated merger simulation sensitivity results using diversion ratios based on MNP data[86], 2014

(a) Network Level				(b) Provider Level			
Segment	**Pre-paid**	**Post-paid private**	**Overall Private**	**Segment**	**Pre-paid**	**Post-paid private**	**Overall Private**
Three	31.2%	9.1%	11.3%	**Three**	16.5%	8.5%	9.3%
O2	15.0%	6.9%	9.0%	**O2**	10.8%	6.3%	7.3%
EE	12.9%	3.8%	4.9%	**EE**	4.9%	3.5%	3.6%
VF	6.0%	2.3%	2.9%	**VF**	3.0%	2.5%	2.5%
Tesco Mobile	16.3%	10.7%	12.3%	**Tesco Mobile**	10.4%	10.1%	10.1%
Segment Effect*	13.6%	5.0%	6.5%	**Segment Effect***	6.7%	4.5%	4.9%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(218) This sensitivity analysis using the MNP data as the basis for the calculation of diversion ratios predicts segment-wide price effects in the overall private segment in the range of 4.9-6.5%.

(219) Again, the price effects that the Parties' customers are expected to be subject to is significantly higher than the average. In the overall private segment, those price effects are in the range of 9.3-11.3% for Three and 7.3-9.0% for O2.

(220) This sensitivity results in slightly lower estimated price effects compared to the baseline scenarios. Overall, however, this sensitivity confirms the conclusions reached in the baseline scenarios.

(221) Table 14 presents the CMCR figures for this sensitivity analysis using diversion ratios based on MNP data.

86 Vodafone is indicated as "VF".

Table 14: CMCR of the sensitivity analyses using diversion ratios based on MNP data (GBP/sub/month), 2014

(a) Network Level			(b) Provider Level		
Segment	Pre-paid	Post-paid private	Segment	Pre-paid	Post-paid private
Three	[…]	[…]	Three	[…]	[…]
O2	[…]	[…]	O2	[…]	[…]
Tesco Mobile	[…]	[…]	Tesco Mobile	[…]	[…]

Source: Commission calculations based on data provided by the MNOs.

(222) At the network level, to eliminate any incentives to increase prices, Three's incremental costs would need to decrease by about […] GBP/sub/month in pre-paid, and by […] GBP/subscriber/month in post-paid private; while O2's incremental costs should decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private.

(223) At the provider level, the incremental costs of Three would need to decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private; while the incremental costs of O2 should decrease by […] GBP/subscriber/month in pre-paid and by […] GBP/subscriber/month in post-paid private.

(224) This indicates that even when using MNP data as an alternative source of switching information, the marginal cost reductions required to offset the incentives of the merging parties (and Tesco Mobile) to increase prices is still large than the short run incremental network costs per subscriber per month, which are the basis of any claimed efficiencies.[87]

3.5.5. *Sensitivity analyses assuming 10% and 20% diversion to the outside good*

(225) This section presents the results of very conservative sensitivity analyses based on the assumption that post-Transaction 10% or 20% of each operator's demand would leave the mobile telecom market, effectively ceasing to use mobile phone services (so called "diversion to an outside good"). In the Commission's view, it is very unlikely that subscribers would stop using their mobile phones in the event of a price increase. These sensitivity analyses should be rather considered as a proxy for possible decreases in usage following a price increase post-Transaction. Estimating by how much the aggregate usage of mobile services would change as a result of a price increase requires estimating the magnitude of the elasticity of aggregate demand. The Commission is not aware of any study that could provide an indication of such elasticity and therefore, in the absence of this information, has considered the effects of very conservative 10% and 20% diversions to the outside good.

(226) Table 15 Table 16 present the results of these sensitivities. Part (a) of the tables present the results using the diversion ratios at network level, while part (b) of the tables present the results using the diversion ratios at provider level.

87 The short run incremental network costs calculated by the Commission for Three and O2 are presented in Section 3.2.4.1.

Table 15: Calibrated merger simulation sensitivity results assuming 10% diversion to the outside good[88], 2014

(a) Network Level				(b) Provider Level			
Segment	Pre-paid	Post-paid private	Overall Private	Segment	Pre-paid	Post-paid private	Overall Private
Three	33.3%	10.2%	12.5%	Three	27.1%	9.0%	10.8%
O2	14.0%	6.2%	8.2%	O2	13.5%	5.3%	7.1%
EE	7.6%	2.3%	2.9%	EE	4.6%	2.0%	2.3%
VF	5.2%	2.2%	2.7%	VF	4.1%	2.4%	2.6%
Tesco Mobile	9.3%	5.3%	6.5%	Tesco Mobile	7.3%	4.7%	5.4%
Segment Effect*	11.4%	4.2%	5.4%	Segment Effect*	8.2%	3.6%	4.4%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

Table 16: Calibrated merger simulation sensitivity results assuming 20% diversion to the outside good, 2014

(a) Network Level				(b) Provider Level			
Segment	Pre-paid	Post-paid private	Overall Private	Segment	Pre-paid	Post-paid private	Overall Private
Three	27.5%	8.4%	10.3%	Three	22.9%	7.6%	9.1%
O2	11.1%	4.7%	6.4%	O2	10.8%	4.2%	5.7%
EE	5.2%	1.6%	2.0%	EE	3.3%	1.4%	1.6%
VF	3.6%	1.5%	1.8%	VF	2.9%	1.6%	1.8%
Tesco Mobile	7.0%	4.1%	4.9%	Tesco Mobile	5.6%	3.7%	4.3%
Segment Effect*	8.8%	3.2%	4.1%	Segment Effect*	6.5%	2.8%	3.4%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(227) This sensitivity analysis based on assuming a 10-20% diversion to the outside good predicts segment-wide price effects in the overall private segment in the range of 3.4-4.4 at the provider level and 4.1-5.4% at the network level.[89]

(228) However, the Commission notes that the […] million customers of Three and O2 are expected to face price increases significantly higher than average. The segment-wide

[88] Vodafone is indicated as "VF".

[89] The Commission notes that in the current case assuming 20% and 10% diversion to the outside good implies an aggregate elasticity of demand of approximately […] and […] in the overall private segment, respectively. This corresponds to a reduction of […] (with 20% diversion to the outside good) and […] (with 10% diversion to the outside good) in demand (in terms of aggregate usage or subscribers) following a price increase of 10%. As mentioned in paragraph (225), the Commission has no prior to base its assessment of the magnitude of the aggregate elasticity. However, it appears unlikely that in the mobile telecommunications sector the aggregate elasticity of demand would be beyond […].

price effects in the overall private segment are in the range of 9.1-12.5% for Three and 5.7-8.2% for O2.

(229) Amongst the sensitivities performed by the Commission, this scenario produces the lowest expected price increases. Overall, the Commission considers that the level of these price effects does not undermine the qualitative nature of the conclusions reached for the baseline scenarios.

3.5.6. Sensitivity analyses using 2015H1 data

(230) This section describes the sensitivity analyses using data from January 2015 to June 2015 (2015H1), instead of data for the full calendar year 2014. The Commission carried out this sensitivity analyses to have insights on the robustness of the baseline scenarios from the most recent data available. In the Commission's view, however, using data that covers only half of the 2015 may not be fully representative of the competitive conditions in the market as observables and unobservable factors affecting the market, such as seasonal patterns in sales, may not be fully captured by the data.

(231) Table 17 presents the results of the sensitivity analyses using 2015H1 data. In part (a) on the left-hand side of the table results using network level diversion ratios are presented, while in part (b) on the right-hand side of the table results using provider level diversion ratios are presented.

Table 17: Calibrated merger simulation sensitivity results using 2015H1 data[90]

(a) Network Level				(b) Provider Level			
Segment	Pre-paid	Post-paid private	Overall Private	Segment	Pre-paid	Post-paid private	Overall Private
Three	39.6%	16.8%	19.1%	Three	32.0%	14.2%	16.0%
O2	18.9%	12.0%	13.8%	O2	18.2%	9.3%	11.3%
EE	11.4%	5.0%	5.7%	EE	6.8%	3.8%	4.1%
VF	7.2%	5.0%	5.3%	VF	5.6%	4.4%	4.5%
Tesco Mobile	12.9%	8.6%	9.8%	Tesco Mobile	9.8%	7.0%	7.8%
Segment Effect*	15.8%	8.1%	9.3%	Segment Effect*	11.2%	6.3%	7.1%

** Segment effect computed as the revenue weighted average of the price effects of each market participant.*

Source: Commission calculations based on data provided by the MNOs.

(232) This sensitivity analysis based on 2015H1 data as opposed to 2014 data predicts segment-wide price effects in the overall private segment in the range of 7.1-9.3%.

(233) The price effects for the Parties in the overall private segment are in the range of 16.0-19.1% for Three and 11.3-13.8% for O2.

(234) This sensitivity results in higher estimated price effects compared to the baseline scenarios, thereby strengthening the robustness of the baseline scenarios' results.

90 Vodafone is indicated as "VF".

3.5.7. *Sensitivity Analysis using Parties'+Kantar diversion ratios*

(235) The Notifying Party submitted its version of diversion ratios. Although the Commission disagrees with the Notifying Party methodology to compute the diversion ratios and considers them unreliable (see discussion in Section 3.1.3), it performed a sensitivity analysis using the Parties' diversion ratios.

(236) The Parties' diversion ratios are primarily based on the Kantar diversion ratios of 2014, and include only switching figures at provider level from the Parties to the other operators in the post-paid private segment. Due to this lack of information, the Commission complemented those figures with the diversion ratios at provider level from the Kantar diversion ratios of 2014. The Commission included diversion ratio figures for the other operators in the post-paid private segment (EE, Vodafone and Tesco), and for all operators in the pre-paid segment (Three, O2, EE, Vodafone, and Tesco). The resulting diversion ratio figures are referred to as the "Parties'+Kantar diversion ratios".

(237) Table 18 presents the results of the sensitivity analysis using the Parties'+Kantar diversion ratios at provider level.

Table 18: Calibrated merger simulation sensitivity results using the Parties'+Kantar diversion ratios[91], 2014

(a) Provider Level			
Segment	**Pre-paid**	**Post-paid private**	**Overall Private**
Three	48.8%	9.1%	13.0%
O2	24.6%	5.2%	9.4%
EE	8.0%	3.8%	4.2%
VF	5.3%	2.8%	3.1%
Tesco Mobile	12.3%	18.2%	16.5%
Segment Effect*	14.4%	4.7%	6.4%

(238) The sensitivity analysis based on diversion ratios as calculated by the Parties predicts segment-wide price effects in the overall private segment of 6.4%.

(239) This sensitivity results in higher estimated price effects compared to the baseline scenarios, thereby strengthening the robustness of the baseline scenarios' results.

4. The Notifying Party's arguments in the reply to the Statement of Objections

(240) In the Reply to the Statement of Objections, the Notifying Party argues that the Commission's analysis is fundamentally flawed in a number of important respects.

(241) In the following the Commission provides its assessment of the different criticisms raised.[92,93]

91 Vodafone is indicated as "VF".

4.1. The role of the quantitative analysis in merger investigations and the standard of proof for the finding of a SIEC[94]

4.1.1. The Notifying Party's view

(242) The Notifying Party argues that the Commission's quantitative analysis is a variant of upward pricing pressure test and that such **tests should only be used as a first screen** to identify cases that require closer investigation rather than a self-standing theory of harm. Quantitative analyses as performed by the Commission should not be used as positive evidence for competition concerns where the **qualitative assessment** does not support such concerns.

(243) The Commission's use of its quantitative analysis would be out of line with the weight given to such techniques by **U.S. agencies** and the views of the antitrust community at large. There would also be a **lack of empirical support** validating pricing pressure tests as **accurate predictor of anti-competitive outcomes**.[95] Moreover, a proper empirical analysis would demonstrate that the merger would lead to lower prices.

(244) The Notifying Party further argues that the UPP analysis would **reverse the burden of proof** to the merging parties as such analyses would predict price increases in every horizontal merger[96] and as there is **no definition or threshold** indicating when a price increase is a "significant impediment to effective competition". The use of UPP as key evidence would also give rise to an arbitrary **discrimination against mergers in markets where UPP data is available**.

Moreover, the Notifying Party argues that the results of these analyses would be highly sensitive to the choice of a **limited number of key inputs.** Pricing pressure tests would be flawed in rapidly changing industries as they fail to consider factors such as "**repositioning, entry, innovation, and efficiencies**".[97] [98] When in previous mergers where the Commission has complemented pricing pressure analysis with **demand estimation based merger simulation techniques**, those alternatives produced much lower predicted price increases.

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92 The Notifying Party's arguments in relation to the impact of proposed remedies on the results of the Commission's quantitative analysis are addressed in Section 9 of the Decision.

93 The Notifying Party also raised or reiterated critiques to the Commission's quantitative analysis at the Oral Hearing and in the Reply to the Letter of Facts of 17 March 2016. These comments are also addressed in this Section.

94 Section 4.1.1 and 4.1.2 of the Reply to the SO.

95 Dennis W. Carlton, "Revising the horizontal merger guidelines", Journal of Competition Law & Economics 2010, 6 (3), pages 619 to 652 [ID5760].

96 Lopatka, "Market Definition?", Review of Industrial Organization 2011, page 69, 86 [ID5761]; Thomas, "Close Competitors in Merger Review", Journal of European Competition Law & Practice 2013, page 391, 399 [ID5764].

97 Carl Shapiro, "Update from the antitrust division," Remarks as Prepared for the American Bar Association Section of Antitrust Law Fall Forum November 18, 2010 [ID5763].

98 Richard Schmalensee, "Should New Merger Guidelines give UPP Market Definition?", 12 (1) CPI Antitrust CHRONICLE. 2010, *available at:* https://www.competitionpolicyinternational.com/should-new-merger-guidelines-give-upp-marketdefinition/ [ID5762]

4.1.1.1. The Commission's assessment

(245) First, the Commission notes that, as explained in the European Commission's **Horizontal Merger Guidelines**, the elimination of competition between the merging parties is the most direct effect of a horizontal merger which, especially in the presence of high barriers to entry, can provide the merged entity with an incentive to raise prices because customers that would have been lost to the other merging party following a price increase pre-merger will remain with the merging party post-merger. In response to price increases by the merged entity, rivals firms my then find it profitable to raise their prices in turn.[99] Moreover, in differentiated product markets the likelihood of significant price increases post-merger increases with the degree of substitutability between the merging parties' products.[100] Another key element for pricing incentives post-merger is the level of margins.[101]

(246) The Commission acknowledges that its quantitative analysis relies on a **limited number of key inputs**. In particular the main inputs into the quantitative analysis are diversion ratios (which are a key measure of the degree of substitutability between products of firms in the industry) and margins.[102] However these measures are key market indicators for post-merger pricing incentives as mentioned in the Horizontal Merger Guidelines. They are hence highly relevant for the assessment of likely non-coordinated effects of a horizontal merger.

(247) The Commissions' quantitative analysis uses a rigorous and standard economic framework that is in line with the description of non-coordinated effects of the Horizontal Merger Guidelines. Within this framework, the analysis summarises the complex interplay between the measures of the degrees of substitutability and margins in the market into simple measure of likely price increases. The Commission considers such estimated price increases to be informative for its assessment of the likelihood of a significant impediment to effective competition.

(248) Second, the Commission does not base its assessment on the quantitative analysis in **isolation from other qualitative evidence**. A quantitative analysis is only one piece of evidence for the assessment of non-coordinated effects. The quantitative analysis is therefore carefully evaluated together with the other qualitative evidence gathered during the market investigation. Indeed, in the present case, none of the qualitative pieces of evidence available indicates that the estimated price increases would be unlikely to happen.[103]

(249) Third, the Commission also does not claim that its quantitative analysis captures all relevant factors in full detail. For example, the Commission noted in the Statement of Objections that the analysis abstracts from a number of factors (such as product repositioning or the existence of barriers to entry). The analysis can also take account of efficiencies or quality improvements to the extent that they meet the standard for efficiencies set out in the Horizontal Merger Guidelines and are appropriately quantified. The Commission assesses efficiencies in detail in Section 8.4 of the

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[99] Horizontal Merger Guidelines, para 24.

[100] Such degree of substitutability is expected prima facie to be significant in a market featuring a very limited number of competitors.

[101] Horizontal Merger Guidelines, para 28.

[102] To a lesser the analysis also relies on observed quantities and prices.

[103] See Section 8.2.1 of the Decision.

Decision, while entry and repositioning are discussed in Section 8.2.4.2 of the Decision and Section 4.5 of this Annex.

(250) In the Commission's view, the applied framework nevertheless captures the most important factors (such as the degree of substitution between the Parties) determining how the Transaction will likely affect the mobile operators' pricing incentives. The Commission considers that the market features and dynamics outside the scope of this analysis are unlikely to significantly bias the results. For this reason, the results should not be interpreted as providing a precise quantification of the exact increase in prices expected following the Transaction but rather as an indication for the likelihood of significant price increases post-merger.

(251) As regards, the use of **demand estimation** techniques in previous cases, the Commission notes that a demand estimation based technique was attempted in M.6992 – *Hutchison 3G UK/Telefónica Ireland* but ultimately was not retained for the Decision due to a number of technical difficulties. In M.7018 – *Telefónica Deutschland/E-Plus*, a demand estimation based merger simulation led to predicted price increases that were somewhat lower the calibration based approach using contribution margins but overall in the same range as the price increases predicted by the calibration based approach using incremental margins. In light of the experiences, the Commission decided not pursue such a highly complex complementary approach in this case. The Commission informed the Notifying Party in early phase II of this decision.

(252) Fourth, the Commission acknowledges that the **burden of proof** for the finding of a significant impediment of effective competition lies with the Commission. However, such a finding will be based on an overall assessment of all the available quantitative and qualitative evidence in each case. While it is correct that a UPP analysis will, absent efficiencies, always predict some price increase from a horizontal merger that eliminates competition between the merging parties, the degree to which a quantitative analysis will indicate price increases as well as the evidentiary weight that can be given to such analysis will vary from case by case. Moreover, the magnitude of the price increases is only one of the relevant elements for the Commission's overall assessment, especially in cases in which, such as the present case, significant harm is identified in relation to separate theories of harm from the standard elimination of horizontal competition between the parties (see Section 8.2.2 of the Decision). The Commission therefore does not consider it necessary to define a threshold for when a price increase indicated by an individual piece of evidence would be significant. The Commission also does not accept that its use of quantitative analysis would lead to a situation in which there would be an undue bias towards prohibition decisions, a reversal of the burden of proof on the parties, or a discrimination against mergers in markets where UPP data are available.

(253) Fifth, the Commission disagrees with a view that pricing pressure tests (including UPP) should only be used as a **first screen** to identify transactions that warrant further investigation. In the Commission's view, such arguments are often based on the notion that, for screening purposes, margins and diversion ratios which are the main inputs for simple UPP analyses are often not estimated very precisely. For example, diversion ratios initially are often assumed to be proportional to market shares rather than measured. Similarly, for screening purposes, very approximate

measures of accounting margins are often used rather than measures of the economic margins.

(254) However, in the present case, the measurement of diversion ratios and economic margins has been validated or refined during the phase II investigation. This detailed analysis goes beyond using readily available proxies for diversion ratios and margins for pure screening purposes. The analysis in the Statement of Objections and in this Decision is an extension of the analysis performed in the context of the phase I investigation also from a methodological point of view by taking account of reactions from the merged entity's competitors. In the Commission's view, a quantitative analysis of non-coordinated effects using carefully measured inputs on key factors relevant for the assessment is hence relevant for the Commission's assessment of the Transaction in phase II.

(255) Sixth, the Commission does not consider it relevant or necessary for its use of evidence to be fully aligned to that of **US agencies**. Nevertheless, the Commission does not agree with the Notifying Party's argument that its use of quantitative analysis would be out of line with that of US agencies. For example, in the context of the recent challenge of the proposed merger between GE and Electrolux, the only piece of quantitative analysis that the expert witness of the U.S. Department of Justice, Prof. Michael Whinston, presented to the court was a simpler version of the simulation model that the Commission applied in the present case.[104]

(256) Last, as regards the alleged **lack of empirical support** that pricing pressure tests predict anti-competitive outcomes accurately, the Commission notes that it is not aware of reliable empirical evidence that the use of UPP techniques would systematically lead to wrong predictions in merger cases. Moreover, the Commission reiterates that the quantitative analysis captures key features of non-coordinated effects in the Horizontal Merger Guidelines while remaining only one piece of evidence in the overall assessment of the transaction. As the Commission's assessment also reflects other factors outside of the scope of the quantitative assessment, the Commission does not consider it necessary for quantitative analysis to provide precise predictions of price effects in order to be informative and relevant for the overall assessment.

(257) The Commission also disagrees with the Notifying Party's view that empirical analyses of other recent mergers in the mobile telecommunications industry would show that such transactions lead to an increased level of competition. This is discussed further in Annex B.

4.2. The use of diversion ratios based on Survey responses

4.2.1. The Notifying Party's view

(258) In its reply to the Statement of Objections, the Notifying Party put forward several objections to the diversion ratios derived from the Survey.

(259) First, the Notifying Party claims that the data gathered from the Survey cannot provide any indication about the closeness of competition between the Parties as the Survey relates to customers who have switched *to* the Parties, rather than targeting

104 Oral testimony by Prof. Whinston, acting on behalf of the U.S. Department of Justice, available at: https://www.justice.gov/atr/file/ge-px02015/download [ID 5663]

customers switching away *from* the Parties. According to the Notifying Party, by interviewing gross adds and internal switchers of the Parties, the Survey provides information on the diversion ratios from the customers' previous operator. The Notifying Party claims that the Commission has not justified this approach, and other more reliable sources of switching behavior such as the MNP data and the Kantar data show that the Parties are not the closest competitors.

(260) Second, the Notifying Party argues that the Survey has a significant limitation as it asks questions on hypothetical scenarios. This approach runs the risk that respondents do not have all the relevant information to answer the question, and hence their answers may differ from actual switching behaviour. According to the Notifying Party, the bias would increase the diversion ratios to (i) operators with strong brand (such as O2), as the customers have greater familiarity with the brand; (ii) operators with higher quality and/or higher priced offerings that the customers would "like" to choose. Conversely, in answering a hypothetical question, customers would tend not to choose less known operators or operators with cheaper options. For example, in postpaid the Survey predicts only 16% of Three customers would switch to MVNOs other than Giffgaff, while the actual figure is […] based on Three's most recent data available. The Notifying Party provides also other examples of studies where stated preferences were found to be different than actual behaviour.

(261) Third, the Notifying Party argues that the fact that approximately one quarter of the interviewees responded "I don't know" to the Survey question on the basis of which the diversion ratio are computed shows that the respondents found it difficult to answer. The Notifying Party also argues that the composite approach of pooling together the responses to the intensive and extensive questions cannot be considered reliable as the intensive and extensive questions are materially different. Furthermore, the Notifying Party argues that since 35% of the interviewees describe their current provider (i.e. the Parties or Tesco Mobile) as their first provider/network they have no actual switching experience upon which to base their response to the hypothetical question. The Notifying Party also argues that, according to the latest YouGov SMIX report[105], only 9% of the customers of O2 joined the operator within the last 12 months. The Survey hence interviews a small proportion of O2's customers and cannot be representative of O2's customer base. Additionally, the Notifying Party argues that according to the Survey data part of the customers would have chosen to cease using their mobile phone in case of a price increase or in case of the unavailability of their operator. This would suggest that the sensitivity analysis assuming 20% outside good should be considered as the baseline scenario.

(262) Fourth, the Notifying Party claims that the Survey questions forming the basis for the calculation of diversion ratios are subject to a framing bias because choosing to remain with their previous provider was given as a separate response option from choosing a different provider in the multiple choice answers. The framing bias would lead to an incumbency effect whereby the customers are more likely to choose to remain with their previous operator rather than changing operator. According to the Notifying Party, this incumbency effect is shown in the Survey data as the

105 "The Smartphone Mobile Internet eXperience (SMIX), Full Report, Wave 25", December 2015, page 10. Attached as Annex B3.5 to the Reply to the SO.

percentage of customers who would choose to remain on their previous operator is higher than those who would choose a different operator.

(263) Fifth, the Notifying Party argues that the recent merger between BT and EE may have had an impact on the diversion ratios and hence the diversion ratios based on historic data would not be a good proxy looking forward.

(264) Sixth, the Notifying Party argues that even accepting the diversion ratios based on the Survey data, only about 10% of the total UK (pre-paid and post-paid) customers would have Three and O2 as their first and second choice. According to the Notifying Party, this small percentage of customers should not be considered sufficient to meet the standards on closeness of competition described in the Horizontal Merger Guidelines.

(265) Finally, the Notifying Party claims that MNP data, Kantar data and Three's Leavers data are all better proxies for switching behaviour than the Survey, primarily because they are based on more observations. These alternative sources of switching behaviour all produce a diversion ratio from Three to O2 in the postpaid private segment in the range of 20-25%, while the Commission's Survey estimates a diversion ratio of 39%.

4.2.2. The Commission's assessment

(266) The Commission's assessment of the Notifying Party's arguments on diversion ratios in its Reply to the Statement of Objections is as follows.

(267) First, the Commission disagrees with the Notifying Party's argument that the Survey could not indicate closeness of competition between the Parties because it would only provide information on the diversion ratios from the customers' previous operator and as it would target customers that switched to the Parties rather than away from the Parties. As explained in Section 3.1, the Survey was designed to investigate the degree of substitutability between Parties' products as described in the Horizontal Merger Guidelines, that is in terms of customers' first and second choices.[106] Customers who recently chose an operator identified that operator to be the first choice at the time of their choice not the second choice as suggested by the Notifying Party.[107] The Survey directly investigates the second choice of such customers had their first choice been more expensive or not available. Hence the Survey addresses directly the measurement of the degree of substitutability between the Parties which is the key question for whether the merging parties are close competitors as noted in the Horizontal Merger Guidelines.

(268) Second, as explained in Section 3.1, the Commission considers that the Survey has a materially different design and scope compared to data on past switching which the Notifying Party favours for the calculation of diversion ratios. Diversion ratios based on past switching necessarily assume that the origin and the destination operator are the first or the second choice of the customer (or vice versa). In particular, the use of port out data assumes that past switching from operator A to B provides an accurate

[106] See Horizontal Merger Guidelines, paragraph 28.

[107] In describing an example of a customer of EE who switched to Three and who would have switched to O2 in response to the Survey question, states "*[...] the survey reveals that a particular customers switching away from EE has O2 UK as their second preference […]*". Reply to the Statement of Objections, para 123.

indication of the switching from operator A to B that would occur following a post-merger price increase by operator A. The Commission considers that this assumption in not necessarily unreasonable, in particular in the absence of more direct information on actual first and second choices of customers. Indeed, in previous cases in the mobile telecommunications sector, the Commission based its quantitative analysis on the use of MNP data and results based on the use of MNP data are also presented for the present case, amongst other sensitivity analyses.

(269) However, the required assumptions underlying diversion ratios based on past switching are not necessarily correct. For example a customer may have switched away from his previous operator because he was unhappy with the service he received or for other reasons unrelated to price.[108] In such cases the previous operator is unlikely to be either the first or the second choice of the customer at the time the switch took place so that the assumption underlying the use of past-switching data is violated. As switching for reasons other than price is included in past switching data, switching in response to a price increases is hence not necessarily reflected correctly by past switching data.

(270) One of the key advantages of the Survey is precisely that it does not require making assumptions but rather asks a sample of informed customers (for which the first choice is known) what their second choice alternative would have been had their first choice been more expensive or not available. The result of such a survey can be that the diversion ratios between the Parties are higher or lower than past switching data suggests. Since the Survey's design was tailored to measure the degree of substitutability as described in the Horizontal Merger Guidelines directly, the Commission considers diversion ratios from the Survey to be conceptually better and hence preferable over diversion ratios derived from past switching data in this case.

(271) Due to the methodological differences and the conceptual advantages of the Survey, the observation that the Survey gives different results from the other sources proposed by the Notifying Party, all of which are based on past switching, does not indicate that switching data are to be preferred as a basis for the calculation of diversion ratios. Moreover, the Commission notes that even among the other sources of diversion ratios proposed by the Notifying Party, which all rely on past switching behaviour, there are severe inconsistencies. For example, according to the Kantar data (the source from which the Notifying Party computes its own version of diversion ratios) the diversion ratio between Three and EE is […] in the postpaid private segment, whereas according to Three's Leavers survey, the same diversion ratio between Three and EE is about […]. Moreover, the Commission notes that the Notifying Party's claims appear to be in contradiction with each other. The Notifying Party heavily criticized the diversion ratios based on MNP data that the Commission used in its preliminary analysis included in the Article 6(1)(c) Decision, while the Notifying Party appears to endorse the use of MNP data in its Reply to the Statement of Objection.

(272) Third, the Notifying Party's criticism that the Survey would be unreliable as it would pose hypothetical questions cannot be accepted. While the Survey asked customers

108 In fact, in the case M.6992 – *Hutchison 3G UK/Telefónica Ireland*, the Notifying Party criticised the Commission's use of MNP data to derive diversion ratios, arguing that data on past switching may not be indicative of switching following post-merger price increases.

for their second choice in response to a hypothetical price increase or non-availability of the first choice, the Commission took measures to avoid or minimize possible biases stemming from this. As explained in recital (53) of this Annex, the Survey targeted informed customers who recently made a switching choice and hence are more likely to remember the circumstances of their choice. Moreover, the Survey included several screening questions to ensure that the interviewee was an *informed* customer at the time of switching, with knowledge about the offerings and the conditions in the market.[109] The Survey questions were also designed to help the interviewee recall the context of the last choice and the elements that drove that decision by asking where the customers purchased their price plan and which features of the price plan they considered the most important. In the Commission's view such measures ensured that interviewees were in a position to give informed responses to the hypothetical Survey question on their second choice alternatives. The Commission therefore considers that the calculation of diversion ratios based on the Survey responses is unlikely to be affected by the biases claimed by the Notifying Party.

(273) While the Commission considers the distribution of the respondents' second choices indicated by the Survey to be unbiased, the amount of switching following a price increase (that is, the proportion of respondents stating that they would switch operator) may not be correctly reflected in the Survey. This is because stated intentions by interviewees in response to a survey are costless: a stated intention to stop using a mobile phone altogether has no real consequences for the interviewee in terms of no longer having to enjoy the benefits of a mobile phone. Similarly, a stated intention to switch supplier does not commit the interviewee to actually take the necessary steps to change operator in the event of a post-merger price increase. The Commission allowed for such responses in the survey design to offer interviewees a complete set of response options and to be able to identify respondents that are more likely to be marginal customers. However, due to the fact that responses have no consequences in terms of costs or inconvenience, the proportion of respondents stating that they would switch operator or even stop using their mobile phones is likely not reflected correctly by the Survey. For this reason, the Commission considers that it would be inappropriate to directly infer from the Survey the elasticity of demand to price increases.[110]

(274) Moreover, the Notifying Party's argument that the Survey cannot be representative of O2 customers overall as customers of O2 that have joined O2 during the last 12 months account, according to a third party source for only 9% of O2's customers is misplaced. The Commission notes first that from the segment level data provided by O2, the proportion of O2's gross adds relative to O2's customer base for the period covered by the Survey (July 2014-June 2015) is approximately […]. Although this figure may […] the proportion of gross adds in the customer base, as some gross adds may have left O2 during the period, it would still represent […] of O2's customer base. Moreover, the Survey interviewed also internal switchers (costumers

109 Specifically, the Survey interviewed only customers who (i) personally bought the SIM called for the interview, (ii) used the SIM called as their primary mobile phone number, (iii) at the time of switching considered other offers of other operators.

110 The Commission's quantitative analysis only derives diversion ratios from the Survey. Price elasticities of demand are inferred from these only in combination with margins.

who changed or renewed their tariffs with the Parties), and not only gross adds as the Notifying Party's argument implies. Hence, the Survey coverage of O2's customer base is likely to be much wider than the 9% presented by the Notifying Party. Second, the Commission notes that the Survey is not intended to obtain responses from a representative sample of O2's overall customers base. Instead, the target population that the Survey seeks to address are customers that would likely switch in response to post-merger price increases, i.e. likely marginal customers. The Notifying Party's argument that the Survey is not representative of O2's overall customer base is hence irrelevant. The relevant question is whether the Survey is representative of the target population of customers that are likely to switch. For this reason, the Survey interviewed a sample of customers who recently made an active and informed decision to switch provider or to stay with their current provider. The Commission considers that this is a reasonable approach to obtain responses that are likely to be representative of the target population.

(275) Regarding the high percentage of customers interviewed for which the Parties (or Tesco Mobile) were their first operator/network, the Commission notes that having past switching experience is irrelevant for the purpose of answering the Survey questions. As explained in paragraph (56), the two Survey questions at the basis of the computation of the diversion ratios ask whether the customer would have chosen a different operator in case its preferred operator were more expensive or unavailable. The Survey questions hence do not imply or require any past switching behaviour of the customer. Therefore, whether the customer had previous switching experience is irrelevant for the scope of the Survey. Moreover, from the Survey data the diversion ratios between the Parties computed based on the subscribers without switching experience are within 1 percentage point in the postpaid segment and within 3 percentage points in the prepaid segment from the diversion ratios based on the subscribers with past experience in switching operators. The Commission therefore considers that the Notifying Party argument is irrelevant, and, in any event, it appears that being a new subscriber without past switching experience does not influence the switching behaviour between the Parties.

(276) Fourth, the Notifying Party's critique of the allegedly high proportion of "I don't know" responses to the Survey questions on the basis of which diversion ratios are computed is highly misleading. The Commission notes that none of the customers interviewed gave "I don't know" responses to the intensive Survey question (question 9 of Annex D), and only a very limited percentage of customers (3.5% on aggregate) answered "I don't know" to the extensive question (question 10 of Annex D). A higher percentage of "I don't know" responses (19%) has been given to the question asking which operator the customer would have switched to (question 11 of Annex D). Contrary to what the Notifying Party argues, this shows that almost all the customers interviewed understood the intensive and extensive survey questions, and more than 80% of those customers had enough information to indicate to which operator they would have switched, suggesting that the screening questions mentioned in recital (52) have been successful in ensuring that the customers interviewed were informed about the offerings in the market. The Commission also considers that pooling together responses to the intensive and to the extensive questions is a reliable and coherent approach, as those two questions do not

overlap.[111] It is reasonable to expect that customers' second choice in the response to the extensive question is the same as the customers' second choice in response to the intensive question.

(277) Fifth, the Notifying Party's argument on the framing bias is unfounded. As shown in question 9 and 10 of Annex D, customers were not given two separate options to choose whether to stay with their previous operator or to switch to a different operator. The two possibilities were described within one and the same option. Therefore, in this respect, the results of the Survey are not influenced by any framing bias. Moreover, the high proportion of customers who would have chosen to stay with their previous operator is not an indication of bias, as it is reasonable to expect a high proportion of customers to have the previous operator as their second best alternative. In fact, as discussed above, the use of switching data for the calculation of diversion ratios which the Notifying Party advocates assumes that the previous and current operator are always the first and second choice of customers. A finding by the Survey that this is often the case hence cannot be interpreted as a source of bias (and even less so a bias that would lead one to favour the computation of diversion ratios based on past switching over those based on the Survey).

(278) Sixth, the Commission acknowledges that the Survey (and partly the MNP data too) covers a period when the entry of BT Mobile and the merger between BT and EE were at their early stages. It also acknowledges that it appears that during the period from its entry in the market to the merger with EE, BT Mobile acquired a non-negligible share of gross adds. However, the Commission notes the following. MNP data for the first half of 2015, as well as Three's Leavers survey of the second half of 2015[112] (which the Parties consider highly reliable), show that […].[113]

(279) The Commission also considers it unlikely that the merger between BT and EE would change the diversion ratios between the Parties to such an extent that the Commission's estimated price increases following the merger between Three and O2 can be considered materially overstated. On the one hand, it is conceivable that BT, having access to EE's tariffs, will have a higher ability to cross sell mobile to its fixed customers. On the other hand, the Commission expects BT to phase out or price more rationally its BT Mobile tariffs after the merger with EE.

(280) Seventh, the Notifying Party's argument that customers considering Three and O2 as first and second choices represent 10% of the UK costumers, is based on a misinterpretation of the Horizontal Merger Guidelines. The Commission considers that the assessment of the degree of substitutability should be carried out relative to the Parties' customers, not based on the total mobile customers in the United Kingdom. This is because the likely incentives that the merged entity would have to increase prices post-Transaction derive from the internalisation of the sales that the Parties would have lost to each other in the event of a price increase absent the Transaction. What determines the magnitude of the expected price increase by each

[111] The extensive question was asked only to those customers who responded to the intensive question that they would remain with the same operator. Therefore, there is no double counting in pooling together the intensive and extensive questions.

[112] See figure 2 of the Reply to the SO.

[113] As explained in paragraph (53), the the degree of substitutability between the merging parties' products a key determinant of the competition effect of a horizontal merger (Horizontal Merger Guidelines, paragraph 28.).

of the Parties is whether out of the customers lost in the event of a price increase, a significant proportion is expected to join the other Party. This effect is measured by the diversion ratios between the Parties. Indeed, the Horizontal Merger Guidelines clearly mention the diversion ratios as a relevant source of information to assess the degree of substitutability between the Parties' products,[114] and by their own nature the diversion ratios are a relative measure based on the Parties' customers. Therefore, the Commission considers the Notifying Party's argument to be unfounded.

(281) Finally, the Commission rejects the Notifying Party's argument that the other sources of switching data are preferable to the Survey because they feature a significantly higher number of observations/respondents. The Commission notes that for each operator and segment the diversion ratios based on the intensive and extensive Survey questions are based on at least a hundred observations/respondents and the diversion ratios for the overall private segment are based on two-hundred observations/respondents for each operator. The Commission also computed the confidence intervals of the Survey diversion ratios (at 5% significance level) and the vast majority of the diversion ratios, most notably those between the Parties, are statistically significantly different from zero.[115] The Commission therefore considers that the diversion ratios based on the Survey are sufficiently reliable to be used as the main source of diversion ratios in its analysis.

(282) In conclusion, the Commission considers that the Notifying Party criticisms of the Survey are unfounded, and maintains that the Survey is a superior source for the measurement of the degree of substitutability among the market participants.

4.3. The relevance of capacity constraints and network quality

4.3.1. The Notifying Party’s view

(283) The Notifying Party argues that the standard UPP framework would not account for fundamental competitive dynamics such as the existence of **capacity constraints**[116] and the role of **network quality**.[117]

(284) […].

(285) The Notifying Party further argues that the Commission's analysis would ignore quality competition and the improvements in network quality and data speeds that would be brought about by the Proposed Concentration. Such improvements would bring the merged entity closer to the market positioning of current market leaders BT/EE and Vodafone, intensifying price competition in the market.

4.3.1. The Commission's assessment

(286) As regards the **capacity constraints**, the Commission considers that operators can expand their network capacity to accommodate additional users on their network or to cater for increasing demand from existing users. This is consistent with the view of the the Notifying Party suggesting that, an operator that is capacity constrained can either invest to upgrade or expand the network or not invest and accept that the

114 See Horizontal Merger Guidelines, paragraph 29.

115 The only non-statistically significant diversion ratios are those from Three and O2 to Tesco in the postpaid residential segment, which are already relatively low (2% from both Three and O2 to Tesco).

116 Section 4.2.1 of the Reply to the SO.

117 Section 4.2.2 of the Reply to the SO.

additional usage corresponding to the new subscribers acquired will lower the average quality experienced by all customers. Both options suggest that capacity constraints in this industry should not be thought of as binding constraints in an absolute sense. Instead, increasing network capacity to cater for additional demand will carry an incremental cost. In the present case, while the relevant incremental network costs appear to be significant, the Commission considers that capacity expansions are possible absent the merger. Therefore, the Notifying Party's characterisation of a capacity constrained operator as an operator with no or little incentives to expand its customer base is incorrect.

(287) The incentives to invest in additional capacity are accounted for in the Commission's baseline scenarios in this Decision via the use of the short run incremental network margins. The use of the short run incremental network margins reflects the fact that an operator engaged in incremental network upgrades and expansions to be able to serve more customers (as is the case for Three) has less incentives to expand compared to an operator that has lower incremental costs of network investments.

(288) If the merger were to lead to significantly lower incremental network costs of the merged entity compared to those of the Parties absent the transaction, this reduction in incremental costs might counteract to an extent the incentives for the merged entity to raise price. This effect could be taken into account in the Commission's quantitative analysis. However, the argument that the merged entity would face lower incremental network costs as a result of the transaction is an efficiency claim. As discussed in Section 8.4 of the Decision this claim does not qualify as an efficiency under the standards set out in the Horizontal Merger Guidelines.

(289) As regards the role of **network quality** in the competitive assessment, the Commission also notes that the framework used for the quantitative analysis also allows to incorporate in the analysis network quality improvements as a result of the merger (either as cost decrease or quality increase). The Notifying Party presented an assessment of the effects of improved quality (network speed) on the competitive outcomes post-merger. However, claims about merger induced increases in quality of the merged entity are again an efficiency claim and, as such, are separately discussed in Section 8.4 of the Decision, where the Commission explains that although it cannot be excluded that some efficiencies in relation to quality improvements may materialize, these have not been quantified by the Notifying Party and hence are not verifiable.

4.4. The Commission's choice of baseline scenario in the Statement of Objections[118]

4.4.1. The Notifying Party's view

(290) The Notifying party claims that both the baseline scenarios presented by the Commission in the Statement of Objections are biased towards the extremes. This would be a direct consequence of the Commission's choice of the relevant diversion ratios and margins.

(291) Specifically, the Notifying Party claims that the **diversion ratios** between Three and O2 in the baseline scenario are materially out of line with all other estimates of

[118] Section 4.3.1 of the Reply to the SO.

diversion ratios, all of which derive from more established and robust sources (such as the MNP data or the Kantar data).

(292) As regards the **margins used** in the SO's baseline scenario (the contribution margins)**,** the Notifying Party claims that […].

(293) Further, the Notifying Party claims that also the sensitivity scenarios considered by the Commission are **partial and misleading,** as based on changing a limited number of parameters in the extreme baseline scenario. Combinations of reasonable assumptions are not tested jointly in this sensitivity analysis.

4.4.2. The Commission's assessment

(294) As regards the **diversion ratios** used in this Decision's baseline scenario, the Commission maintains that the diversion ratios based on the responses to the Survey are likely to be the most meaningful and correct proxy for substitution patterns in this case. While the supporting arguments are presented in Section 4.2 of this Annex, the Commission stresses that the Survey was not designed to show that the Parties are closer substitutes to one another than suggested by MNP data. Rather, it has been conceived and designed to obtain a more refined measure of diversion ratios between operators (and in particular between Three and O2) than that provided by the MNP data used during the phase I analysis. The Survey based diversion ratios between Three and O2 could have ex-ante turned out to be higher or lower than those calculated based on MNP data.[119]

(295) As regards the Notifying Party's criticism on the **margin** measure adopted, the Commission considers, as discussed in Section 3.2.3, that the only costs that have been convincingly shown to be relevant for pricing decisions (other than those already included in the contribution margins) are the avoidable network costs. Therefore, the most appropriate approximation for the economic margins driving the pricing decisions of each mobile operator is the short run incremental network margins, and not the full short run incremental margins as claimed by the Notifying Party. This adjustment to the baseline scenario leads to a small reduction in the predicted price increases compared to the baseline scenario presented in the Statement of Objections.

(296) Finally, as regards the appropriate **sensitivities** for the baseline analysis presented in this Decision, the Commission notes the following.

(297) First, the Commission choses as its baseline scenario the one that, on balance, it considers to provide the most relevant quantification of the likely price effects. The Commission bases this choice on what it considers to be the most reasonable measures of relevant margins and diversion ratios. Against this background, the role of sensitivity analyses is not to show that the baseline scenario's results lie in between the estimates of various sensitivity scenarios. The role of sensitivity analyses is rather to examine whether the main conclusions from the baseline scenario's results still hold under a number of alternative less preferred but still plausible assumptions. The Commission considers that changing all of assumptions

119 For instance, according to the Survey results, Three turned out to be slightly less close to O2 in pre-paid than indicated by MNP.

simultaneously would lead to an extreme sensitivity scenario that has little informative value.

(298) In this respect, the Commission considers that the sensitivities presented in this Annex confirm the qualitative conclusion from the baseline analysis, that is, that the transaction would likely lead to significant price increases on average in the pre-paid and post-paid segment, as well as in the overall private segment and to even more significant price increases by Three and O2 in each of these segments.

(299) Second, in any event, the Commission considers that the baseline scenario's results presented in this Decision, are not "extreme". There are a number of sensitivities producing higher predicted price increases (sensitivities based on contribution margins, Kantar diversion ratios, 2015H1 data, intensive survey question only) and sensitivities producing lower price increases (using full short run incremental margins, MNP diversion ratios, assuming a degree of aggregate elasticity).

4.5. Supply-side responses by competitors[120]

4.5.1. The Notifying Party's view

(300) The Notifying Party criticises the Commission's quantitative analysis for not accounting for the effect of potential supply side responses by competitors. The Notifying Party argues that price increases post-merger would create an incentive for entry by new players such a MVNOs or for expansion by existing players (e.g. an MNO via a sub-brand), an incentive that does not exist if prices remained (as today) at highly competitive levels.

(301) The Notifying Party claims modifying the Commission's model to account for the impact of entry suggests that even modest entry would significantly mitigate price effects. Moreover, the Notifying Party claims that this additional modelling shows that engaging in or supporting such an entry would be profit enhancing for Vodafone who would be well placed to pursue such a strategy as it has spare capacity, is not positioned closely to Three and has recently acquired a sub-brand Talkmobile.

(302) In support of these findings, the Notifying Party notes that there have been instances of entry of sub-brands in the past in the UK's mobile market. Such instances are the entry of BT Mobile, the creation of Giffgaff and the creation of the Tesco Mobile JV between O2 and Tesco.

(303) According to the Notifying Party the Commission's analysis would hence overstate the likely price effects.

4.5.2. The Commission's assessment

(304) The Commission acknowledges that its quantitative analysis does not model entry of new MNOs or MVNOs or repositioning of existing players through second brands or otherwise. However, as explained, the Commission considers that its quantitative analysis captures the most important factors affecting pricing incentives. As discussed below, features and dynamics outside the scope of this analysis, such as entry and repositioning, are unlikely to reduce the estimated price effects from this Transaction to levels that are no longer of concern.[121]

120 Section 4.3.3 of the Reply to the Statement of Objections.

121 See also Statement of Objections para 786.

(305) The Commission considers that the likelihood or effects of entry or repositioning by non-merging firms post-merger are likely very limited for the following reasons.

(306) First, the Commission notes that it is not clear whether the merged entity's existing competitors in each market segment (that is to say, prepaid and postpaid) would have an incentive to reposition their products so as to increase competition with the merging parties. The Commission recalls that those competitors would benefit from the proposed transaction as post-merger price increases by the merged entity would lead to a shift in demand to rivals which would then likely be able to raise prices as well.[122] Indeed, the Horizontal Merger Guidelines recognise the fact that non-merging firms can also benefit from the reduction of competitive pressure which results from a merger.[123] This so called feedback effect is fully accounted for in the Commission's quantitative assessment which models optimal (i.e. profit maximising) price reactions by the merged entity’s MNO rivals. To the contrary, this feedback effect is not accounted for in the Notifying Party's simplified modelling which only takes account of the direct effect of elimination of competition between the merging parties.

(307) Second, the Commission considers that entry by a new mobile player (MNO or non-MNO) as a result of the merger is unlikely due to the high barriers to entry that characterise the telecommunications markets.[124] Moreover, in the Commission's view, non-MNOs exert only a limited competitive constraint on MNOs.[125]

(308) The experience in the UK mobile telecommunications market illustrates the difficulty of introducing new products successfully. Three entered as an MNO in 2003 and has reached a market share of only approximately 12% in 2015 H1. Virgin Media entered as an MVNO in 1999 and has only reached a market share of […]% in 2015 H1. Giffgaff, a second brand launched by O2 in 2009, which the Notifying Party considers a "successful competitive initiative", currently accounts for approximately only 3% market share. Tesco Mobile has been in the market since 2003 and has reached a market share of approximately […]% in 2015 H1. However, this success has most likely been driven by having as joint controlling shareholders Tesco and O2. This ensures Tesco Mobile can benefit from one of the most extensive retail networks and widely recognised brand in the UK (Tesco) and […].

(309) A joint venture between Vodafone and Sainsbury's, another major supermarket retail chain, was dissolved after only 2.5 years in October 2015 after having acquired […]customers. This suggests that the success of the Tesco Mobile JV may not be easy to replicate even with Vodafone as an MNO partner.

(310) The Commission also notes that Vodafone, which the Notifying Party considers would have a strong incentive to engage in a supply-side response by introducing a second brand on its own or through a joint venture, has been losing market share over time, and has also not been competing aggressively in the wholesale market in recent years. Against this background, and the failed joint venture with Sainsbury's,

122 Due to the loss of competition following the proposed transaction, the overall competitive pressure in the market would be reduced, making it possible for the Parties' rivals to increase their prices. See paragraph 24 of the Horizontal Merger Guidelines.

123 Horizontal Merger Guidelines, paragraph 24.

124 See Section 8.2.4.2 of the Decision.

125 See Section 8.2.1.3 of the Decision.

the claim that the Vodafone would be able to profitably reposition and gain a 5-10% additional share post-merger seems very speculative.

(311) Third, in contrast to the Commission's quantitative analysis which is based on measures of actual diversion ratios, quantities or margins, the Notifying Party's modelling of the effect of entry is not fact based but entirely based on assumptions. Most importantly, the Notifying Party's modelling of supply-side reactions simply assumes that the new entrant (whether an MVNO or a sub-brand of an existing competitor) would obtain a 5-10% gross add share.[126] This assumption is speculative and, in light of the experience of entry or repositioning discussed in paragraph (308), likely unrealistic.[127]

(312) Moreover, in the Notifying Party’s own modelling, an MVNO entrant post-merger with a 3-5% share would still leave a 3.5-4.8%[128] price increase in the overall private segment. This also implies significantly higher price increases for the 40 million customers of Three and O2.

(313) Fourth, entry by other operators that are already active in the United Kingdom's mobile market or that would enter the market even absent the Transaction, such as the fixed operators BT Mobile and Sky[129], is not merger specific. The Commission further notes that all other major fixed operators (Virgin, Talk Talk, Sky, BT) are already active in mobile.

(314) As such, to the extent that entry by a fixed operator would lead to a more competitive market outcome, such an outcome would already be present in the Commission's assessment of the scenario absent the Transaction.

(315) The relevant question is whether a merger between Three and O2 would still have a significant impact on prices if happening in a market in which one or more fixed operators have entered. In this respect, while the impact of BT Mobile and Sky will possibly have some limited impact on the MNOs' margins and diversion ratios between the parties, the Commission does not consider that these would reduce the price effects from the merger to levels that are no longer of concern.

(316) BT Mobile has been gaining customers since its entry but the available data shows that this dynamic did not significantly affect the diversion ratios between the Parties (see Section 4.2.2). Sky is also expected to have only limited impact on the diversion between Three and O2, as suggested by […].[130]

(317) Overall, the Commission considers that the fact that past or forthcoming entry by certain fixed operators absent the Transaction (such as BT Mobile or Sky) is not modelled in the Commission's quantitative analysis is not expected to affect the

126 As discussed in Section 3.3, for its quantitative analysis the Commission uses the gross add shares as opposed to the subscriber market shares, as the former are considered to be better proxies of the long term forward looking market shares.

127 The Notifying Party further simply assumes that the new brand could attract consumers from all existing brands in proportion to gross add shares.

128 These results are based on contribution margins. Based on short run incremental network margins, the Notifying Party's model predicts that an MVNO entrant with a 3-5% share would still leave a 2.8-4.0% price increase in the overall private segment and significantly higher price increases for Three and O2.

129 Expected to launch as MVNOs in 2016.

130 […].

Commission's conclusion that significant price effects would be generated from the Transaction.

(318) To illustrate this point, the Commission has modified the Notifying Party's modelling of entry to isolate the incremental competitive impact brought by an entrant under a NEO model compared to the competitive impact that such entrant would have had in any event by entering under a different model (for instance a “pay-as-you-go” wholesale access model).

(319) To this end, the Commission has taken the Notifying Party's calibration of the post-merger scenario with an entrant at 5% gross add share and has looked at the impact of de-merging Three and O2. The results suggest that the price increase that would result from the merger between Three and O2 in a market where an entrant at 5% share is already present pre-Transaction is 6.5%.[131] This is not materially lower than the 6.7% price increase estimated for the case in which the merger occurs absent such entrant pre-merger.[132]

(320) Fifth, the claimed mitigating effect of product repositioning has also not been studied widely the economic literature and has hence not been shown to be a robust result so far. This is one reason why repositioning is not explicitly accounted for in standard merger simulation models such as the one used by the Commission for the analysis of this case. One study by Ghandi (2008)[133] based on a specific theoretical economic model, argues that repositioning of the merging parties would be more important than repositioning of non-merging firms. However, the Commission does not consider their argument to apply to the present case, in particular because the result in their model requires that the merging parties' products are each other's closest competitors which is not claimed by the Commission in the present case. The Commission further considers that the results of the abstract model by Ghandi (2008) have not been shown to be robust and relevant enough to be considered in the context of the specific case.

(321) Finally, the Commission notes that brand repositioning is likely to be costly and not easily achievable in the short run. This does not mean that brand repositioning is impossible. However, the fact that brand repositioning is costly and time consuming makes it unlikely that such repositioning would occur and mitigate price effects from the proposed transaction to any significant degree. Indeed Werden and Froeb (1998)[134] show that relatively modest fixed costs of entry generally can be expected to prevent entry in response to differentiated product mergers, and, as noted by

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131 De-merging Three and O2 generates a price decrease by 6.1%, which corresponds to a price increase by 6.5%.

132 The Commission notes that this illustrative example is based on the use of contribution margins, while the margin measure used by the Commission in this Decision is the short run incremental margins. The purpose of the illustrative example is simply to show that even using the Notifying Party's own modelling of entry (which is based on contribution margins) the effect of the merger happening in a market with an entrant with 5% share does not materially differ from the effect of the same merger in a market with no such entrant.

133 Gandhi A., Froeb, L., Tschantz, S., Werden, G., 2008, "Post-merger Product Repositioning", *'The Journal of Industrial Organization'*, Vol. 56, Issue 1, pp. 49-67. [ID5657]

134 Werden G. and Froeb L., 1998, "The entry-inducing Effects of Horizontal Mergers", '*Journal of Industrial Economics'*, 46, pp. 525-543. [ID5658]

Ghandi (2008), the same constraints likely apply to product repositioning. Neither the timing nor the cost aspects of repositioning are discussed by the Notifying Party.

(322) In this respect, the Commission notes that according to the Notifying Party's model, sponsoring an entrant in the pre-paid segment is profitable for Vodafone already pre-merger.[135] The fact that the introduction of a sub-brand by Vodafone is not observed today can be taken as an indication that either (i) the Notifying Party’s assumptions about the parameters for successful entry are too optimistic (as suggested by the abandoned joint venture between Vodafone and Sainsbury's); or (ii) there are other factors, such as costs of repositioning that make in fact such strategy less likely to be profitable.

(323) In light of the above, the Commission considers that the entry of a new MVNO or the introduction of a sub-brand by an established MNO such as Vodafone is (i) highly speculative, (ii) unlikely to be timely and (iii) unlikely to have a significant impact on the likelihood of significant price increases post-merger.

5. CONCLUSIONS

(324) Based on the results of the quantitative analysis, the Commission considers that the Transaction is likely to generate significant price effects in the UK mobile telecom market.

(325) The Commission carried out a quantitative assessment of the likely price effects resulting from the elimination of horizontal competition between Three and O2. This assessment is based on a calibrated merger simulation approach which is an extension of the methodology used in support of the findings presented in the Article 6(1)(c) Decision. In generating the price predictions presented in this Decision, the Commission took into account a number of arguments raised by the Notifying Party in its Reply to the Statement of Objections.

(326) The Commission's first baseline scenario relies on information on short-run network incremental margins and diversion ratios at the network level based on the intensive and extensive survey questions. The model predicts price increases for Three and O2 of respectively 15.4% and 10.7% in the overall private segment. The resulting segment-wide predicted price effects are 14.9% in the pre-paid segment, 5.7% in the post-paid private segment and 7.3% in the overall private segment.

(327) The Commission's second baseline scenario relies on information on short-run network incremental margins and diversion ratios at the provider level based intensive and extensive survey questions. The price effects for Three and O2 are respectively 12.9% and 9% in the overall private segment. The resulting segment-wide price effects are 10.3% in the pre-paid segment, 4.8% in the post-paid private segment and 5.7% in the overall private segment.

(328) As discussed in Section 3.5, the Commission has carried out a number of sensitivity scenarios based on a number of alternative assumptions. These consist in (i) using more conservative measures of margins (that is, using incremental margins as opposed to contribution margins); (ii) calculating diversion ratios based on alternative data sources (intensive survey question only, MNP diversion ratios, and

[135] Based on both contribution margins or short run incremental network margins.

Parties'+Kantar diversion ratios); (iii) assuming a degree of diversion to the outside good; (iv) using margin and ARPU figures relating to 2015H1 as opposed to relating to 2014. The results of the sensitivity scenarios presented in this Annex confirm the qualitative conclusion reached based on the baseline scenarios' results.

(329) Overall, the Commission concludes that the Transaction is likely to generate strong incentives for the merged entity to significantly increase prices. This will foster segment-wide price increases in both the pre-paid segment and the post-paid private segment, and consequently in the overall private segment.

(330) The Commission has not accounted for the efficiency claims presented by the Notifying Party in this quantitative analysis. This is because, as discussed in Section 8.4 of the Decision, such claims do not meet the standard set by the Horizontal Merger Guidelines.[136]

[136] Horizontal Merger Guidelines, paragraph 78.

6. REFERENCES

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APPENDIX A: DIVERSION RATIOS

(331) This appendix present all diversion ratios tables used in the analysis. In particular:

(a) Table 19 and Table 20 present the diversion ratios based on the intensive and extensive survey questions at network and provider level, respectively;

(b) Table 21 and Table 22 present the diversion ratios based on the intensive survey question only at network and provider level, respectively;

(c) Table 23 and Table 24 present the diversion ratios based on MNP data at network and provider level, respectively;

(d) Table 25 presents the diversion ratios at provider level computed by the Notifying Party and complemented with diversion ratios based on the Kantar World Panel survey.

(332) Rows and columns' labels should be read as an "operator-segment" combination. The rows represent the donor operator-segment combination, while the columns represent the recipient operator-segment combination.

(333) The following abbreviations apply:

(a) "Pre" stands for pre-paid segment;

(b) "Postres" stands for post-paid private (residential) segment;

(334) The full diversion ratios tables, including the diversion ratios from other operators, have been made available in the Data Room that opened on 5 February 2016.

Table 19: Diversion ratios based on survey data (intensive+extensive) – Network Level

mno	EE_postres	EE_pre	H3G_postres	H3G_pre	O2_postres	O2_pre	Tesco_postre	Tesco_pre	VF_postres	VF_pre	Other_postres	Other_pre
H3G_postres	0.29		-1.00		0.42		0.02		0.24		0.02	
H3G_pre		0.21		-1.00		0.53		0.05		0.19		0.02
O2_postres	0.45		0.14		-1.00		0.02		0.36		0.03	
O2_pre		0.30		0.21		-1.00		0.11		0.33		0.06

Table 20: Diversion ratios based on survey data (intensive+extensive) – Provider Level

mno	EE_postres	EE_pre	H3G_postres	H3G_pre	O2_postres	O2_pre	Tesco_postre	Tesco_pre	VF_postres	VF_pre	Other_postres	Other_pre
H3G_postres	0.24		-1.00		0.39		0.02		0.19		0.16	
H3G_pre		0.19		-1.00		0.47		0.05		0.14		0.15
O2_postres	0.34		0.14		-1.00		0.02		0.31		0.19	
O2_pre		0.27		0.20		-1.00		0.11		0.24		0.19

Table 21: Diversion ratios based on survey data (intensive only) – Network Level

mno	EE_postres	EE_pre	H3G_postres	H3G_pre	O2_postres	O2_pre	Tesco_postre	Tesco_pre	VF_postres	VF_pre	Other_postres	Other_pre
H3G_postres	0.29		-1.00		0.43				0.24		0.04	
H3G_pre		0.26		-1.00		0.48		0.05		0.17		0.05
O2_postres	0.43		0.19		-1.00		0.03		0.30		0.05	
O2_pre		0.24		0.29		-1.00		0.17		0.26		0.05

Table 22: Diversion ratios based on survey data (intensive only) – Provider Level

mno	EE_postres	EE_pre	H3G_postres	H3G_pre	O2_postres	O2_pre	Tesco_postre	Tesco_pre	VF_postres	VF_pre	Other_postres	Other_pre
H3G_postres	0.22		-1.00		0.41				0.22		0.15	
H3G_pre		0.24		-1.00		0.43		0.05		0.07		0.21
O2_postres	0.39		0.19		-1.00		0.03		0.25		0.14	
O2_pre		0.18		0.29		-1.00		0.17		0.14		0.23

Table 23: Diversion ratios based on MNP – Network Level

[…]

Table 24: Diversion ratios based on MNP – Provider Level

[…]

Table 25: Diversion ratios based on the Notifying Party's plus Kantar – Provider Level[137,138]

[…]

137 Based on the Notifying Party's estimates of diversion ratios between Three and O2 and augmented using Kantar as an estimate of the diversion ratios from/to the other operators.

138 […].

ANNEX B[1]

(1) The Notifying Party argues that evidence from recent mergers in the mobile telecommunications sector shows that such transactions lead to increased competition. To support this view, the Notifying Party submitted a paper on the effects on competition and consumer welfare of the acquisition of Orange Austria ("Orange") by Hutchison 3G Austria ("H3G")[2] that was consummated in Austria in late 2012 (the "Compass Lexecon Study").[3] The Notifying Party also pointed to price developments after the mergers H3G/O2 Ireland and Telefonica Deutschland/E-plus in, respectively, Ireland and Germany,[4] suggesting no anti-competitive effects on prices following the transactions.[5] The Notifying Party further commented on some other recent studies analysing the effect of concentration on prices and investments in the mobile telecommunications industry. In particular, the Notifying Party commented on a recent study by Genakos, Valletti and Verboven which was published by the Centre on Regulation in Europe ("the CERRE Study"),[6] and on a study prepared for GSMA[7] by Frontier Economics ("the GSMA Report").[8]

(2) In the Statement of Objections, the Commission provided a preliminary assessment of the Compass Lexecon Study as well as of the other studies mentioned by the Notifying Party. The Commission also reviewed further recent studies on the issue,[9] including a joint study published by the Commission (the "Commission Case Study")[10] in collaboration with the Netherlands Authority for Consumers and Markets ("ACM") and the Austrian telecommunications regulator ("RTR"), and an early presentation of a study conducted by RTR on the same H3G/Orange Austria merger analysed in the Compass Lexecon Study (the "RTR Study").[11]

(3) In the Reply to the Statement of Objections the Notifying Party reiterates its position and argues that the Commission's preliminary assessment of the evidence from other mobile telecommunications mergers would be selective and inconsistent.

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1 All abbreviations are the same as in the Decision.

2 The acquisition was reviewed by the Commission in case No M.6497 – *Hutchison 3G Austria/Orange Austria.* In the following the acquisition will be also referred to as the "H3G/Orange merger". The party notifying that case and the Austrian merged entity, "H3A", are ultimately controlled by the same group which controls the Notifying Party in the current Transaction.

3 "Case Study – Effects of the H3A/Orange Austria Transaction", 21 October 2015, prepared by Alina Goad, Thilo Klein, and Jorge Padilla (Compass Lexecon) [ID1929].

4 See Commission decision of 28 May 2014 in case M.6992 – *Hutchison 3G UK/Telefónica Ireland* Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus.*

5 Notifying Party's reply to the Article 6(1)(c) Decision paragraphs 15 and 301-302.

6 Genakos C., Valletti T., Verboven F. (2015): "Evaluating Market Consolidation in Mobile Communications", [ID4074].

7 An organization representing the interests of mobile operators worldwide.

8 Frontier Economics (2015): "Assessing the case for in-country mobile consolidation" [ID: 4076]

9 Statement of Objections, Annex B.

10 Aguzzoni, Buehler, Di Martile, Ecker, Kemp, Schwarz, Stil (2015), "Ex-post analysis of two mobile telecom mergers: T-Mobile/tele.ring in Austria and T-Mobile/Orange in the Netherlands".[ID4077]

11 RTR (2016). Ex-post analysis of the merger between H3G Austria and Orange Austria, report, Vienna, March 2016 . [ID5661]**.** The study presents the results already anticipated in the RTR's presentation discussed in the Statement of Objections Annex B and titled: "The effect of the H3G Orange merger on Austrian mobile prices" presented at the 13th ACE ANNUAL CONFERENCE, Milan, 27 November 2015[ID4075].

(4) Further, in the Reply to the Statement of Objections, the Notifying Party claims that the Commission omitted to review two other relevant empirical studies of mobile merger effects. These are a report by the HSBC (the "HSBC Study")[12] and a recent paper by Huongbonon ("Huongbonon 2015")[13]. Both studies would suggest that there might be positive effect on competition from mergers in the mobile industry.

(5) Moreover, in the Reply to the Letter of Facts of 17 March 2016, the Notifying Party also commented on the full version of the RTR Study, on a study by the Austrian Competition Authority ("BWB") on the merger H3G/Orange Austria (the "BWB Study"),[14] and on a study by the UK telecommunication regulator ("Ofcom") analysing the effect of disruptive operators on prices in the mobile telecommunication industry (the "Ofcom Study").[15,16]

(6) In the following the Commission first clarifies the evidentiary weight given to studies of other transactions. The Commission then provides an assessment of Compass Lexecon Study and other recent studies. The Commission also responds to the further arguments submitted by the Notifying Party.

1. THE RELEVANCE OF STUDIES OF CONCENTRATION IN OTHER MOBILE TELECOMMUNICATIONS MARKETS FOR THE ASSESSMENT OF THE PRESENT CASE

1.1. Notifying Party's view

(7) According to the Notifying Party the analysis of developments in other mobile telecommunications markets provides compelling evidence that mobile consolidation would be pro-competitive. In light of this evidence, the Notifying Party considers that the Commission's analysis in the Statement of Objections of non-coordinated horizontal effects on the retail market would be "entirely misdirected" as the Statement of Objections would "focus on theoretical concepts to substantiate the Commission's concerns".[17]

(8) The Notifying Party also considers that the Commission would be inconsistent in relying on submissions made by Three to Ofcom in 2011 regarding the UK market while at the same time rejecting more recent evidence from other countries.

1.2. Commission assessment

(9) The Commission considers that ex-post studies of mobile telecommunications mergers in other markets may contribute to the understanding of the general effects of market concentration in the mobile telecommunications sector. However, the Commission does not consider that the results from such studies are probative nor can they replace the specific assessment of the Transaction.

12 HSBC Global Research, Supersonic: European telecoms mergers will boost capex, driving prices lower and speeds higher, April 2015. Included in the Reply to the Statement of Objections.

13 Huongbonon, G. The Effects of Market Concentration on the Price of Wireless Communications Services, Working paper, 29 September 2015. Included in the Reply to the Statement of Objections.

14 BWB (2016). The Austrian Market for Mobile Telecommunication Services to Private Customers. An Ex-post Evaluation of the Mergers H3G/Orange and TA/Yesss!, Sectoral Inquiry BWB/AW-393, Final Report, Vienna. [ID5659].

15 Ofcom (2016). A cross-country econometric analysis of the effect of disruptive firms on mobile pricing. [ID5662]

16 Reply to the Letter of Facts of 17 March 2016, Annex A and Annex B.

17 Reply to the Statement of Objections, paragraph 543.

(10) The Commission disagrees with the Notifying Party's argument that such studies provide compelling evidence that mobile consolidation would be pro-competitive. As explained in detail in this Annex, the Commission does not share the Notifying Party's interpretation of the available evidence on the effect of market concentration on prices. A conservative interpretation of the available studies would at least find mixed results for what concerns the impact of market concentration on prices with indications that price increases following a merger are likely outcomes. For what concerns the impact of market concentration on investments the available evidence is far less reliable, though the results appear to indicate no overall increase in industry wide investments.

(11) The Commission considers that the ex-post analysis of mobile telecommunications mergers in other markets is a complex exercise which, due to methodological issues and issues of limited availability of data, has to be interpreted very cautiously. Moreover, in the mobile telecommunication industry market concentrations in different countries display a material degree of heterogeneity. For these reasons, results applicable to other transactions are not directly transferable to the present Transaction.

(12) In consideration of these reasons, the Commission does not give significant evidentiary weight to the experience gathered by studying mergers in different geographic markets for the purposes of assessing the Transaction. In this case, as in the other cases, the Commission bases its review of the Transaction primarily on its assessment of the evidence and circumstances of the present case.

2. ASSESSMENT OF THE COMPASS LEXECON STUDY

2.1. Notifying Party's view

(13) In the Compass Lexecon Study the Notifying Party reviewed the Austrian mobile telecommunication market developments in the period before and after the 2012 H3G/Orange merger. The Notifying Party's conclusions can be summarized as follows:

(a) Post-merger H3A has significantly increased the quality of its network achieving LTE coverage of 98% and becoming the network in Austria offering the fastest download speeds. This was achieved by a substantial investment effort which H3G and Orange would not have undertaken absent the merger. The increased network quality also facilitated the surge in data consumption after the merger;

(b) The combined entity continued to compete aggressively post transaction as demonstrated by continued growth in market share;

(c) The trend in average revenue per GB used (which the Notifying Party calls the "unit price") was not affected by the H3G/Orange merger;

(d) Customer welfare in Austria unambiguously improved after the H3G/Orange merger because subscribers consumed more data, enjoyed higher speed and better coverage and paid lower unit prices.

(e) Episodes of MVNOs entry in the Austrian mobile market further contributed to intensify competition.

(14) The Notifying Party considered that the results of its Compass Lexecon Study do not prove that four-to-three mergers in the mobile telecommunications industry never harm competition. However, the Notifying Party sought to demonstrate that the Commission's finding that the H3G/Orange merger (absent remedies) would have harmed consumers in Austria was wrong and that it would be wrong to conclude that any of such mergers always harm consumers.

2.2. Commission's assessment

(15) The Commission considers that the Compass Lexecon Study presents shortcomings both in terms of methodology and interpretation of the results.[18]

2.2.1. Methodology

(16) Any empirical measurement of the effects of a past merger is based on a comparison of observed post-merger outcomes with an estimate of what would have happened in the post-merger period in the hypothetical scenario in which the merger did not take place.

(17) The Compass Lexecon Study follows a *before and after* methodology to perform this comparison. The study relies on the assumption that the observed pre-merger prices in Austria can be used to predict the effect of the merger. However, this assumption is not necessarily true. In particular, in a fast evolving industry like the mobile telecommunications sector in which new technologies are frequently introduced and in which other factors, such as customer usage patterns evolve quickly, it is doubtful that pre-merger prices provide a good predictor for what would have happened in the post-merger period in the absence of the merger. These issues are of particular concern in the specific case as the *before and after* methodology proposed by the Notifying Party is extremely minimal and does not include any control variables for demand or cost factors that could affect prices. Indeed, the only structure that is imposed on the model is that prices should follow a trend (quadratic in case of prices in level or linear in case of log-prices).

(18) The Commission is not arguing that *a priori* the *before and after* methodology is inappropriate to carry out event studies like ex-post merger evaluations. Indeed, there might be some market context in which the *before and after* methodology could be appropriate or there might be very detailed and data rich *before and after* study that might credibly isolate the effect of mergers on prices (something that it is not credibly done in the minimal approach taken in the Compass Lexecon Study). In light of the above discussion, in the context of the mobile telecom industry, the Commission considers it more appropriate to use a *difference in differences* approach. In its simplest application this approach assumes that absent the transaction the outcomes in the market in which the merger took place would have evolved in the same way as outcomes in a control group of markets with similar characteristics that were unaffected by the merger. This methodology is more likely to ensure that factors unrelated to the transaction that have a similar effect on similar markets can be controlled for.

(19) The Commission notes that most of the other recent studies on consolidation in the mobile telecommunication industry discussed below use the *difference in differences* approach. One exception is the study carried out by the Austrian Competition

18 […].

Authority on the H3G/Orange merger (the BWB Study) that adopts a *before and after approach*. However, as discussed in paragraph (84) *et seq.*, this study has access to very detailed data at the country level and uses a structural estimation framework. Another exception is the Notifying Party's price concentration analysis in case M.6992 – *Hutchison 3G UK/Telefónica Ireland,* however this study is a purely cross-sectional study without any time dimension.

(20) The Commission notes that the Notifying Party in its Reply to the Statement of Objections criticises studies that use a *difference in differences* approach for not controlling for numerous time changing factors, whilst it sees no need to control for such factors in its *before and after* approach.[19] The Commission disagrees with this argument. The Commissions considers that there is a much greater need to control for such factors with a *before and after approach.* A simple time trend, as in the econometric specification of the Compass Lexecon Study, cannot be expected to account for the full evolution of these time-varying factors. The *difference in differences* approach is precisely designed to control for such factors, as it compares the evolution of the outcome variable in a country affected by a merger against that in countries not affected by a merger, but which are otherwise influenced by the same or similar time-varying factors. This identification strategy allows to disentangle the effect of a merger from the effect of other factors unrelated to the consolidation in the market.

(21) Due to its reliance on the *before and after* approach and absent any empirical strategy to control for time varying factors related to demand and costs other than a time trend, the Commission considers the results of the Compass Lexecon Study to be unreliable.[20]

2.2.2. Evolution of Price

(22) The main price measure used in the Compass Lexecon Study is the ratio between total expenditure on mobile services and number of units of traffic (measured in giga-bytes), where voice and text messages are converted in equivalent data volume on the basis of some technical conversion factors. The Notifying Party considers this to be an appropriate measure of the "unit price" which controls for the volume of services consumed and reflects the evolution of the "value for money". According to the study, this unit price measure has been decreasing both before and after the H3G/Orange merger, with no detectable impact of the H3G/Orange merger on this evolution.

(23) The Commission does not consider this pricing analysis to be informative.

(24) First, as discussed in paragraph (16) *et seq*, the Commission considers the *before and after* approach to be inappropriate in the context of mobile telecommunications industry. Even accepting that "unit prices" as defined by the Notifying Party have continued to decrease in Austria after the H3G/Orange merger this allows no reliable

[19] Notifying Party's Reply to Annex B of the Statement of Objections paragraph 2.4.

[20] Moreover, the 2012 H3G/Orange merger was approved with commitments and the following competitive developments necessarily reflect the impact of such commitments. The Notifying Party argues that the MVNO entry facilitated by the commitments took place only almost two years after the closing of the transaction and that the intermediary period was not affected by the remedies. The Commission does not exclude that although MVNO entry is observed only two years after the H3G/Orange merger the commitments accepted might have had an indirect impact on the Austrian market already before the entry of MVNO took place.

inference on the effect of the H3G/Orange merger on prices. The Notifying Party's argument that the pre-merger decline in this price measure has continued at a similar rate post-merger also does not constitute an appropriate benchmark for the situation absent the merger to which the post-merger development should be compared, for the reasons set out in paragraph (17).

(25) Second, the Commission considers this price measure to be flawed:

(a) The decline in unit price as defined in the study is mostly driven by a continuing strong growth in data consumption. This does not necessarily reflect how consumers value data and voice services;[21]

(b) By using a technical conversion factor, voice and text services have almost no weight in the price unit measure, and certainly a weight that is not representative of the value that users attach to those services, in particular voice services.[22]

(26) Third, even if the preferred price measure and the general approach were accepted, the econometric model used in the Compass Lexecon Study is incorrect and the results are neither robust nor probative. The identification strategy adopted by the Compass Lexecon Study is to compare the slope of the estimated trend pre-merger with the slope of the estimated trend post-merger. A statistically significant difference in the slopes pre- and post-merger would imply, according to the Compass Lexecon Study, that the merger had an effect on prices. However, the econometric model of the Notifying Party dilutes the merger effect by adopting an unreasonable specification that does not allow for a change in the intercept when examining the post-merger trend. This unreasonably constrains the pre and post-merger trend to be very similar as they have to share the same intercept and artificially leads the results towards a finding of a no effects related to the merger.

(27) Under the hypothesis of log-prices following a declining linear trend it would be possible to estimate the empirical model on the combined entity's log-price only in the pre-merger period, and use the estimated coefficients to predict post-merger prices absent the merger. The comparison of the actual prices and the predicted prices would then represent the price change associated with the merger under the assumptions of the *before and after* approach adopted by the Notifying Party, but without unreasonably constraining the effects to be estimated. This comparison (Figure 1) shows that H3A's observed post-merger unit prices were significantly above (on average 20% higher) than what would be expected following a continuation of the pre-merger trend. A similar conclusion would be reached under

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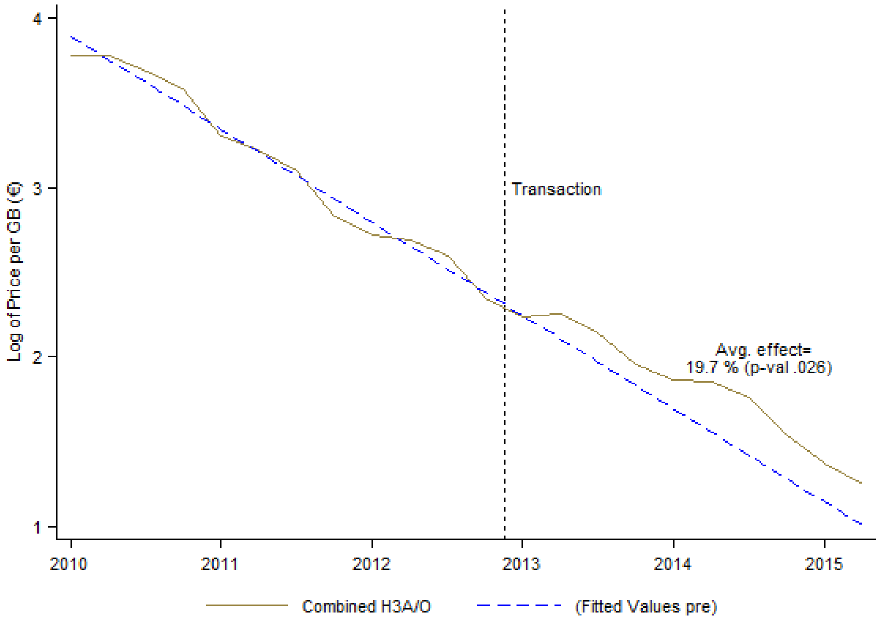
[21] Data consumption is not only demand driven but is also supply driven, as the adoption of better technology allows operators to provide more data volume to customers at a much lower cost. Further, data consumption is also supply driven as customers do not purchase units of data, they purchase bundles of data and voice offered by operator from a limited number of options. The fact that consumers purchase data allowances which they may not fully use also illustrates the limits and problems with the use of "unit prices" as proposed by the Compass Lexecon Study. According to the logic of this measure, each consumer would be better off by always consuming their entire usage allowance as this lowers the unit price and increases welfare. Should this not happen, however, the measure would be not relevant for consumers.

[22] In a response to Ofcom's comments, the Notifying Party argues that their findings are robust to the use of different weights [ID3727]. However, the Notifying Party has not presented any empirical estimation of the consumer value of “data” as opposed to the consumer value of “voice”. In any event, the Commission's main concern relates to the use of "unit prices" themselves rather than the exact weights to convert voice and SMS in their computation.

alternative conversion factors for voice and SMS traffic (Figure 2). However, the same analysis applied to the average market prices would not suggest a price increase.

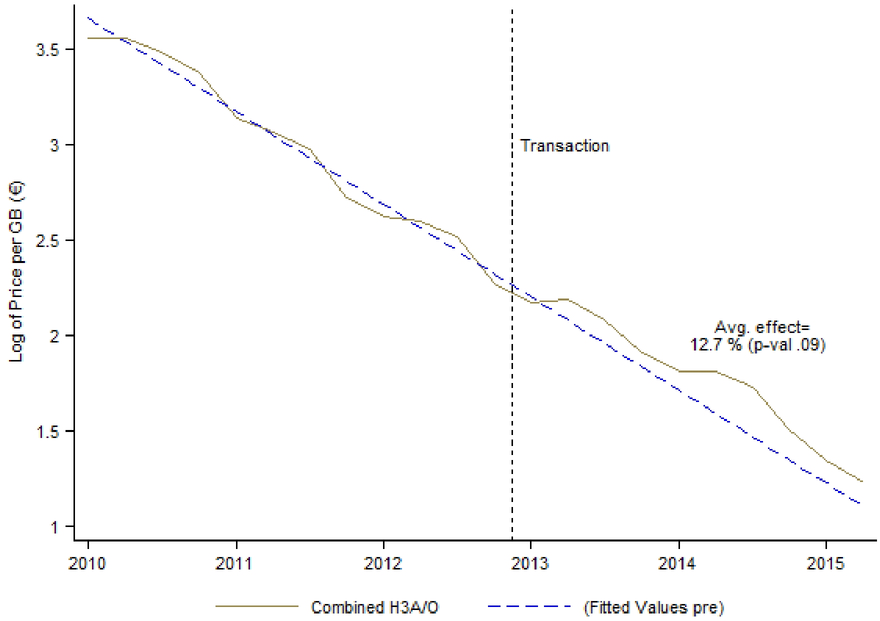
(28) The Commission does not consider the above as conclusively indicating a post-merger price increase by H3A. However, the Commission considers that even abstracting from the methodological shortcomings of the Notifying Party's approach and of the use of unit prices, the conclusions of the Notifying Party of no price increases are not reliable to the use of a more reasonable econometric specification. For these reasons the Commission considers the results of the Notifying Party's econometric analysis unreliable and not probative.

Figure 1. Estimated Price effect on combined H3G/Orange



Source: Commission's calculations on data provided by the Notifying Party

Figure 2. Estimated Price effect on combined H3G/Orange (with different conversion factors)



Source: Commission's calculations on data provided by the Notifying Party

Conversion factors: 1 min = 1 mb and 1000 sms = 1 mb

(29) The Compass Lexecon Study on Austria also considers two other price measures: ARPU[23] and an index of prices developed by the Austrian telecommunications regulator ("RTR").

(30) The Commission considers that ARPU is not appropriate to identify the evolution of price measure relevant for consumers over time. ARPU does not control for changes in consumption and it also includes several other service revenues.[24] The comparison of ARPU over time makes it difficult to separate price effects, relevant for competition analysis, from simple effects related to the change of mix of consumption.[25]

(31) The RTR price index is conceptually different from the ARPU measure as it is calculated on the basis of a hypothetical profile of consumption (hence controlling for consumption levels and also excluding other revenues, like roaming fee that bias the ARPU measure). This is a feature of expenditure based measure in which consumption can be directly controlled for allowing for fixed consumption or for changing consumption levels, both using hypothetical levels of consumption or

23 Average revenue per user.

24 For example, ARPU includes added value services, roaming, etc. While such revenues are determined by the pricing structure of the firms overall, they might not be the relevant parameter for examining the evolution of price over time.

25 This observation relates to empirical analyses of the evolution of ARPU over time (where usage patterns may change) or across countries or markets (where usage patterns may differ for a number of reasons). It does not apply to the use of ARPU and the resulting margin per subscriber for the quantitative analysis of likely price effects performed by the Commission as this analysis focusses on incentives to raise price for given (constant) levels of usage in a specific market.

actual consumption data, if available. Given the consumption level the RTR index is then computed on the basis of the tariffs available during each time period.[26]

(32) The RTR index indicates price increases following the H3G/Orange merger. These price increases are not contested by the Notifying Party. However, the Notifying Party relates the price increases found with the RTR index to the spectrum auction and to other cost factors (like over the top services adoption) rather than to the H3G/Orange merger. Moreover, the Notifying Party considers the RTR index to be methodologically flawed for how it is constructed.

(33) The Commission disagrees with the Notifying Party's view on the RTR index. The fact that the RTR index considers only the tariffs available in each period makes it more relevant for the assessment of the future evolution of prices as the index reflects changes in tariffs as they occur. Moreover the RTR index considers several tariffs and no single tariff drives the results.

(34) Furthermore, in the Commission's view the claim that the RTR index is not representative of real prices paid by consumers, as it is a theoretical index, is unfounded. As discussed in section 3.2.5, the Austrian competition authority, BWB, has recently issued a study on the H3G/Orange transaction. The BWB has access to customers' take-up of different tariffs and to mobile service consumption at the tariff level. This means that the price measure in the BWB Study is representative of what Austrian consumers actually pay. A comparison (Figure 3) of the BWB price measure (top panel) with the price measures of the RTR, both computed with varying consumption (the RTR index – centre panel) and keeping consumption fixed (as in the RTR Study – bottom panel)[27], show that the RTR price measures and the price measure used in the BWB Study have similar evolutions. Moreover, all price measures lead to the same conclusions of an absolute price increase in 2014.[28] Overall, this confirms that using the RTR index or similar price measures as a proxy for consumers’ actual expenditure is a reasonable assumption and dismisses the Notifying Party's claim that the price measures computed with the method followed by RTR are not relevant for what Austrian consumers pay.

(35) It is also dismissed the Notifying Party's claim that the RTR index fails to account for the large increase in data consumption. The RTR index reported in the Compass Lexecon Study (centre panel in Figure 3) is computed by allowing consumption to change over time (although annual rate of growth are computed at fixed consumption levels). Hence, to the extent that average consumption of data has increased over time this is captured by the RTR index as the index will consider a higher consumption and will select the tariffs more relevant to the new consumption levels. In any event, even keeping consumption fixed would not change the conclusions, as discussed in paragraph (34).

(36) Moreover, the Commission considers that the use of an index approach also allows a differentiated analysis on how prices have evolved for specific user groups (e.g. users with low, medium or high data consumption).

[26] By only looking at the currently available tariffs this index is more representative of the new market dynamics compared to measures that look at the tariffs of the established customer base and it is more indicative of the changed conditions in a forward looking perspective.

[27] This is the price measure used in the study RTR Study.

[28] The main difference with the BWB price can only be seen with the "low" basket of the RTR index. But this could be related the higher aggregation of the BWB price measure.

(37) In contrast, the Commission considers that the Notifying Party's notion of "unit prices" confounds price developments (which are set by MNOs) with the evolution of demand and consumption. The Commission also considers that the Notifying Party's unit price is driven by data consumption and especially by the consumption of "data heavy users" (high volume spending costumers) and it is therefore not appropriate to assess the effect on prices paid by consumers with more stable or less intensive consumption patterns.

(38) The Commission therefore considers that an index approach such as the one taken by RTR is conceptually better than the Notifying Party's notion of "unit price". Moreover, the Notifying Party's claim that approaches focused on monthly customer expenditures (such as the RTR index) rather than "unit prices" would mix change in prices and change in consumption effect is flawed.[29] Indeed, by using an expenditure approach it is possible to keep fixed the consumption level and isolate the impact of price changes and this is one of the advantages of using this approach.

(39) As also noted in the Ofcom response to the Compass Lexecon Study, standard economic theory does not support the argument that higher spectrum auction outlays would lead to higher prices. Auction cost are sunk costs that once committed would not enter the profit maximization decision of the mobile operator. The Commission also shares the view of Ofcom that the price increases after the auction might not be related to the cost of the auction itself but rather to the stable competitive condition that realized after the auction in which there was no entry of a new player. In this respect price increases before the auction might have also been deferred as to deter possible new bidders to participate in the auction.

[29] Reply to the Statement of Objections, Annex B.7.1, page 7.

Figure 3. Comparison of RTR and BWB prices indices

Figure 2: Subscriber-weighted average prices by segments.

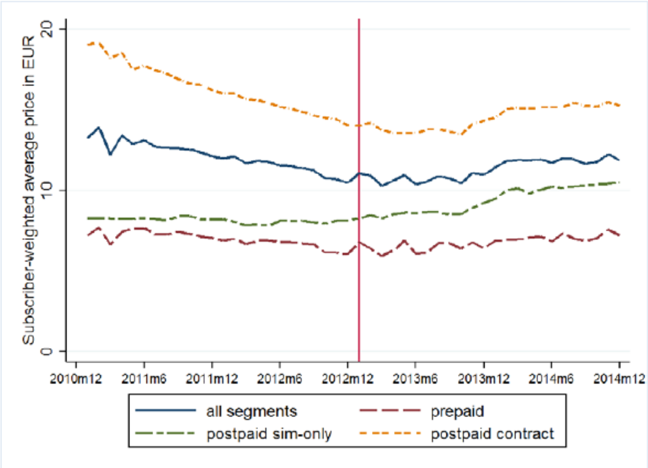
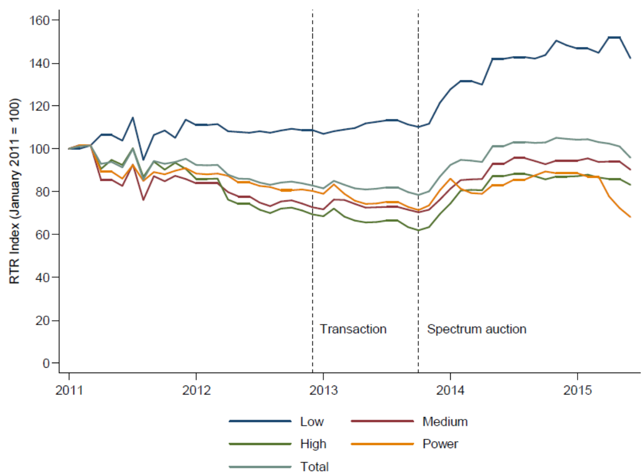
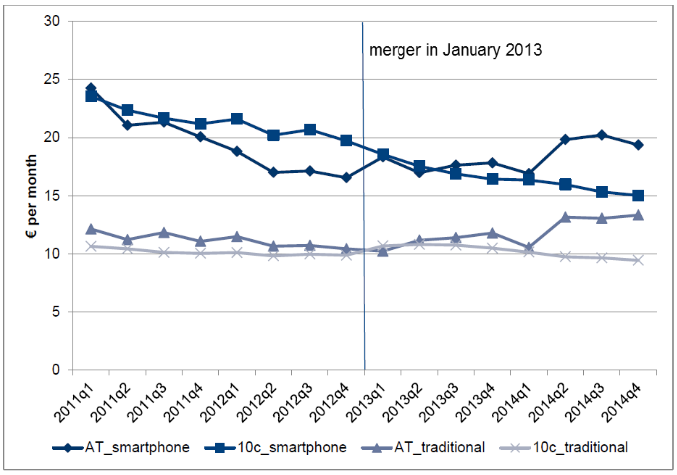


Figure 18: RTR Index



Source: RTR.

Figure 1: Austrian (AT) mobile prices compared to the 10 control group countries (10c)



Source: Top panel Figure 2 BWB Study (expenditure based on actual consumption at tariff level); centre panel Figure 18 Compass Lexecon Study (RTR index with varying average consumption for different profiles) ; bottom panel Figure 1 RTR Study –(profile of consumption fixed at year 2013 for Austria and control countries) note: 10_c refers to the average in the 10 considered control countries

(40) The Commission finally notes that the price changes detected in a *before and after* comparison may well underestimate the price changes that would emerge if the actual price development is assessed against an appropriate benchmark, that is to say by using the *difference in differences* approach. For example, the analysis of the same transaction performed recently by the RTR (the RTR Study) using a *difference in differences* approach indicates sizeable price effects starting from the months immediately after the merger (with estimated relative price increases in excess of 20%). The RTR findings also indicate that even if all the costs of the 2013 spectrum auction were assumed to be passed on to consumers, therefore contradicting economic theory, the relative price increase would still remain sizeable.

(41) In light of the above, the Commission considers that the Notifying Party's *before and after* analysis of the transaction allows no reliable inferences on the effect (or claimed lack thereof) of the H3G/Orange merger on price.

(42) The Commission further considers that the Notifying Party's claims about the absence of indications of anticompetitive effects (as would be indicated by declining prices in Germany and stable prices in Ireland) following the recent mobile telecommunications mergers in Ireland and Germany in 2014[30] cannot be relied upon because these claims are also based on simple before and after comparison (not even substantiated in a proper study as was done for the Austrian merger) that suffer from the lack of a reliable benchmark for how prices would have evolved absent the transactions against which the effect of these transactions could be assessed.

2.2.3. Increased network quality, market shares and usage

(43) The Commission does not dispute that H3A spent significant amounts of CAPEX to achieve LTE coverage of 98% in 2015 and to significantly increase download speeds on its network since the merger. Similarly, the Commission does not dispute that H3A's market share appears to have continued to grow post-merger or that data usage in Austria has increased significantly.

(44) However, in the Commission's view, the Notifying Party has not shown that this evolution is causally related to the merger. In other words, the Notifying Party has not shown that the same or similar outcomes would not have been achieved in the absence of the merger.

(45) Reliably estimating market outcomes that would have occurred in the absence of a merger is a complex exercise which the Notifying Party does not attempt.

(46) Instead the Compass Lexecon Study compares actual post-merger outcomes on LTE coverage and sites to forecasts prepared by H3G in 2012 of expected LTE coverage and sites that H3G and Orange would achieve without the merger. The Notifying Party also compares actual network CAPEX figures for 2013 to 2016 of the merged entity to the corresponding estimated figures included in the 2011 H3A's business plan for the merged entity. This comparison of actual and forecasted figures is unreliable as the actual investment take into account the outcome of the spectrum auction of 2013, an outcome not considered in the 2011 business plan.

[30] Commission decision of 28 May 2014 in case M.6992 – *Hutchison 3G UK/Telefónica Ireland* Commission decision of 2 July 2014 in case No M.7018 – *Telefónica Deutschland/E-Plus.*

(47) The Commission also found H3G's forecasts to be unreliable in its decision for the H3G/Orange merger.[31] Moreover, even the comparison of the 2011 business plan forecasted CAPEX of the combined entity against the sum of the 2011 forecasted CAPEX of the two standalone entities does not account for the transition costs occurred to integrate the two networks.

(48) For the above reasons the Commission considers the CAPEX comparison exercises proposed by the Notifying Party to be biased and not informative to assess the effect on competition.

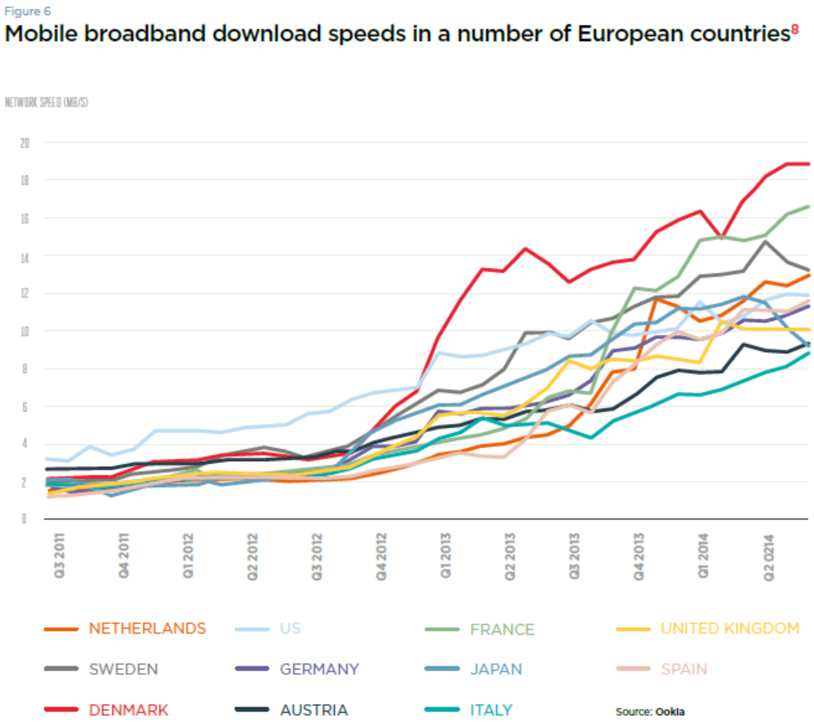
(49) About network speed, the Commission notes that data speeds have seen impressive growth across different countries as illustrated by the figure below. In fact, the figure suggests that after 2012 and until mid-2014 the download speed in Austria appears to have grown at a slower rate compared to other European countries. This suggests that relative to the evolution found in other comparable countries the speed of the Austrian mobile broadband network has not increased and may well have deteriorated.[32]

(50) The Commission acknowledges that in the second half of 2014 the download speed in Austria might have increased compared to a group of comparable control countries (not depicted in the below Figure), as submitted in the Notifying Party's reply to the Statement of Objections. The Commission notes however, that the increase in speed in Austria from the second half of 2014 might have been due to reasons unrelated to the 2012 merger such as greater take up of 4G subscriptions following the 2013 spectrum auction and the 4G roll-out by Austrian MNOs. The Notifying Party has failed to provide evidence, let alone compelling evidence, that this increase in speed would not have occurred absent the merger.

[31] Commission decision of 12 December 2012 in case No M.6497 – Hutchison 3G Austria/Orange Austria, recital 420: *"It has not been substantiated why H3G would not have incentives to build more sites (especially more than 700 LTE sites when UMTS is congested), acquire additional frequencies from competitors or rely more intensely on domestic roaming. The Parties have not produced evidence by, for example, independent network engineers to prove the binding nature of the constraint"*.

[32] See Figure 6 reported in the Frontier Economics (2015) study: "Assessing the case for in-country mobile consolidation" [ID: 4076]

Figure 4. Mobile download speeds in a number of European Countries



Source: Figure 6 reported in the Frontier Economics (2015),

(51) Also, consistently with the Decision on the H3G/Orange merger, the Commission considers that absent the merger H3G and Orange could have entered in a network sharing agreement (NSA) with other operators in the Austrian market (as both H3G and Orange had advanced discussions with T-Mobile). The NSA could arguably have led to a similar network performance as that was deployed in Austria following the merger.

(52) In this respect, the Commission, in the Decision on the H3G/Orange merger, noted that the forecasts of the merged entity ignored possible network sharing agreements and that "[…] *it appears plausible from internal documents that Orange and T-Mobile could have an incentive to enter into such an agreement*".[33] Due to the existence of other rollout possibilities, the Commission also concluded in the Decision on the H3G/Orange merger that "*faster LTE roll out is not merger specific*" in its assessment of efficiencies.[34]

(53) In the Reply to the Statement of Objections the Notifying Party claims that the counterfactual of a NSA would have implied disadvantages and lower investment compared to the merger. The Commission considers that these claims are not substantiated. Also, the Commission notes that in Figure 4 two European countries with network speed amongst the highest are Denmark and Sweden, two countries in which there are network sharing agreements in place. Hence, there are examples of countries in which NSAs do not prevent providing quality to consumers.

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[33] Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 419.

[34] Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 432.

(54) The Commission also notes that H3G's network was certified as being the best 3G network (the leading technology at the time) in any of the European German-speaking countries already in 2011.[35] To the extent that H3A in 2015 has the best network it means it only maintained its first of the class position acquired in 2011.

(55) As regards the continued growth in market share of H3A, the Commission notes that the combined market share was growing at similar rates pre-merger and the continued growth of the share of the merged entity may simply indicate that the merged entity's share has not yet reached its long run equilibrium especially given that the two merging parties had a gross add share significantly higher than their subscriber share.[36] In the Reply to the Statement of Objections the Notifying Party claims that the Commission would have developed this theory *ad-hoc* for the specific case. The Commission reject this view and notes that it is common for the Commission to assess market shares also in a dynamic perspective as explicitly contemplated also in the Horizontal Merger Guidelines.[37] For this reason, the Commission also considers gross adds shares, in particular when gross adds shares might be more representative of the competitive strength of the different market players than market shares would predict. In this regard, the assessment of gross adds shares was part of the Commission's investigation of the H3G/Orange merger indicating that *"H3G and Orange are much more important than their installed customer base would suggest"*.[38] Hence, the Commission considers that the simple observation that H3A's market share increased over the period considered is not sufficient to establish that H3A competed as fiercely as H3G and Orange would have done absent the merger. Moreover, due to the adjustments in the number of subscribers that took place over time, the comparison of market share figures before and after the H3G/Orange merger might be misleading.

(56) As regards the evolution in usage volumes, the Notifying Party claims that the H3G/Orange merger has helped to enable (and possibly generated in part) the surge in data usage. The Commission notes, again, that the increase in usage is also a phenomenon shared by many other European markets and the Compass Lexecon Study fails to identify the impact of the H3G/Orange merger. Similarly, while the Notifying Party argues that H3A is responsible for two thirds of the increase in Austrian volume, this is likely also related to the particular customer base of H3A which, on average, used higher data volumes than other operators even before the H3G/Orange merger. In fact, the evolution of usage depicted in Figure 11 of the Compass Lexecon Study does not seem to support the view of the Notifying Party. This figure indicates that data usage has already grown exponentially before the merger. There is no discernible trend in the growth in data usage in the total market after the transaction.

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[35] Commission decision of 12 December 2012 in case No M.6497 – *Hutchison 3G Austria/Orange Austria,* footnote 334. See also http://www.connect.de/ratgeber/mobilfunk-netztest-oesterreich-2012-1368672 html, last visited on 22 January 2016 [ID4078]. In 2011, H3G's network was certified by the independent network test of the German magazine "Connect" as the best network in any of the German-speaking countries, being Germany, Austria and Switzerland.

[36] Commission decision of 12 December 2012 in case No M.6497 – Hutchison 3G Austria/Orange Austria, recital 171.

[37] Horizontal Merger Guidelines, paragraph 15.

[38] Commission decision of 12 December 2012 in case No M.6497 – Hutchison 3G Austria/Orange Austria, recital 171.

(57) The Commission therefore concludes that the Compass Lexecon Study does not show that the increases in LTE coverage, network speeds, market share and usage were the result of the H3G/Orange merger.

2.2.4. Consumer welfare

(58) The Compass Lexecon Study also proposes a consumer welfare model in which consumer's utility depends (positively) on the volume of services consumed and on the difference between the value that a consumer obtains from a unit of consumption and its unit price. On the basis of this theoretical modelling the Notifying Party concludes that consumer welfare unambiguously increased following the transaction because: volume of consumption increased; the value of unit of services increased (allegedly because of quality increases); and the unit price decreased.

(59) The Commission notes that, while the Notifying Party in the Reply to the Article 6(1)(c) Decision claims that the Compass Lexecon Study would demonstrate that the H3G/Orange Austria merger has resulted in massive consumer benefits, the wording in the Compass Lexecon Study is actually much more cautious. The Compass Lexecon Study simply concludes that consumer welfare has increased after the H3G/Orange merger. Volume increases, quality increases and a fall in "unit price" are phenomena shared by many mobile telecommunications markets in different countries before and since the H3G/Orange merger in Austria in late 2012. The Notifying Party's welfare measure has hence been increasing in Austria and other countries since long before the H3G/Orange merger in 2012. This, again, demonstrates that the simple *before and after* approach employed by the Compass Lexecon Study is inappropriate to identify causal relationships in this industry.

(60) Therefore, the Commission does not consider that the Compass Lexecon Study provides reliable insights on the impact of the H3G/Orange merger on any of the constituent factors entering the welfare measure proposed. The Commission therefore considers that the Compass Lexecon Study fails to identify the impact of the H3G/Orange merger on consumer welfare.

2.2.5. Entry of MVNOs

(61) Finally the Compass Lexecon Study seems to suggest that the entry, around 2015, of several MVNOs is a sign of, and contributes to, effective market competition. In this respect the Commission notes that these conclusions are irrelevant for the assessment of the harm resulting from the H3G/Orange merger in the form in which it was initially notified. The Commission considers that MVNO entry in Austria is likely the result of the commitments presented by the Notifying Party to address the Commission's concerns and to obtain a conditional clearance. Even though there was no MVNO entry until 2015 the Commission considers that the reference offer that was part of the commitments might have had an impact on the market developments and it eventually facilitated the MVNO entry that occurred only very recently in 2015. Moreover, possible anticompetitive effects on price following the merger in Austria might have also facilitated the MVNO entry. In any case, the Commission considers it too early to draw meaningful conclusions on the effect of the MVNO entry in Austria and on the basis of the available evidence it is not possible at this stage to conclude that the MVNOs entry was sufficient to counteract the likely anticompetitive effects of the H3G/Orange merger.

2.2.6. *Conclusions*

(62) Overall, the Commission concludes that the Notifying Party's Compass Lexecon Study is not probative as it does not offer a reliable insight on the effect of the H3G/Orange merger on consumer welfare, investments, quality or prices.

3. OTHER RECENT STUDIES

(63) This section presents the Commission's views on a number of recent ex-post evaluation studies related to consolidation in the mobile telecommunication industry, as these are relevant for the assessment of the Notifying Party's claims submitted in the Compass Lexecon Study and in other submissions.[39] For the reasons discussed in section 1.2, however, the Commission considers that ex-post studies of mobile telecommunications mergers in other geographical markets can only receive limited evidentiary weight in the assessment of the present Transaction. In this case, as in the other cases, the Commission bases its review of the Transaction primarily on its assessment of the evidence and circumstances directly related to the present case. Therefore, the Commission considers that a detailed in-depth assessment of these studies is outside the perimeter of the assessment of the present case.

3.1. Notifying Party's view

(64) In the Reply to the Article 6(1)(c) Decision, the Notifying Party noted that the recent CERRE Study which analyses the relationship between price, investment and market concentration across countries between 2002 and 2014 points out that increased concentration leads to higher prices and increased investment. As there is a trade-off between price and investment, it would not be possible to conclude from the CERRE Study whether consumer welfare would increase. Moreover, the CERRE Study's results on prices should not be considered reliable as it would not account for increases in demand and changes in quality.

(65) The Notifying Party further pointed out that another recent study published by GSMA[40] and prepared by Frontier Economics ("the GSMA Report")[41] finds no systematic difference in unit prices between three and four MNO markets. As regards investment, the Notifying Party considers that the CERRE Study and the GSMA Report both find that concentration increases investment per MNO. While the studies find no effect on investment in the market overall or on a per subscriber basis, the Notifying Party considered that because of fixed cost savings arising from mergers the investments would likely be better spent in markets with higher concentration to the benefit of consumers.

(66) The Notifying Party also considers that it would be inconsistent for the Commission to rely on the CERRE Study since this study would be subject to the same criticism which the Commission made regarding a price concentration analysis submitted by the Notifying Party in case No M.6992 Hutchison 3G UK/Telefonica Ireland.

(67) In the Reply to the Statement of Objections, the Notifying Party argued that the Commission's review and assessment in the Statement of Objections of these and other studies on the effect of concentration in mobile markets would be flawed and

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[39] Reply to the Statement of Objections, and Reply to the Letter of Facts of 17 March 2016.

[40] An organization representing the interests of mobile operators worldwide.

[41] Frontier Economics (2015): "Assessing the case for in-country mobile consolidation"[ID: 4076]

inconsistent and would lead the Commission to prefer studies that find anticompetitive effects over those that don't.

(68) In particular, the Notifying Party raised the following criticisms:

(a) The Commission's preferred studies use measures of the monthly bill paid by consumers which might increase as a result of an increase in consumption rather than changes in price.

(b) The Commission wrongly considered the GSMA Report and the CERRE Study as applying a *difference in differences* methodology.

(c) The Commission inconsistently criticised the Price Concentration Analysis of suffering from omitted variable bias, while it did not raise such concern for other studies.

(d) The Commission inconsistently interpreted the results of the Commission Case Study.

(e) The Commission inconsistently assessed the endogeneity issues in the CERRE Study and in the GSMA Report.

(f) The Commission omitted other recent studies that suggest positive merger effects on competition.

3.2. Commission's assessment

3.2.1. Price concentration analysis submitted by the Notifying Party in case No M.6992

(69) During the Commission's review of the Hutchison 3G UK's acquisition of Telefonica Ireland, the Notifying Party submitted a price concentration analysis using ARPU data for 25 EU Member States and Switzerland (the "Price Concentration Analysis").[42] In that Price Concentration Analysis a distinction was made between small countries, defined as those national mobile telecommunications markets with less than 20 million subscribers (such as Ireland), and large countries, defined as those national mobile telecommunications markets with more than 40 million subscribers (such as the United Kingdom). The results of that Price Concentration Analysis indicated that increases in market concentration levels would be associated with price reductions (as measured by ARPU) in small countries. In contrast, in large countries the presence of three MNOs instead of four MNOs is associated with higher prices according to the results of the study. Based on these results, the Notifying Party argued that a four-to-three merger in Ireland would likely reduce price.

(70) In the conditional clearance decision of that transaction, the Commission found that it could not rely on the Price Concentration Analysis. One reason, among others, for this conclusion was that the claimed results that for small countries increases in market concentration level would be associated with lower prices was not robust even accepting the overall methodology. The Commission also noted that the methodology employed by that Price Concentration Analysis did not sufficiently

42 The acquisition was reviewed by the Commission in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland.* The price concentration study submitted in that transaction is described and discussed in recitals 800 to 809 and Annex II, part 1 of the Decision in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland.*

control for differences across countries and that this would undermine its conclusions.

(71) In its Reply to the Statement of Objections, the Notifying Party argued that the Commission's critique to the Price Concentration Analysis was inconsistent with its assessment of the CERRE Study and of the Commission's Case Study.[43] The Notifying Party noted that although the Price Concentration Analysis included more control variables than the CERRE Study and the Commission's Case Study, it was the only study to be criticised for omitted variable bias.

(72) The Commission disagrees with the Notifying Party's argument and notes that its criticism to the Price Concentration Analysis was due to the pure cross-sectional nature of the Price Concentration Analysis. The criticism does not apply to studies employing *difference in differences* approaches, such as the CERRE Study and the Commission's Case Study, that benchmark the within country evolution in affected countries against the within country evolution in an appropriate control group of unaffected countries, thereby controlling for fixed differences over time, as well as the evolution over time that is unrelated to changes in concentration.[44,45]

3.2.2. GSMA

(73) The GSMA Report uses a *difference in differences* approach. The GSMA Report finds that CAPEX per subscriber is not higher in four player markets compared to three player markets.[46] The GSMA Report also estimates the effect of market concentration on prices (average revenue per minute, in this case) and finds no significant positive relationship between prices and increases in concentration. Average revenue per minute used by the GSMA is a measure of unit price which, as the unit price measure in the Compass Lexecon Study, confounds the evolution of prices with that of usage.[47] The use of this variable casts doubt on reliability of the GSMA Report results.

(74) In the Commission's view, the econometric approach used to analyse the relationship between concentration and investments in the GSMA Report also suffers from a number of methodological shortcomings (in particular endogeneity of HHI, serial correlation, use of lagged variables) and raise some further doubts.

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43 Reply to the Statement of Objections, Annex B7.1, paragraph 5.16 *et seq*.

44 The Commission also noted in the Decision of *Hutchison 3G UK/Telefónica Ireland* that, in contrast to price concentration analyses that were used in past decisions, the Price Concentration Analysis compared different markets with different competitors which made it less reliable than analyses used in other cases. In the Reply to the Article 6(1)(c) Decision, the Notifying Party argues that this criticism would also apply to other studies using data from different countries, in particular those that are discussed in this subsection. The Commission notes that the specific remark in the decision in case No M.6992 – *Hutchison 3G UK/Telefónica Ireland* was addressed at the pure cross-sectional study presented in that case. In the Commission's view, this criticism does not apply to the same extent to studies using *difference in differences* approaches which control for cross-sectional differences across countries such as differences related to the identity of firms present.

45 The Notifying Party further argued that this reasoning does not apply to the CERRE Study, as the methodology applied should not be considered a *difference in differences* approach. The Commission assesses the Notifying Party's claim in paragraphs (80).

46 As investment per subscriber is unaffected, investment per operator would increase in a three player market, as subscribers per operator increase.

47 While the effect of concentration on price is not estimated precisely and the point estimates are not statistically significant, the point estimates suggest a sizeable positive long run effect of concentration on price in most regression specifications.

(75) In light of the above, the Commission considers that the GSMA Report provides little reliable insights on the effects of concentration.

3.2.3. CERRE

(76) The CERRE Study considers the impact of market structure on firms' investment (CAPEX) and on prices using a *difference in differences* approach. The CERRE Study finds that CAPEX per MNO increases with a reduction in the number of MNOs. However, it finds no statistically significant impact of concentration on the aggregate industry-wide investment levels (CAPEX).[48,49] As a price measure, the CERRE Study adopts a basket based price measure similar to the one adopted by RTR and described in the Compass Lexecon Study for the analysis of prices. About the impact on prices the CERRE Study finds that market concentration (for instance a merger from four to three players) is consistent with a significant price increase. According to the study, an average hypothetical 4-to-3 merger could be expected to lead to a price increase of 16%. The CERRE Study hence identifies a trade-off following a market concentration between higher investment per operator and higher prices. In contrast to what the Notifying Party suggests, the CERRE Study does not draw conclusions on consumer welfare from increased concentration.

(77) In the Commission's view, the CERRE Study's general approach take measures to partly address some econometric issues (such as the endogeneity of the number of players or of the HHI measure, and inclusion of country fixed effects) which undermine the results of other studies (notably the issues identified in the GSMA Report). The Commission considers that these observations also dismiss the Notifying Party's claim, in the Reply to the Statement of Objections, that the Commission's assessment of the CERRE and GSMA Report is inconsistent despite the similarities of the two studies. Indeed, the identified differences for what concerns the price analysis of the two studies, and especially the choice of the price measure, make the approach of the CERRE Study more appropriate. For what concerns the analysis of market concentration on CAPEX the Commission has concerns on both studies (as explained in paragraph (79)).

(78) The Commission considers that the CERRE Study sufficiently controls for demand and quality changes by using a *difference in differences* approach. Moreover, as discussed above, the Commission considers that the use of a price index holding usage constant is a methodologically better measure as it isolates price effects from changes in usage. In particular the results of the CERRE Study are robust even when the authors allow consumption to change over time.[50] This also dismisses the Notifying Party's claim in its Reply to the Statement of Objections that using the

48 The report mentions that, while insignificant, the estimate in their main specification points towards concentration increasing industry investment. The Commission notes that this result is reversed when the authors restrict the analysis to the subgroup of European countries. That is, for the subsample of European countries the point estimate indicates that concentration would be associated with a decrease in industry CAPEX. The estimate is statistically significant in one of the two specifications reported for this subsample.

49 This result is consistent with the conclusions reached by the GSMA Report. Still, as for the other studies, the Commission considers that CAPEX investments are not directly related to quality improvements neither at the single operator level nor at the national level. Hence, on the basis of these results it is not possible to conclude on the effect of concentration on quality, a competitive measure that affects more directly consumer welfare.

50 The main specification assumes varying baskets: the 2006 basket for the period 2006-2009, the 2010 basket for the period 2010-2011, and the 2012 basket for the period 2012-2014.

price measure of the CERRE Study *"increases in monthly bills may be caused by increases in consumption volumes"*. For these reasons, the Commission considers the CERRE Study's findings on price effects to be methodologically sound.

(79) With respect to investment, the Commission considers that the CERRE Study provides no indication for an increase in aggregate CAPEX (or, alternatively CAPEX per subscriber) following mergers. The CERRE Study also does not assess whether and to what extent higher CAPEX per MNO (for constant CAPEX overall) would increase network performance. Moreover, the Commission considers that the analysis of market concentration on CAPEX does not provide a direct evidence of the impact of mergers on quality.

(80) In the Reply to the Statement of Objections, the Notifying Party claims that neither the GSMA Report (discussed above) nor the CERRE Study employ a difference in differences approach. The Notifying Party argues that these studies rely *"for all practical purposes"* on a before and after approach. On this respect the Commission considers that the Notifying Party is correct in claiming that the approach of the GSMA and CERRE Study exploits the within country variation in their estimation. However, the Notifying Party fails to consider that the studies' methodology also exploits the cross-country comparison. The individual within country variations are still compared across countries and both the time and country dimension contribute to the isolation of the effect of interest. Therefore, both GSMA and CERRE studies can be considered as following a *difference in differences* approach.[51]

3.2.4. Case study on T-Mobile/tele.ring (Austria 2006) and T-Mobile/Orange (the Netherlands 2007).

(81) In November 2015 the Commission published a study (the "Commission Case Study") carried out jointly by staff of DG COMP and staff of the Netherlands Authority for Consumers and Markets ("ACM") and the RTR.[52] The Commission Case Study analysed the price effect related to two past mergers in the mobile telecommunications sector: the *T-Mobile/tele.ring* merger in Austria, approved with commitments in April 2006; and the *T-Mobile/Orange* merger in the Netherlands, approved without conditions in August 2007.

(82) The methodology adopted is a *difference in differences* analysis that uses other European countries that did not experience structural changes (entry or exit) in the analysed period as a control group. The price measure adopted by the Commission Case Study is an expenditure based price similar to the RTR price measure. However, the study considers a price measure with fixed consumption levels for both the two countries of interest (Austria and the Netherlands) and the control countries. Contrary to what the Notifying Party claims in its Reply to the Statement of Objections, this study, by keeping consumption fixed, does not mix changes in

[51] The Notifying Party also claimed that in the Statement of Objections the Commission had an inconsistent assessment of the GSMA Report and of the CERRE Study. The Notifying Party listed several arguments whereby the instrumental variables used in the CERRE Study would not be valid, and it pointed out that the GSMA Report used the lag of the HHI as an instrumental variable. The Commission acknowledges that the instrumental variables adopted in the CERRE Study may have some limitations, however in the Commission's view the GSMA Report is likely to suffer from far more severe endogeneity issues than the CERRE Study.

[52] Aguzzoni, Buehler, Di Martile, Ecker, Kemp, Schwarz, Stil (2015), "Ex-post analysis of two mobile telecom mergers: T-Mobile/tele.ring in Austria and T-Mobile/Orange in the Netherlands".[ID4077]

consumption with changes in prices and isolates the effect of the mergers on the latter measure.

(83) The quantitative results of the Commission Case Study suggest that the Austrian T-Mobile/tele.ring merger, as modified by the offered commitments, did not lead to price increases in Austria. In contrast, prices for mobile telecommunications services in the Netherlands increased after the T-Mobile/Orange merger compared to the control countries.[53] Among other things, the Commission considers these results illustrates the importance of considering case-specific features and the complexity in drawing external conclusions from the analysis of single case studies. At the same time the Commissions considers that these results show that the possibility of relative price increases following a market concentration cannot be ruled out.

3.2.5. Case study on the H3A/Orange Austria merger from the Austrian Competition Authority (BWB)

(84) On 14 March 2016 the Austrian Competition Authority (BWB) published a report (the "BWB Study") that assesses the effect on mobile prices of the H3G/Orange Austria merger and the related transaction in which Orange's second brand Yesss! was sold to the incumbent operator Telecom Austria (TA).[54]

(85) The price measure considered is a basket price measure (i.e. the monthly bill paid by consumers). Notably, as BWB has access to usage data at tariff level the expenditure reflects average actual consumption at tariff level (including out of bundle consumption) and not hypothetical consumption levels. The price measure also includes handset subsidies which are not usually observed in other studies adopting the basket price approach.

(86) The BWB Study does not perform a cross-country comparison and it could be seen as a *before and after* model, although it adopts a different methodology (structural estimation) from the Compass Lexecon Study (that adopts a reduced form approach).[55] The BWB has access to highly detailed data (including prices, tariffs choice, consumption, costs) at the Austrian level, both pre and post-merger. In terms of methodology, it adopts a merger simulation approach (a method commonly used for the ex-ante assessment of mergers). Notably, the BWB Study, among its cost variables, also takes into account the spectrum auction of October 2013.

(87) The analysis of the BWB Study finds significant price increases in the range 14-20% in the period 2013-2014, with pre-paid tariffs suffering the highest price increases

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53 In its Reply to the Statement of Objections, the Notifying Party claimed that the Commission adopted an inconsistent interpretation of the results of the Commission Case Study. According to the Notifying Party, the Commission did not consider that the Austrian merger led to a price reduction, and rather interpreted the results of the analysis as if the Austrian merger did not lead to a price increase. The Commission considers the Notifying Party's argument as partial and misleading. The Notifying Party does not take into account that the merger T-Mobile/tele ring in Austria was modified by commitments, as opposed to the merger in the Netherlands. The effect of such commitments could not be disentangled by the analysis carried out in the Commission Case Study. Therefore, attributing the price reduction to the effect of the merger would have been inconsistent.

54 BWB (2016). The Austrian Market for Mobile Telecommunication Services to Private Customers. An Ex-post Evaluation of the Mergers H3G/Orange and TA/Yesss!, Sectoral Inquiry BWB/AW-393, Final Report, Vienna. [ID5659]**.**

55 A structural model is a model that specifies some economic relationships between variables (on the basis of theoretical economic models) and uses these relationships and the available data to estimate the parameter of the model to then make predictions about possible scenarios absent the merger.

(20-30%). In particular, the price increases materialized in December 2013 and lasted at least one year. The BWB's analysis does not extend beyond December 2014, although it acknowledges that prices might have started to fall during 2015 due to the entry of several competitive MVNOs (especially Hofer Telecom). Despite this, the BWB Study concludes that the higher prices *"might have been sufficient to decrease consumer surplus dramatically"*.

(88) In its reply to the Letter of Facts of 17 March 2016 (Annex B), the Notifying Party criticizes the BWB Study. Among other issues, the Notifying Party claims that the BWB Study does not fully control for some relevant factors like changes in volume or quality. In this respect the Commission observes that volume control variables are included in the marginal cost regression and should therefore control for this changing factor and isolate the impact of volume changes from the impact of the merger on prices. Changes in quality are not directly controlled for but could be captured by the indicator variables that control for the LTE auction of 2013 after which the LTE roll-out started.

(89) Another criticism relates to the assumption whereby the Austrian MNOs, in particular H3G, were not capacity constrained. In this respect the Commission notes that in the Decision of the H3G/Orange Austria merger it concluded that *"The claim that H3G's endowment constitutes an imminently binding capacity constraint, and that it cannot be relieved by measures other than acquisition of spectrum and sites is not substantiated by the Parties"*.[56]

(90) Overall, the Commission concludes that, although some of the concerns raised by Notifying Party might have some merit it is not clear whether and how these would materially affect the conclusions of the study. Further, an in-depth assessment of the BWB Study is outside the scope of the assessment of the present case especially as the Commission is attaching only limited evidentiary weight to the results of these studies (see section 1.2).

3.2.6. Case study on the H3A/Orange Austria merger from Austrian Telecom Regulator (RTR)

(91) Together with the BWB Study also RTR published its own assessment (the "RTR Study") of the price effect related to the 2012 concentration between H3G and Orange Austria.[57] The RTR Study confirms the conclusions anticipated in an earlier presentation of the results of the study, already commented in the Statement of Objections.

(92) To estimate the effect of the concentration the RTR Study adopts the same approach as the Commission’s Case Study, although it differs also under some dimensions. The RTR Study considers two different consumption profiles defined as "traditional user" and "smartphone users". Notably, the latter profile includes also data consumption in the basket price calculation.

(93) The RTR Study, in its different estimations, finds price increases between 50-90% for smartphone users and between 22-31% for traditional users. These price increases are related to the period 2014, with lower price increases in 2013. Further, the RTR

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[56] Commission decision of 12 December 2012 in case No M.6497 – Hutchison 3G Austria/Orange Austria, recital 420.

[57] RTR (2016). Ex-post analysis of the merger between H3G Austria and Orange Austria, report, Vienna, March 2016 . [ID5661].

Study also controls directly for the costs of the spectrum auctions both in Austria and in the control countries. The RTR Study conservatively assumes a 100% pass-through rate of these costs by deducting them from the price measure.[58] Following this approach, the RTR Study still finds sizeable price increases between 21-72% for smartphone users and between 18-21% for traditional users.

(94) As the BWB Study, also the RTR Study finds price increases until 2014 and then suggests that prices might have fallen in 2015 following the effective implementation of the remedies. However, as for the BWB Study, no analysis is carried out for year 2015 and it is not possible to establish whether the entry of the MVNOs was sufficient to restore competition in Austria.

(95) The Notifying Party raised several criticisms on the RTR Study.[59] Specifically, the Notifying Party (i) questioned the reliability of the synthetic control group approach, (ii) questioned the suitability of the other countries as control group, and (iii) questioned the small sample of countries used as a control group. The Commission notes that the Notifying Party's criticisms to the synthetic control group approach are already addressed by the permutation method used to make inferences on the estimated effect (i.e. to derive the statistical significance of the estimate). Furthermore, the synthetic control group approach is also robust to the Notifying Party's critiques to the control group of countries, as it constructs a weighted average of the most similar countries to the treated country. The Commission also notes that the Notifying Party's comparison of the price series across countries (on which it based its criticism) does not account for the variation explained by the control variables in the *difference in differences* approach. The comparison is therefore partial and possibly misleading.[60] Overall, although the RTR Study may suffer from some limitations, the finding of a price increase following the merger appears to be consistently confirmed by the several specifications and robustness tests implemented by RTR.

(96) Moreover, in the Commission's view the fact that three studies analysing the effect of the merger T-Mobile/Orange in Austria using different methodologies (the BWB Study, the RTR Study and the Compass Lexecon Study[61]) find evidence of price increases in 2014 appears to be an additional indication of the robustness of the results and on balance (despite possible limitations of these studies) there is evidence of possible price increases following the H3G/Orange merger.[62]

[58] The RTR study considers all spectrum auctions in the period 2011-2014 and computes a monthly cost equivalent per customer, assuming an amortization period of 15 years. Using a 100% pass-through is a conservative assumption for at least two reasons. First, spectrum costs are sunk costs that are less likely to be passed to consumers; second, even assuming a pass-through, standard oligopoly models would predict a pass-through rate below 100%. For instance assuming a linear demand the pass-through would amount to about 50%.

[59] Reply to the Letter of Facts of 17 March 2016, Annex B.

[60] The Commission also notes that the price series used by Notifying Party are based on a different data source than the price series used in the RTR Study.

[61] When the price measure is not derived following Compass Lexecon's unit price measure.

[62] According to the Compass Lexecon Study the price increases should be attributed to the spectrum auction. The BWB and the RTR studies, however, attempt to model for the effect of the spectrum auction in their econometric model and still find price increases not explained by the spectrum auction. None of these studies is conclusive on the market developments that started in 2015.

3.2.7. *Ofcom's case study on the impact of disruptive firms*

(97) Recently, Ofcom published a cross-country econometric study to examine the effects on pricing of disruptive firms in mobile markets.[63] The Ofcom Study adopts a hedonic price approach that essentially decomposes the price of each tariff into its single components.[64] The components considered are the characteristics of the tariffs (e.g. allowances, handset), time effects (to capture common time related effects, like cost reductions) and other market characteristics, including the presence of a "disruptive firms". Ofcom uses this approach to estimate the price change associated with the presence of a disruptive firm.

(98) Disruptive firms are identified as those firms that introduce services that "supersede" other competitors' services and to which competitors have to react, or firms that are particularly aggressive competitors. The study finds that in countries where a disruptive player is present prices are lower compared to countries where a disruptive firm is not present. The analysis also indicates that prices are lower in countries with a higher number of players. According to Ofcom, combining these two factors suggests that, in general, the elimination of a disruptive player through a 4 to 3 merger can be expected to lead to higher prices.

(99) In its Reply to the Letter of Facts of 17 March 2016 (Annex A), Notifying Party raised some criticisms to the Ofcom Study. Many of the Notifying Party's criticisms appear to be already taken into account in the Ofcom Study (such as model specifications or the modelling of the "disruptive" indicator variables), and are discussed in the many robustness test analyses included therein.[65]

(100) Overall, the Commission concludes that although some comments raised by the Notifying Party might have some value it is not clear whether and how these criticisms would materially affect the results of the study. However, as already explained, an in-depth assessment of the Ofcom Study falls outside the perimeter of the assessment of the present case as the Commission is attaching only limited evidentiary weight to the results of these studies. .

3.2.8. *Other studies suggested by the Notifying Party*

(101) The Notifying Party, in its reply to the Statement of Objections claims that the Commission omitted to review other empirical studies of mobile merger effects.

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[63] Ofcom (2016). A cross-country econometric analysis of the effect of disruptive firms on mobile pricing. [ID5662]

[64] This approach cannot be applied to pay-as-you-go tariffs as the monthly bill would depend on actual consumption. Moreover the study assumes that there is no out of bundle consumptions. The Ofcom study does not consider this to be a significant problem.

[65] Other criticisms appear to be less relevant. For example, the Notifying Party criticizes the amount of information used by Ofcom and the variation in the data, especially in relation to the variable of interests for the market structure and for the presence of the disruptive operator. The Commission considers that a higher variation in these variables would be desirable for the identification of the effect; however, other studies, and in particular case studies, exploit even less variation in the data to identify the effect of the event of interest. The Notifying Party also criticize the use of fixed-effects in Ofcom's methodology. The Commission notes that the Ofcom's methodology does not include country fixed-effects but operator fixed effects. Hence, it is still possible to identify the effect of the presence of a disruptive firm separately from the fixed effect of other operators. Still, given the particular setting, the analysis of Ofcom could have benefitted from further robustness tests on this issue. Also some other concerns could be possibly related to the use of the hedonic approach. The implication of this appears less clear. In any event, the Commission would still favour a basket price measure.

These are a recent report by the HSBC (the "HSBC Study")[66] and a recent paper by Huongbonon ("Huongbonon 2015")[67]. Both studies would suggest that there might be a positive effect from mergers in the mobile industry. The Commission, for the reasons set out in Section 1.2 does not consider that it is necessary to cover all the available empirical evidence on the effect of mergers on the mobile industry. Nevertheless, the following paragraphs will briefly comment on these studies.

(102) Huongbonon 2015 evaluates the effect on prices of the entry of the operator *Free* in France in January 2012 and the merger between H3G and Orange in Austria in 2012. The study adopts a matching estimator to select a set of control countries. The results of the study suggest that the entry of *Free* in France is associated with an increase in the prices for data and a decrease in the prices for voice calls, while the study finds the opposite effects for the merger in Austria (i.e. a price increase for voice calls and a price decrease for data). The study lacks access to data in the pre (entry or merger) period and only uses post event data. This raises some doubts on the extent the matched countries provide a good prediction of the prices in Austria and France respectively before the merger and the entry of *Free.*[68]

(103) Other anecdotal evidence suggests some caution in interpreting the results of this study. *Free* is widely reputed to have driven price and service competition in France not only for voice but also for data and it triggered the launch of second brands from the other major operators (see the Ofcom Study description on *Free*). It is then surprising that the entry of *Free* would be associated with a price increase in data. Rather, it could be that the methodology of the study or the price measure adopted fails to capture some relevant dimensions or capture the wrong competitive dimensions.

(104) Figure 5, presented in the study, also appears to show different trends in the price evolution in Austria and France. If anything prices are stable and then decline in France and prices are stable and then increase in Austria in 2014.

(105) Moreover, the study adopts a particular methodology in which every year a separate regression is run and different coefficients are estimated. It is then not clear how to interpret these coefficients and the estimated changes. Further, the effect of the merger is estimated separately for voice and data services and the study does not explain what would be the overall effect on consumers by taking into account the diverging effects observed for voice and data prices.

[66] HSBC Global Research, Supersonic: European telecoms mergers will boost capex, driving prices lower and speeds higher, April 2015. Included in the Reply to the Statement of Objections.

[67] Huongbonon, G. The Effects of Market Concentration on the Price of Wireless Communications Services, Working paper, 29 September 2015. Included in the Reply to the Statement of Objections. The Commission notes that the author, at the time of writing, was an employee of the Regulatory Affairs Department of the incumbent operator Orange France, further the study was also directly financed by Orange.

[68] For instance the study admits that it has no data on the pre-2013 period and hence it tests the parallel trend assumption between treated (France and Austria) and control countries on the basis of fixed broadband plans.

Figure 5. Least expensive tariff evolution in Austria and France

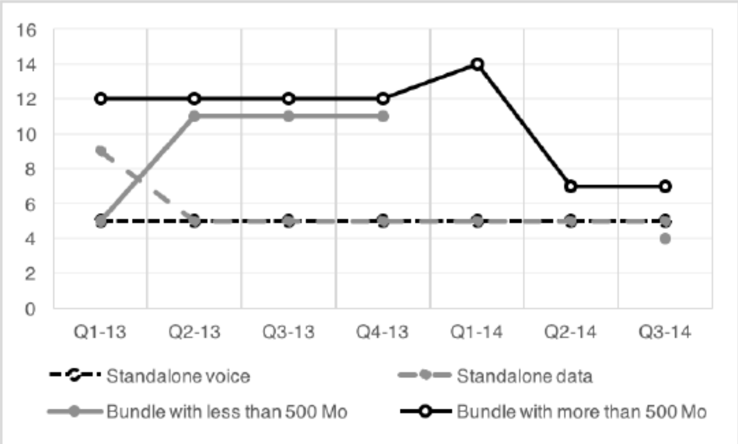

Figure 2: Evolution of the price of the least expensive plan in France (Orange and SFR)

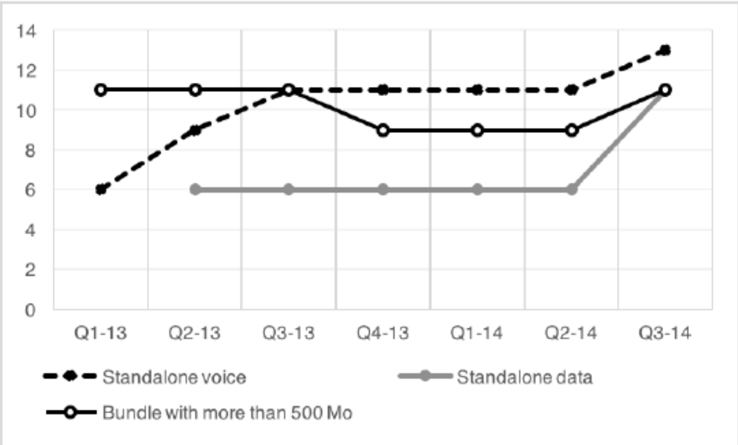

Figure 3: Evolution of the price of the least expensive plan in Austria (A1 Telekom Austria and T-Mobile)

Source: Huongbonon 2015

(106) The HSBC Study also referred by the Notifying Party adopts the same methodology and data of Huongbonon 2015 and the two studies are essentially the same. For these reasons the same concerns raised for Huongbonon 2015 applies also to the HSBC Study.

4. CONCLUSION ON EX-POST EVIDENCE

(107) In the light of the above, the Commission concludes that the Notifying Party's Compass Lexecon Study provides no reliable insights of the effect of the current Transaction on investments, quality, prices or consumer welfare.

(108) The Compass Lexeon Study is not the first that aims to assess the effect of mobile market concentration on outcome variables relevant for competition and consumer welfare. Examples of these studies include: a Compass Lexecon Paper submitted by the Notifying Party in *Hutchison 3G UK/Telefónica Ireland*, the GSMA Report, the CERRE Study, the Commission's Case Study, the BWB Study, the RTR Study, and Ofcom Study.

(109) The Commission's preliminary view on these studies is that they contribute to understanding the effects of market concentration in the mobile telecommunications sector. Nevertheless, the studies are subject to some methodological shortcomings which are, in part, related to the complex sector characteristics and data limitations. Overall, the studies abovementioned should be interpreted with caution especially in the assessment of future merger cases. The Commission also notes that almost all the past transactions considered in these studies underwent merger control scrutiny and most of them were approved only with commitments. To the extent that commitments modified the effects of the analyzed concentrations in the market, it is not possible to disentangle the effect of the concentration and the effect of the commitments.[69] This makes it further unclear to assess the relevance of the studies for the assessment of future mergers.

(110) Subject to these caveats, the Commission's view is that on balance the studies show that four to three mergers tend to lead to price increases. This is indeed the result of the analyses using price indices (holding constant consumption baskets) which, in the Commission's view, are more appropriate than measures of unit prices which confound price effects with changes in customer consumption levels. With respect to investments, the Commission considers that the available evidence is insufficient to draw sound conclusions. The Commission notes that the conceptually sounder studies in this respect indicate that mergers tend to have no effect of industry level investments (as measured by CAPEX). As, by definition, mergers involving MNOs reduce the number of MNOs in a given market, this finding implies that CAPEX per MNO increases (but not CAPEX per subscriber). The Commission does not however consider at this stage that the studies would allow inferences that an increase in the CAPEX per MNO increases the quality of networks or that consumers (who tend to pay higher prices for the same usage) would be overall better off as a result of mergers in the mobile telecommunication industry.

(111) In any event, the Commission does not consider that the results from ex-post studies can replace the specific contemporaneous assessment of the Transaction.

[69] This implies that from the available studies it is also not possible to conclude on the impact of the accepted remedies.

ANNEX C: THE PARTIES' NETWORK PERFORMANCE AND CAPACITY ABSENT THE TRANSACTION

TABLE OF CONTENTS

SUMMARY OF THE COMMISSION'S ASSESSMENT OF THREE AND O2'S NETWORK CAPACITY ABSENT THE TRANSACTION

(1) An important claim of the Notifying Party's rationale for this Transaction is that both Three's […] and will be […] their customers' increasing demand for mobile data. This would result in […].

(2) In this annex, the Commission sets out its detailed analysis of Three's and […]. The Notifying Party's main views and the conclusions of the Commission's assessment are summarised in this section. For each of the Parties, the current network performance forms the starting point of the assessment, as the Commission can take into account future changes in their ability to compete on network quality only to the extent they can be reasonably predicted. To this end, the Commission investigated the way demand is forecast to grow, the modelling approach used by the Parties […].

(3) The Commission notes that network quality is a broad concept that is determined by several factors, including speed. When making a choice of provider, customers value download speeds as well as other network quality parameters such as coverage and reliability. Increased speeds above a certain threshold may only have little additional value to consumers, to the extent they can already run their main applications without speed limitations. Average speed experienced by customers in high traffic areas and in the busy hour is determined to a large extent by the available capacity and the demanded mobile data traffic.

<u>Three</u>

(4) Despite its lower spectrum holdings of Three in relation to the traffic carried compared to other MNOs , the Commission finds that today, Three's network is not materially congested and offers a very good quality of service, as confirmed by numerous consumer surveys. This is reflected in Three's continuous increase in market share in recent years. The Commission finds that Three is currently rolling out its 4G network and is still in the process of […].

(5) In relation to Three's demand forecast, the Commission is of the view that [demand will be lower than internally predicted by Three for a number of reasons], the Commission does not consider that they would compromise Three's overall ability to compete.

(6) The Commission considers that Three's Capacity Model, […] is flawed. The number of […] which Three uses to model demand is not properly forecasted and does not adequately take account of increasing network capacity which, in the Commission's view, should decrease the number of subscribers waiting for mobile data transfer in the busy hour. The […] used in Three's model […] effectively implies a hypothetical data demand which exceeds […] by a factor of […] and thus renders Three's submitted model […].

(7) [Issues on the number of assumed additional future sites].

(8) There are a number of further issues which result in a […] bias of the modelled capacity. For example, the Commission is of the view that in high traffic areas it can be expected that […] achieves a similar spectral efficiency as its […] and therefore provide higher capacity than modelled by Three. […].

(9) The Commission further finds that Three has a number of further means to increase capacity in the future if that would be needed. These means are only partially reflected in Three’s Capacity Model. The following means are particularly important.

(10) First, the Commission considers that in future spectrum auctions or sales, Three will likely obtain […] more spectrum […], the Commission takes the view that Three's expected spectrum valuations will allow it to acquire more spectrum in the forthcoming auctions in the United Kingdom (Public Services Spectrum Release – PSSR- and the 700 MHz auction) […]. Specifically, Three's technical value for spectrum will be high to the extent that it requires additional spectrum to increase its capacity. Moreover, BT/EE and Vodafone have, respectively, a much higher (capacity) spectrum holding and can thus be expected to have a lower technical value for additional capacity spectrum.[1]

(11) […], other operators are unlikely to strategically outbid Three in the upcoming PSSR auction because capacity spectrum will be auctioned. As an additional safeguard, the United Kingdom's regulator Ofcom can be expected to adopt the necessary measures to prevent strategic bidding, if it deems them necessary.

(12) In line with Ofcom, the Commission considers that Three could plausibly acquire […] of 2.3 GHz spectrum and […] of 3.4 GHz spectrum at the upcoming PSSR auction. Three can complement or substitute spectrum of the PSSR auction by 2.6 GHz spectrum from BT/EE if further capacity is needed. It further cannot be excluded that Three will acquire some 700 MHz spectrum.

(13) Second, the Commission notes that absent the Transaction, Three has also a number of options to densify its network. It may increase the number of sites in a number of ways: by accessing MBNL sites where it has no presence and […], by requesting access to its competitors’ grid in particular through the existing […] and the […] once the latter is finalised, by seeking access to sites owned by portfolio landlords or building new sites. […], the Commission also considers that it is technically feasible for Three to unilaterally densify its network through the various options. […].

(14) Third, another option […] includes the deployment of 4 x 2 and when available 4 x 4 MIMO solutions. The Commission considers that MIMO is a viable means to increase capacity which will allow Three to significantly expand capacity in the next 10 years. […].[2] […]

(15) […]. The Commission in particular considers that more spectrum […] such as 3.4 GHz will be available to be deployed on small cells. The Commission recognises however that at this stage there are uncertainties around the cost, benefits and technical developments small cells.

(16) Moreover, the Commission considers that in the next 10 years further technologies such as 5G, will likely further enhance the capacity of mobile networks. Whereas the exact capacity increasing effect of these technical developments cannot be accurately predicted at this point in time, it will likely be significant, as was the case during the past 10 years. In order to achieve consistency with demand modelling, if a continued

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[1] In this context, BT/EE holds the combined previous spectrum holdings of BT and EE whereas the number of mobile customers of BT/EE will be only slightly above that of EE pre-merger.

[2] Three's internal document […] [ID 006000413.00001].

growth of mobile data demand is assumed, the potential capacity increase of yet not fully known technical improvements should also be taken into account.

(17) In relation to Three's remark that means to expand capacity can only be considered to the extent they are likely to be implemented, the Commission notes that Three appears to be likely to meet the expected demand even when focusing exclusively on commercially particularly attractive means. When calibrating Three’s Capacity Model with Three’s internally applied throughput threshold of […].[3] This is hence close to the level of […] which Three tolerates today in its network. If Three additionally acquires […] of the 2.3 GHz spectrum which will be offered in the upcoming PSSR auction, which the Commission considers likely to materialise, the predicted congestion levels drop to […]. Congestions levels are likely to drop further if the model is calibrated by correcting the additional modelling issues identified by the Commission.

(18) Finally, the Commission also notes that Three's recent success in winning wholesale contracts provides an indication that it does not expect to become materially capacity constrained in the foreseeable future.

(19) The Commission therefore concludes that, going forward, Three will likely continue being able to meet its customer demand and provide a high quality of service. Based on the available information on file it cannot be reasonably predicted that Three’s ability to compete would materially deteriorate due to [capacity constraints].

<u>O2</u>

(20) The Commission considers that O2's network (and in particular its 4G layer) […] by survey results. This data shows […]. O2's network also offers a good quality of service to its customers, as confirmed by a high customer satisfaction and by O2's recent increases in market share. […]

(21) The Commission considers that in the short run, O2 will be able to add capacity to its 4G layer whose roll-out is not yet complete. For example, its 4G 1 800 MHz spectrum was only deployed on […] of its sites in November 2015. Also when compared to Three, the amount of data transmitted per Hz of 3G/4G spectrum per site is […].

(22) The Commission has also assessed O2's network capacity model, the results of which are presented in the context of […]. O2 plots the available capacity against the demand that would ensue […].

(23) The Commission notes that O2 expects significant growth in its data traffic and […] in the next three years. […].

(24) The Commission considers that O2's internal capacity modelling is extremely conservative and the expected capacity of planned measures is likely underestimated for a number of reasons.

(25) First, towards the end of 2015, despite […] as submitted by O2, the Commission considers that O2’s network […] by consumer surveys. This confirms the Commission's view that […] actual traffic on O2's network […] while maintaining acceptable quality levels. Therefore, the Commission understands that […].

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3 […].

(26) Second, the spectral efficiency for 4G sites assumed by O2 is considerably below levels reported by equipment vendors and […].

(27) Third, due to 3G traffic data used to calibrate O2's capacity model for the 4G layer, the Commission considers that for a given level of network level total throughput, the peak traffic at the cell level is overestimated and thus the available network level capacity is underestimated by roughly […].

(28) Fourth, for its 2018 simulation O2 modelled future technological developments such as LTE advanced by assuming a capacity increase of […], which however is far below the capacity gain that can be currently expected of LTE-A improvements or the benefits from carrier aggregation and also far below the capacity increase through these technologies […].

(29) Fifth, O2 considered capacity gains due to a number of means to expand capacity which […]. Whereas the Commission could not assess the underlying assumptions in great detail in light of the limited information still available by O2, the attached capacity again appears to be extremely conservative.

(30) Therefore, the Commission considers that, when interpreting O2's internal documents in the context of its […]planning, it has to be taken into account that the modelling likely underestimates capacity and that at the end of 2015 O2's network delivered a good quality although its network plan shows […]. For this reason, it is the Commission's view that […] it cannot be concluded that it would be likely that […].

(31) Moreover, the Commission notes that even within the next […]years there are a number of means to increase capacity and which are not yet fully reflected in O2's modelling. […].

(32) The Commission acknowledges that in light of O2's expected […] growth rates of mobile data demand, in addition to capacity that will come on-line based on deploying O2's current spectrum holding, […]. For this reason, O2 is also likely to have a higher intrinsic value for capacity spectrum than BT/EE or Vodafone, which in turn means that there will be a high likelihood of O2 successfully acquiring such spectrum. The Commission considers that O2 has the option and is likely to acquire 2.3 GHz and 3.4 GHz spectrum in the upcoming PSSR auction. […]. This spectrum could not only be used for macro cells but will also increase the capacity of the small cell rollout planned by O2. The Commission notes that in total 150 MHz of 3.4 GHz spectrum will be offered in the PSSR auction, which, in light of the high technical value this spectrum may have to O2 implies that there is a large likelihood that O2 will successfully acquire some of this spectrum.

(33) The Commission also notes that when forecasting capacity beyond the […] horizon covered by O2's detailed network planning, it can be expected that O2 will implement further initiatives to increase its network capacity beyond those currently planned for the next three years and that the technological evolution of LTE, MIMO antennas and LTE-A and later technologies will provide further scope to expand capacity. For example, the Commission finds that, in view of technological evolution and provided that the MIMO-related capacity uplift exceeds that which can be achieved by six-sector deployment, O2 may choose to prioritise MIMO deployments over six-sector or to deploy MIMO in sites where it does not plan to upgrade to 6 sectors.

(34) The Commission considers that O2's current and future success to attract and to host non-MNOs […]. In addition to being by far the largest host of non-MNO customers among the four MNOs in the United Kingdom, O2 expects some of these wholesale customers, for example Sky, […]. According to O2's own forecasts, the network capacity share that non-MNOs would take on its network would be around […].

(35) Therefore, based on the evidence on file and the inherent uncertainty linked to a long-run forecast going beyond O2's own long-term plans, the Commission concludes that it cannot be reasonably predicted that […] in the absence of the Transaction.

1. THREE NETWORK PERFORMANCE AND CAPACITY IN THE ABSENCE OF THE TRANSACTION[4]

1.1. Notifying Party's view

1.1.1. Concept of network quality

(36) The Notifying Party notes that "network quality (in the form of reliability, indoor and outdoor network coverage and download speeds) plays a significant role in customers' choice of a provider and thus in competition". The future growth of video and data streaming will, in the Notifying Party's view, further highlight the need for reliable and dependable mobile Internet. The Notifying Party argues that customers are placing increasing importance on the speeds that mobile operators can offer and that evidence shows that (i) data consumption increases as speed increases; (ii) churn increases with network congestion; and (iii) customers value the speed advantage offered by 4G and are willing to pay more for higher speeds.

(37) […].

(38) […].

(39) […].[5] […].[6]

(40) […].[7] […].[8][…].[9][…].[10]

(41) **[…]**.[11][…].

(42) […].[12] […].

(43) […].

(44) […].[13]

1.1.2. […]

(45) […],[14] […].[15] […].

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4 All abbreviations and capitalised terms used in this Annex shall have the same meaning as in the Decision.

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(47) […].[18] […][19]. […].[20]

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(53) […].[26] […].

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(60) […].

(61) […].[32][…][33]. […].

1.1.7. *[…]*

(62) […].[34]

(63) […].[35][…].[36][…].[37]

(64) […].[38]

(65) […].[39][…].

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(68) […].[40] […].[41] […].[42]

(69) […].

(70) […],[43] […].

(71) […],[44] […].

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1.1.8. […]

(72) […]. […], […].[45]

(73) […][46]

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1.1.9. […]

(75) […].

(76) […].

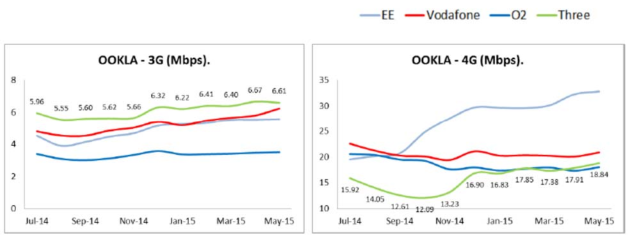
1.2. Commission's assessment

1.2.1. Network quality is a broad concept which is determined by several factors including average speed

(77) The Commission notes that data download speed is only one parameter of many others in relation to network performance and quality. Other parameters are network coverage, network reliability, latency, jitter, website load times (which are not only a function of download speeds and also depend on the core and backhaul network) and so forth. Some of these parameters are interrelated, for example, coverage of the 4G layer has an impact on nation-wide average speeds, and speed is one of the parameters that customers value to qualify a network as "reliable". Therefore, customers value a variety of parameters, to different degrees, when choosing a mobile operator and may rate network quality as a function of these parameters. Overall, the Commission believes that data download speed is not the only important network parameter valued by mobile customers, […].

(78) The Commission notes that, according to some independent measurement companies, such as Ookla, Three's 4G network speed was, in May 2015, significantly lower than EE's, slightly lower than Vodafone's but slightly higher than O2's. Three's 3G network speeds were, on the other hand, the highest among the four MNOs in the United Kingdom, as shown in Figure 1.

Figure 1: 3G and 4G network speed (by operator)



Source: Form CO, Section 6, Figure 51.

(79) On 10 February 2016, RootMetrics published its biannual report into the reliability, call and text performance and data speed of the four MNOs in the United Kingdom (the "RootMetrics report").[47] The test looked at performance across the breadth of the United Kingdom itself, in each of the four nations, and within the 16 most populous metro areas in the United Kingdom. The RootMetrics report states that operators have continued to expand their 4G coverage and deliver improved reliability and speed. RootMetrics awarded Three the Reliability RootScore Award, confirming that Three has the most reliable network in the United Kingdom: Three's customers get connected and stay connected in 97% of cases in 11 and 14 (respectively for connecting or staying connected to web/app) out of 16 metro areas. In addition, the Commission notes that Three has been considered the United Kingdom's "most

[47] Rootmetrics, "Mobile Network Performance in the UK", second half 2015, ID[5409].

reliable network" by YouGov (see Section 8.2.1.2.b)i) of the Article 8 Decision, in Positioning with respect to network related competition).

(80) The 2016 Rootmetrics report further notes that these improvements were especially impressive considering that testers were only able to get Three's 4G network coverage 80% of the time (lower than other operators), which suggests that as Three expands its 4G network footprint, it could challenge its competitors in the Network Speed Rootscore category in those areas. The Commission therefore considers that, in view of these results, Three's download speeds are already increasing and are likely to increase further following a more extensive deployment of its 4G network and the roll-out of its newly acquired spectrum in the 1 400 MHz band.

(81) The Commission is of the view that, when making a choice of provider, customers value download speeds as well as other network quality parameters such as coverage and reliability. […],[48] […]. The Commission also notes that speed may be of lower importance to customers provided that reliability and coverage are acceptable.

[…]

[…]

[...]

(82) […][49]. […][50] […].

(83) […].[51] […].[52]

(84) The Commission disagrees with Three's claim that speed does not play any role in the Rootmetrics reliability test. In high demand sites, average speeds in the busy hour play an important role in web/app reliability testing. For example, if the speed was not sufficient in a congested site, the customer would likely interrupt the connection and not complete the task. This would be captured in the reliability test and Three's results show that Three's network scores better than all other MNOs both in making a connection and in staying connected. The Commission also notes that, according to the 2016 Rootmetrics report, in most of the markets where this threshold was not met, it was missed by a narrow margin and that Three's performance achieved 99% in 12 out of 16 markets for staying connected.[53]

(85) The Commission further notes Three's contradiction in the way it describes the relationship between speed and reliability in its Reply to the Statement of Objections, summarised in paragraph (40) of this Annex. Three states that speed experienced by end customers is an important factor in determining the perceived reliability of Three's network, perhaps the most important component of network reliability in the eyes of customers. The Commission considers that these statements also apply to the

48 […].
49 Three's internal documents, […].
50 Three's internal documents, […] [ID024703591.00001].
51 Reply to the Letter of Facts of 17 March 2016, paragraph 37.
52 Reply to the Letter of Facts of 17 March 2016, paragraphs 37 and 38.
53 Rootmetrics, "Mobile Network Performance in the UK", second half 2015, page 29, ID[5409]: "*and in four out of the five markets where Three didn't achieve excellence, Three missed our 97% connection rate threshold of excellence by very narrow margins. Three's reliability was even stronger for staying connected; Three reached our mark of Excellence for staying connected in 14 markets. And in 12 markets, Three's web/app success rates for staying connected were better than 99%.*"

Rootmetrics measurements of reliability and further confirm that Three's current network speed is sufficient to provide an excellent customer experience in terms of reliability.

(86) In relation to the Notifying Party's arguments summarised in paragraph (40) that speed is not only a standalone parameter for network quality, but also an important element of other parameters of network quality such as network reliability, the Commission acknowledges that different quality-related parameters are interdependent. For example, as the Notifying Party argues, certain download speeds are necessary in order to achieve a "reliable" network and network coverage has an impact on speeds achieved by customers. In that respect, along the lines of the Notifying Party's arguments set out in paragraph (40), there may be certain download speeds below which customers perceive that the service is not acceptable, and certain download speeds above which the service is perceived as being of "good quality". The Commission further considers that, in line with these arguments, speeds above a certain threshold may only be of marginal value to consumers, because they would already perceive network quality and/or reliability as good. The Commission considers that this reasoning is underpinned by Three's recent awards which show that, despite not having the highest speeds, its network is the most reliable in the United Kingdom.

(87) This is further illustrated by the 2016 Rootmetrics report, which shows that Three recorded the slowest median download speed of any operator in London, at 6.2 Mbps, which means that it takes 13 minutes to download a 600 MB television show. RootMetrics however notes the following: "*Keep in mind that downloading a television show is one of the more intensive real-world demands that you might place on a network. Other activities such as checking email or even downloading a song would not be impacted to the same degree by faster speeds. A law of diminishing returns exists with speed: you need enough to accomplish your daily mobile activities with ease, but beyond that, the extra speed might have a minimal impact on your experience, depending on how you use your mobile. Our scoring takes into account these diminishing returns. Depending on what you use your mobile for, Three's speeds might be more than you need*". In other words, speed differences do matter only when they affect the customer experience and RootMetrics finds today that Three's speed are sufficient to get a good mobile internet service, indeed "*more than you need*".

(88) The Commission also highlights that the CMA's Final Findings Report include that, despite Three having the slowest 4G download speeds, its overall 3G and 4G network latency and the average web page download times were in 2014 best of all MNOs.[54] In the Commission's view, this shows that download speed is only one parameter of many others that contribute to network quality and performance.

(89) The Notifying Party submits that the importance of speed may change in the future, so that customers would place more importance on download speeds when switching providers, as set out in paragraph (40). The Commission recognises that the importance of speed may increase in the future although the extent of any potential increase remains uncertain. Moreover, the Commission remains of the view that speeds matter to the extent that they significantly improve the customer's experience.

[54] CMA, Final Findings Report, Appendix G, Table 10 [ID4112].

For example, switching from 2G-based GPRS/Edge technologies which offer up to a few hundred kbps to speeds of the order of Mbps offered by 3G+ and 4G networks is a substantial improvement of customer experience. Equally switching from 3G to 4G meant customers could watch high quality video streaming, download and upload large files with a substantially increased experience. Such improvements are strongly perceived by smartphone users who increasingly use their phones to connect to the Internet seamlessly via fixed or mobile networks. However, differences in peak speeds between Three's reliable 4G services and EE's 4G+ services mentioned by the Notifying Party are less tangible for mobile users. In both cases, users can download webpages and upload files in a few seconds or watch streaming video with no interruption or buffering.

(90) The previous reasoning is also illustrated by the fact that both Three and O2 have consistently grown their market share (see Section 8.2.1.2.b) of the Article 8 Decision) in the past years despite the fact that they do not provide the highest download speeds of all MNOs (see Figure 1). In the Commission's view, this highlights that Three and O2 have been strong competitors without necessarily providing the highest data speeds on the market.

(91) In conclusion, the Commission considers that data download speeds are only one of the parameters that contribute to customer network experience. The Commission accepts that customers may demand higher download speeds in the future although the extent to which this may impact competition is highly uncertain. It also acknowledges that speed has an impact on other network quality parameters such as reliability and that high download speeds are likely to be necessary for Three to remain competitive going forward. Today, Three appears to place higher importance on improving coverage and achieving excellent network reliability and, in any event, Three's current download speeds appear to be sufficient to remain competitive in view of the various prizes awarded to Three for having the most reliable network (which presumes certain minimum download speeds). This is further illustrated by the fact that having lower download speeds than some of its competitors have not prevented Three and O2 from growing its market share in recent years.

1.2.2. Three's network performance has been improving in the recent past and is currently very good

(92) The Commission has investigated Three's claims about its capacity constraints in relation to its current network today, but also the extent to which Three's network is likely to be […]in the short and long terms (see section 1.2.4).

(93) The Commission considers that Three's network currently operates smoothly. […].[55] […].[56]

(94) […].

(95) In its recent Final Findings Report the CMA published data from Ofcom, showing that although Three has the slowest 4G download speed, its overall 3G and 4G network latency and the average web page download times the best across all United Kingdom's MNOs.[57] The overall network latency is typically affected by several

55 […].
56 […].
57 […].

factors, including aspects related to the radio access network but also for example the mobile backhaul technology and speeds supplied by the MNO.[58] […].[59]

[…]

[…]

[…]

(96) […].[60] […].

[…][61]

	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]

	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]

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(97) […].

(98) […].[62] […].

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(100) […],[63] […].

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(102) […],[64] [...].

(103) […].

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(104) […].

(105) […].

(106) […].[65] […].

(107) […].

1.2.3. […]

(108) […]. […].[66]

(109) […].

1.2.3.1. […]

(110) […][67][…].[68] […].[69]

(111) […][70], […].[71] […].

(112) […].[72] […].[73] […].[74] […].

(113) […].[75] […].

(114) […].[76] […].[77]

(115) […].[78] […].[79]

(116) […].[80][…].[81][…].

(117) […].

1.2.3.2. […].

(a) […]

(118) […].[82] […].

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(120) […].[83] […].

(121) […].

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(123) […].[84]

(124) […].

(125) […].[85]

(126) […].[86] […].[87]

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(127) […].

(128) […].[88] […].[89] […].

(129) […].[90] […].

(130) […].[91]

(131) […].[92][…].[93] […].[94]

(132) […].

(133) […].

(134) […].

(135) […].

(136) […].

(137) […][95,96] […][97] […][98][…].

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94 […].

(138) […].[99] […].[100]

(139) […].[101] […]:

(a) […].[102]

(b) […].[103]

(c) […].[104]

(140) […],[105] […].

(141) […][106] […].[107] […].[108]

(142) […].[109]

(143) […].

(144) […].[110]

(145) […].[111] […].[112]

(146) […].

(b) […]

(147) […].[113]

(148) […].[114][…].

(149) […].

(150) […].

(151) […].

(c) […]

(152) […].

(153) […].[115]

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(154) […].[116]

(155) […].

1.2.3.3. […]

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(157) […].[117] […].

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(159) […].

1.2.4. […]

(160) […].[119] […].

1.2.4.1. […]

(161) […].

(162) […].[120][…].[121][…].[122]

(163) […].[123][…].[124] […].

(164) […].[125] […].[126] […].

(165) […].[127] […].[128] […][129]. […].[130][…].

(166) […].[131] […].

(167) […].

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(170) […].[133]

(171) […].[134] […].

(172) […].[135] […].

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(173) […].[136]

(174) […].[137][…].[138]

(175) […].[139]

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(176) […].[140] […].

(177) […].[141]

(178) […].[142] […],[143] […].

(179) […].[144] […].[145]

(180) […].

(181) […].

(182) […].

(183) […].

(184) […].[146] […].

(185) […].[147] […].[148]

(186) […].[149] […].

(187) […].[150] […].

(188) […].[151]

(189) […].[152]

(190) […].

(191) […].

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(192) […].

(193) […].[153] [...].

(194) […].

1.2.4.2. […]

(195) […].[154] […].

(196) […].[155] […].

(197) […].

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(198) […].[156] […].[157] […].[158] […].

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(199) […].

(200) […].

(201) […].[159] […].

(202) […].

(203) […].[160] […].[161]

(204) […].

(205) […].

(206) […].[162] […].[163] […].

(207) […].[164] […].[165] […].

(208) […].

(209) […].[166] […].

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(210) […].

(211) […].[167] […].

(212) […].[168]

(213) […].

1.2.4.3. […]

(214) […].

(215) […].[169]

(216) […].

(217) […].[170] […].

(218) […].[171] […].

(219) […]:

Table 1: […]

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(220) [...].

(221) […]. [172]

(222) […].[173] […].

(223) […].[174]

(224) […].

1.2.4.4. […]

(225) […].

(226) […].[175] […].[176]

(227) […],[177] […].

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(230) […].

(231) […],[178] […].

(232) […].[179] […].

(233) […].[180] […].

(234) […].[181] […].„[182]

(235) […].

(236) […].

(237) […].[183]

(238) […].

(239) […].[184]

(240) […].

1.2.4.5. […].

(241) […].

(242) […].[185] […].[186] […].[187]

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183 […].
184 […].
185 […].
186 […].
187 […].

1.2.4.6. […]

(247) […].

(248) […].

(249) […].[188]

(250) […].

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(251) […][189] […].[190]

(252) […].[191] […].

(253) […].[192]

(254) […].

(255) […].[193] […].

(256) […].[194][…][195][…].

(257) […].[196][…].

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(260) […].

1.2.4.7. […]

(261) […].

(262) […].

(263) […].

(264) […].

(265) […].

1.2.4.8. […]

(266) […].[197][…].

(267) […].[198][…].

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(268) […],[199] […].

(269) […].[200]

(270) […].

1.2.4.9. […]

(271) […].

(272) […].[201][…].

(273) […]:[202] […][203] […].

(274) […].

(275) […].

Figure 2: […]

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(276) […].[204] […].

Figure 3 […]

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(277) […].

(278) […].[205]

(279) […].[206] […].[207] […].[208]

(280) […].[209] […].[210] […].

(281) […].

(282) […].

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(284) […].

(285) […].

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(287) […].[211] […].

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(292) […].

1.2.4.10.[…].

(293) […].

(294) […].

(295) […].

1.2.5. […]

(296) […].

1.2.5.1. […]

(297) […].

(298) […].

(a) […]

(299) […].[212]

(300) […].[213]

(301) […].

(302) […].[214][…].[215]

(303) […].[216] […]. [217]

(304) […].

(305) […].

(b) […]

(306) […].

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(307) […].[218]

(308) […] .[219] […].[220]

(309) […].

(310) […].[221] […].[222] […].[223]

(311) […].[224] […].[225] […].[226] […].[227]

(312) […].[228]

(313) […].

(314) […].

(315) […].

(316) […].

(317) […].

(c) […]

(318) […].

(319) […].

(320) […].[229][…].

(321) […].

(322) […].

(323) […].[230]

(324) […].

(325) […].

(326) […].

(327) […].

(d) […]

(328) […].[231]

(329) […].[232][…].[233][…].[234][…]..[235][…].[236]

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(330) […].

(e) […]

(331) […].

(332) […].

(333) […].

1.2.5.2. […].

(334) […].

(a) […]

(335) […][237] […].

(336) […].[238] […].[239] […].

(337) […].[240][…].

(338) […].[241][…].[242][…].[243][…].

(339) […].

(340) […].[244][…].[245][…].[246]

(341) […].[247][…].

(342) […].[248][…].

(343) […].[249][…].

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(345) […].[250][…].

(346) […].[251][…].[252]

(347) […].[253][…].

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239 […]
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(348) […].[254][…].[255]

(349) […],[256] […].[257]

(350) […].[258][…].[259]

(351) […].

(352) […].[260][…].

(353) […][261][…].[262] […].[263]

(354) […]:

(1) […].

(2) […].

(355) […][264] […].[265][…].

(356) […].

(357) […][266] […].

(358) […].[267][…].

(359) […].[268][…].[269][…].[270][…].[271]

(360) […].

(361) […].[272]

(362) […].

(363) […].

(364) […].

(365) […].

(b) […]

(366) […].

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(i) […]

(367) […].

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(369) […],[273] […].

(370) […].

(371) […].[274] […].

(a) […].

(372) […].[275]

(373) […].

(374) […].

(375) […].

(376) […].

(ii) […]

(377) […].[276]

(378) […].[277] […][278], […].

(379) […].[279] […].[280]

(380) […][281] […].

(381) […].[282] […].

(382) […].

(383) […],[283] […].

(384) […].

(c) Three will likely obtain […] spectrum […] in the upcoming PSSR auction

(385) Three has a number of opportunities to purchase spectrum in the future, the most important being the Public Sector Spectrum Release (PSSR) auction, due in 2016 after the European Commission issues its decision on the Transaction.[284] The PSSR

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284 On 3 December 2015, Ofcom decided to postpone the 2016 spectrum auction (2.3 GHz and 3.4 GHz), initially planned for January/February 2016, until after our decision in relation to the Transaction. See Section 6.5.1.5 of the Statement of Objections.

auction will only include capacity spectrum: 40 MHz of 2.3 GHz spectrum, for which there is already wide device availability and 150 MHz of 3.4 GHz spectrum.

(386) In its efficiencies submission, the Notifying Party submits that […].

(387) The Commission considers that strategic bidding by other operators is not likely to happen in the PSSR auction, for the following reasons. First, Ofcom has the general duty to ensure competitive outcomes in spectrum auction. Ofcom's submits that the design of the PSSR auction discourages strategic investment or mitigates its effects, including how prices are set in the auction, the nature of bidding and the limited information available to bidders during the auction.[285] […].[286][…].

(388) Furthermore, on 10 March 2016 Ofcom submitted a letter to the Commission setting out that its position that there should be four MNOs in the United Kingdom and that it will continue to regulate to achieve that. It goes on to explain that it will propose including competition measures in the PSSR award where it considers such measures to be necessary and proportionate to promote effective and sustainable competition. In particular, Ofcom points out that it cannot be assumed that it would impose no spectrum caps in the forthcoming PSSR auction as expressed in its decision of October 2015. When considering competition measures, Ofcom would also expect to revisit the question of whether to distinguish between the 2.3 GHz and 3.4 GHz bands for the purpose of competition measures.

(389) As the Commission set out in the Letter of Facts of 17 March 2016, this letter provides evidence that Ofcom can be expected to foresee effective measures to prevent strategic bidding in the future spectrum auctions governed by Ofcom to the extent this is deemed necessary. It can thus be expected to ensure that strategic bidding is unlikely to materialise in particular in the upcoming PSSR auction.

(390) […].

(391) The Commission acknowledges that Ofcom is bound to consult on the design of the PSSR auction should it wish to depart from the position taken in its latest consultation, but notes that any new consultation process undertaken by Ofcom would necessarily need to take into account the new situation arising from the Commission's decision on the Transaction. In relation to the claim that Ofcom's letter exceeds its duty to act fairly, the Commission considers that it is within Ofcom’s remit to point to the possibility of assessing a new situation (resulting from the Transaction, the BT/EE merger and other market and technological developments) and that Ofcom's letter therefore does not constitute a violation or breach of its duties.

(392) […] Ofcom has not committed to including any specific measures in the design of the PSSR auction, but only expressed its intention to revisit the issue in view of the new circumstances. Moreover, the Commission considers that Ofcom's position with regards to preventing strategic bidding (and other public policy objectives) in the PSSR auction has not changed throughout the process. Consequently, the Commission has to take into account, in its assessment of the Transaction, that Ofcom would adopt the necessary measures to prevent strategic bidding at the PSSR

285 Ofcom submission "Three's ability and incentive to acquire spectrum in the future", paragraph 33 and Annex 2 [ID03924].

286 Reply to the Statement of Objections, paragraph 1410.

auction taking into account the outcome of the Transaction and more generally the overall changes that have occurred since October 2015.

(393) Second, the amount of spectrum auctioned (40 MHz of 2.3 GHz spectrum and 150 MHz of 3.4 GHz spectrum) would make strategic bidding highly onerous. Third, only capacity spectrum will be auctioned in the PSSR auction, which could be substituted with other means of expanding network capacity, making strategic behaviour uncertain for the strategic bidder, to the extent that a strategic bidder may not succeed in undermining its rivals' competitive position. […],[287] […],[288] […].

(394) […].[289][…].[290]

(395) […],[291][…].

(396) […].[292][…].

(397) […].[293][…][294][…].

(398) […].

(399) […].[295]

(400) […].

(d) […]

(401) […].

(402) […].[296][…].[297]

(403) […][298] […].[299] […].

(404) […].[300]

(405) […].

(406) […].

(407) […].

(e) […]

(408) […].

(409) […].

(410) […].

287 Notifying Party's response to the questions on the first draft Form CO of 5 July 2015, Annex 33.L.
288 […].
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297 […].
298 […].
299 […].
300 […].

1.2.5.3. […]

(411) […].[301]

(412) […].[302][…].[303] […].

(413) […].[304]

(414) […][305] […].[306][…].[307][…].[308]

(415) […].[309] […].[310]

(416) […].

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(418) […].

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(419) […].[312] […]:

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(420) […].[313] […].

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(421) […].

(422) […].[314] […].

(423) […].[315] […].[316]

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(424) […].

(425) […].[317]

(426) […],[318][…].

(427) […].[319]

(428) […].[320] […].[321][…].[322]

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(429) […].

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1.2.5.4. […]

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324 […].

(437) […].

1.2.5.5. […]

(438) […].

(439) […]. [326]

(440) […].[327] […].

(441) […].[328] […].[329]

(442) […].[330]

(443) […].[331]

(444) […].

(445) […]..

(446) […].

1.2.5.6. […]

(447) […].

(448) […].

(449) […].[332] […].

(450) […].[333]

(451) […][334] […].[335]

(452) […]. [336]

(453) […][337] […].

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337 […].
338 […].

(457) […].

1.2.5.7. […]

(458) […].[339] […].

(459) […].

(460) […].

(461) […].

(462) […].[340] […].[341]

(463) […].

[…][342]

[…]	[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
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[…]		[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
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		[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
[…]		**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**

(464) […].

(465) […].

[…][343]

[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]
[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**
[…]	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**	**[…]**

339 […].

340 […].

341 […].

342 […].

343 **[…]**.

(466) […].

(467) […].

(468) […].

1.2.5.8. […]

(469) […].

(470) […].

(471) […].

(472) […].

1.2.6. […]

(473) […].

(474) […].

(475) […].[344]

(476) […].

(477) […].[345] […].[346]

(478) […].[347]

(479) […].

(480) […].

(481) […].

1.2.7. […]

(482) […].

(483) […].

(484) […].[348]

(485) […].

(486) […].

(487) […].

1.3. […]

(488) […].

(489) […].[349]

(490) […].

(491) […].

344 […].
345 […].
346 […].
347 […].
348 […].
349 […].

(492) […].

(493) The Commission is therefore of the view that in the absence of the Transaction, Three is unlikely to experience […] capacity constraints that will […]reduce its ability to compete in the future.

2. O2'S NETWORK PERFORMANCE AND CAPACITY IN THE ABSENCE OF THE TRANSACTION

2.1. Notifying Party's view

2.1.1. O2's views on its current network

(494) The Notifying Party claims that O2 has […]less (capacity) spectrum than EE and Vodafone. […].[350]

2.1.2. […]

(495) […].[351]

[…]

[…]

[…]

(496) […][352] […].

[…]

[…]

[…]

(497) […][353] […][354] […]

[…]

[…]

[…]

(498) […]:[355]

(1) […]

(2) […].

(3) […]

(499) […].

350 […].
351 […].
352 […].
353 […].
354 […].
355 […].

2.1.3. [….

2.1.3.1. […]

(500) […].

[...].

[…]

[…].

(501) […].

(502) […].[356] […].

(503) […].[357]

(504) […].[358]

2.1.3.2. […].

(505) […].[359]

[...].

[…]

[…].

(506) […].[360]

(a) […].

(507) […].

(508) […].[361] […].

(509) […].

(b) […].

(510) […].[362][…].[363] […].[364] […].

(c) […].

(511) […].[365]

(512) […].

(d) […]

(513) […].[366]

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356 […].
357 […].
358 […].
359 […].
360 […].
361 […].
362 […].
363 […].
364 […].
365 […].

(514) […].

(515) […].

(516) […].

2.2. Commission's assessment

2.2.1. O2's network is rated good by its customers […]

(517) […].[367][…].[368] […].[369] […].

(518) […],[370][…].[371]

(519) […].[372] […].[373] […] [374] […].

(520) […].

(521) […].[375] […].[376]

[…].

[…]

[…].

(522) […].[377]

(523) […],[378]: […][379] […].

(524) […].

(525) The Commission's view is therefore that O2's current network is performing well for its customers […].

2.2.2. […]

(526) […].

(527) […].

(528) […].[380] […].

(529) […].[381]

(530) […].[382]

366 […].
367 […].
368 […].
369 […]
370 […]
371 […]
372 […].
373 […]
374 […]
375 […]
376 […].
377 […].
378 […].
379 […].
380 […].
381 […].

(531) […].

(532) […].[383] […].

[…]

[…]

Source: […]

(533) […]

(534) […].

2.2.3. […]

(535) […].[384] […].[385]

[…]

[…]

Source: […].

(536) […].[386] […].[387]

(537) […].[388]

(538) […].[389] […].[390] […].

[…][391]

[…]

Source: […].

(539) […].

[…][392]

[…]

Source: […].

[…]

[…]

Source: […].

382 […].
383 […].
384 […].
385 […].
386 […].
387 […].
388 […].
389 […].
390 […].
391 […].
392 […].

[…][393]

[…]

[…].

(540) […].

(541) […].[394]

(542) […].

(543) […].

2.2.4. […]

(544) […].[395] […]

2.2.4.1. […]

(545) […].

(546) […],[396] […].

(547) […]

(548) […].[397] […].[398]

(549) […]

(550) […].[399]

(551) […].[400]

(552) […]

(553) […],[401] […].[402]

(554) […]

(555) […].

(556) […].

2.2.4.2. […]

(557) […]

[…]

[…]

Source: […]

393 […].
394 […].
395 […].
396 […].
397 […].
398 […].
399 […].
400 […].
401 […].
402 […].

(558) […].[403]

(559) […].

(560) […].[404] […].[405] […][406] […].

(561) […].

2.2.4.3. […]

(562) […].

(563) […].

2.2.5. […]

(564) […][407] […]:

a) […];

b) […].

c) […];

d) […]

(565) […].

(a) […]

(566) […].[408] […].[409]

(567) […].

(568) […].[410] […].

(569) […].[411]

(570) […].

(571) […].

(b) […]

(572) […].

(573) […].

(574) […].

(575) […].

403 […].
404 […].
405 […].
406 […].
407 […].
408 […].
409 […].
410 […].
411 […].

(c) […]

(576) […].[412] […].[413] […][414] […].

(577) […].[415]

(578) […].[416] […].[417]

(579) […][418], […][419] […].

(580) […].

(581) […].[420] […].[421] […].[422] […].[423]

(582) […].

(583) […].[424]

(584) […].[425]

(585) […].[426]

(586) […].

(d) […]

(587) […] .

(588) […].[427] […].[428] […]

(589) […]

(590) […].[429] […].[430] […].[431] […]

(591) […].

(592) […].

(593) […].

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412 […].
413 […].
414 […].
415 […]
416 […].
417 […].
418 […].
419 […].
420 […].
421 […].
422 […].
423 […]
424 See paragraph (266)
425 […].
426 […]
427 […].
428 […].
429 […].
430 […]
431 […].

(594) […].

(595) […].

(596) […].

(597) […].

(598) […].[432] […].

(599) […].

(e) […]

(600) […].[433] […].

(601) […].

(602) […].

(603) […].

(f) […]

(604) […].

2.2.6. […]

(605) […].

2.2.6.1. […]

(606) […].

(607) […].

(a) […].

(608) […].

(609) […].[434] […]

(610) […][435] […].[436] […]

[…]

[…]

[…]

(611) […].

(612) […].

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432 […].
433 […].
434 […].
435 […].
436 […].

(613) […] [437] […].[438] […].[439]

(614) […],[440] […].

(615) […].[441] […].

(616) […].

(617) […].

(b) […]

(618) […].

(619) […].[442]

(620) […].[443] […].[444]

(621) […].

(622) […].[445] […]

(623) […].

(c) […]

(624) […].[446]

(625) […][447] […].

(626) […].

(627) […].

(628) […].[448] […].[449] […].

(629) […].

(630) […].[450]

[…]

[…]

Source: […]

(631) […].

(632) […]

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437 […].
438 […].
439 […].
440 […].
441 […].
442 […].
443 […].
444 […] .
445 […]
446 […].
447 […].
448 […].
449 […].
450 […].

(633) […].

(d) […]

(634) […].

2.2.6.2. […]

(635) […].[451]

(636) […].

(637) […].

(638) […]. [452] […].

(639) […].

2.2.6.3. […]

(640) […].

(641) […].

[…]

[…]

Source: […].

(642) […].

(643) […].

(644) […].

(645) […]:

(1) […]

(2) […]

(3) […].

(646) […].

(647) […].

(648) […].[453]

[…]

[…]	**[…]**[454]
[…]	[…]
[…]	[…]

451 […].
452 […].
453 […].
454 […].

[…]	[…]
[…]	[…]
[…]	[…]

[…].

(649) […].

[…]

[…]

[...]

(650) […].[455] […].[456] […].[457] […].

(651) […].[458] […].

(652) […].

(653) […].

2.2.6.4. […]

(654) […].

(655) […]:[459]

a) […]

b) […]

c) […]

d) […][460]

(656) […].

(657) […].[461]

(658) […].[462] […].

[…]

[…]

[…]

(659) […].[463] […].[464] […].

455 […].
456 […].
457 […].
458 […]
459 […].
460 […].
461 […].
462 […].
463 […]

(660) […].[465] […].

(661) […].[466] […].[467]

(662) […].[468] […].

(663) […].

(664) […].

2.2.6.5. […]

(665) […].

(666) […].

(667) […].[469] […].

(668) […].

(669) […].[470]

(670) […].

(671) […].

2.2.7. […]

(672) […].

(673) […].

(674) […].

2.2.8. […].

(675) […].

(676) […].

(677) […].[471]

(678) […].

(679) […].

(680) […].

2.3. […]

(681) […][…].

(682) […].

(683) […].

(684) […].

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464 […].
465 […].
466 […].
467 […].
468 […]
469 […].
470 […].
471 […].

(685) […].

(686) […].

(687) […].

(688) […].

(689) […].

(690) […].

(691) […].

(692) […].

3. CONCLUSION

(693) Based on the above assessment, […]. Both companies […] are likely to continue to compete effectively for the provision of mobile services in the United Kingdom.

ANNEX D

Customer survey

INTRODUCTION
Hello my name is … from BDRC Continental, calling on behalf of the European Commission. The European Commission wish to understand people's opinion on their mobile phone provider. May I ask you some questions?

IF NECESSARY: The survey will take approximately 5 minutes, and your participation would be very much appreciated.

ALSO IF NECESSARY:

Your number was provided by the European Commission, who obtained it from your mobile phone provider for the purposes of this research.

BDRC Continental is an independent market research company and member of the Market Research Society. Any opinions you express during this interview will remain completely confidential and will not be attributed to you directly.

SCREENING QUESTIONS

Q1. *ASK ALL*

Firstly, which mobile phone provider do you currently pay for the use of this phone?

READ OUT IF NECESSARY, SINGLE CODE

[INTERVIEWER: IF THE RESPONDENT CHOOSES AN OPTION OTHER THAN 2, 3, 8 OR 10, PLEASE CLARIFY THE FOLLOWING BEFORE CLOSING]

*So you pay {**INSERT MOBILE PROVIDER FROM Q1}*** for the voice, SMS, and data usage?

[IF NOT, THEN RE-CODE]

EE – including Orange and T-Mobile	1	CLOSE
Three	2	CONTINUE
O2	3	CONTINUE
Vodafone	4	CLOSE
Lycamobile	5	CLOSE
Virgin	6	CLOSE
Talk Talk	7	CLOSE
Tesco Mobile	8	CONTINUE
Lebara	9	CLOSE
Giffgaff	10	CONTINUE
Other (write in)_________________________	11	CLOSE
Don't know	14	CLOSE

Q2. *ASK ALL*
How do you pay for this phone's price plan?

READ OUT IF NECESSARY

1. Pay as you go - you buy credit/topped up online, at an ATM or in-store.
2. Contract/pay monthly. Each month you pay the bill/invoice for the use of your mobile phone.
3. Other) - *CLOSE*

4. Don't know - *CLOSE*

Q3. *ASK ALL*
Is this your main personal mobile phone?

1. Yes
2. No – *CLOSE*

Q4. *ASK ALL*
Did you choose this specific ***{INSERT pay as you go plan/ contract from Q2}*** yourself or did someone else choose the plan for you?

1. Yes – I chose it myself
2. No - someone else chose it for me -*CLOSE*

Q5. ASK ALL

{IF GROSS ADD}

When you chose your current mobile phone provider, did you consider any other mobile phone providers or did you only consider one provider? Please note by 'provider', I mean your network or operator.

{IF INTERNAL SWITCHER}

When you last chose or upgraded your current mobile phone price plan, did you consider any other mobile phone providers or did you only consider one provider? Please note by 'provider', I mean your network or operator.

1. Yes –considered a range of providers
2. No – did not consider other providers -*CLOSE*

Q6. *ASK ALL*
Where did you purchase your current ***{INSERT pay as you go plan/ contract from Q2}*** ?

READ OUT IF NECESSARY

1. In-store at a branded shop of the mobile provider
2. In-store at a third party retail store (e.g. Carphone Warehouse)
3. Online via the mobile provider
4. Online via a third party (e.g. Carphone Warehouse)
5. On the phone through the mobile provider
6. On the phone through a third party (e.g. Carphone Warehouse)
7. Other (please specify)

Q7. *ASK ALL*
Which of the following factors did you take into account in the choice of your current {**INSERT *pay as you go plan/ contract* from Q2}**?

RANDOMISE OPTIONS. READ OUT

1. Attractiveness of the price plan (in terms of cost and allowances of minutes/SMS/data)
2. Network reliability (including coverage)
3. Network performance (in particular speed)
4. Quality of the customer service
5. Handsets range and quality
6. Brand has good reputation
7. Ability to provide a landline

[IF MORE THAN ONE OPTION IS CHOSEN] Which of these was the *most important* factor in the choice? READ OUT IF NECESSARY

Q8. *ASK ALL*
Approximately, how much do you...

{IF CONTRACT} pay on average per month for your current mobile phone contract?

{IF PAY AS YOU GO} top up on average in a typical month?

[INTERVIEWER/SCRIPTER: TYPE IN AMOUNT. PLEASE ROUND UP TO THE NEAREST POUND]

[INTERVIEWER: IF RESPONDENT UNSURE, PLEASE ASK THEM TO GIVE THEIR BEST ESTIMATE AND OFFER THE RANGES BELOW AS POSSIBLE ANSWERS]

What would you estimate it is, on average?

- £ 0-5
- £ 5-10
- £ 10-20
- £ 20-30
- £ 30-50
- More than £ *50*

Q9. *ASK ALL*
You mentioned earlier that you currently have a ***{INSERT pay as you go plan/ contract from Q2}*** with ***{INSERT MOBILE PROVIDER FROM Q1}.***

{IF CONTRACT}

Suppose that at the time you chose this price plan all the contract price plans of ***{INSERT MOBILE PROVIDER FROM Q1}***, including yours, had been **10%** more expensive per month –

ONLY READ OUT IF ANSWER AN AMOUNT PROVIDED AT PREVIOUS QUESTION
i.e. approximately £X* more per month on your price plan **-** ,
READ AMOUNT CAREFULLY

while the price of all other mobile phone providers had remained unchanged. Which of the following do you think you would have been ***most likely*** to do?

{IF PAY AS YOU GO}

Suppose that at the time you chose this this price plan all the pay as you go price plans of ***{INSERT MOBILE PROVIDER FROM Q1}***, including yours, had been **10%** more expensive for all elements (e.g. minutes, data etc.) –

ONLY READ OUT IF ANSWER AN AMOUNT PROVIDED AT PREVIOUS QUESTION
i.e. approximately an additional £X* of top up per month for the same amount of usage**-**,
READ AMOUNT CAREFULLY

while the price of all other mobile phone providers had remained unchanged. Which of the following do you think you would have been ***most likely*** to do?

INTERVIEWER: IF RESPONDENT UNSURE, READ ANSWER LIST AGAIN (AND QUESTION IF NECESSARY).

READ OUT

[NOTE TO SCRIPTER: Randomise order of list each time, except for option 4 and 5 ("Stopped using…" and "Don't know", which should always be at the end]

1. Not done anything differently (i.e. chosen the same ***{INSERT pay as you go plan/ contract (reply to Q2)}*** with **{INSERT MOBILE PROVIDER FROM Q1}**)
2. Chosen or stayed with a provider other than ***{INSERT MOBILE PROVIDER FROM Q1}***
3. Chosen a ***{INSERT pay as you go plan/ contract (opposite of reply to Q2)}*** with {***INSERT MOBILE PROVIDER FROM Q1***})
4. Stopped using your mobile phone and mobile services completely. *[DO NOT INCLUDE IN RANDOMIZATION]*
5. Don't know *[DO NOT INCLUDE IN RANDOMIZATION. ALLOW BUT DON'T SHOW AS A PRE-CODE]*

* CALCULATE FROM ANSWER AT Q8

- If respondent indicates an exact amount (e.g. £14), then x = 10% x £14 = £1.40
- If the respondent chooses a range, then apply the following mapping:

£0-5	x = £ 50p
£5-10	x = £1
£10-20	x = £2
£20-30	x = £3
£30-50	x = £5
Above £50	x = £5

Q10. *ASK ALL STAYING WITH PROVIDER (OR DON'T KNOW)* - *CODE 1, 3, and 5 ABOVE*

Now let's suppose that {***INSERT MOBILE PROVIDER FROM Q1}*** had not offered **any** mobile phone price plans, so that you would have had to make a different choice. What would you have been ***most likely*** to do instead?

READ OUT

1. Chosen or stayed with a provider other than ***{INSERT MOBILE PROVIDER FROM Q1}***
2. Stopped using your mobile phone and mobile services completely
3. Don't know

Q11. *ASK SWITCHING TO ANOTHER PROVIDER (CODE 2 AT Q9 OR CODE 1 AT Q10)*

Which mobile phone provider would you have chosen or stayed with?

READ OUT IF NECESSARY

IF UNSURE OR DON'T KNOW, ASK: If you had to choose one, which would you have been most likely to have chosen?

[NOTE TO SCRIPTER:
- EXCLUDE CURRENT PROVIDER FROM THE LIST TO BE READ OUT.
- RANDOMISE ORDER OF BRAND LISTS. "OTHER" AND "I DO NOT KNOW" ALWAYS TO BE AT THE END]

1. EE (including Orange and T-Mobile)
2. Three
3. O2
4. Vodafone
5. Lycamobile
6. Lebara
7. Talk Talk
8. Tesco Mobile
9. Virgin Mobile
10. Giffgaff
11. Other (please specify name of provider)

    ____

12. Don't know *[ALLOW BUT DON'T SHOW AS A PRE-CODE]*

Q12. *ASK TO THOSE SWITCHING TO ANOTHER PROVIDER (CODE 2 AT Q9 OR CODE 1 AT Q10)*

Which type of mobile phone price plan with ***{INSERT BRAND FROM QUESTION ABOVE}*** would you have been ***most likely*** to have chosen?

READ OUT

1. Pay as you go
   [*READ OUT IF NECESSARY* - You buy credit/topped up online, at an ATM or in-store]
2. Contract/pay monthly
   [*READ OUT IF NECESSARY* - Each month you pay the bill/invoice for the use of your mobile phone]
3. Other (please specifiy)
   ____
4. Don't know

Q13. *ASK ALL*

Before having a mobile phone price plan with ***{INSERT MOBILE PROVIDER FROM Q1}*** what was your previous mobile phone provider?

READ OUT, ONLY IF NECESSARY

[NOTE TO SCRIPTER: EXCLUDE FROM LIST BELOW THE CURRENT MOBILE PHONE PROVIDER, I.E. THE MOBILE PROVIDER FROM Q1]

1. No one - This is my first provider/network
2. EE (including Orange and T-Mobile)
3. Three
4. O2
5. Vodafone
6. Lycamobile
7. Lebara
8. Talk Talk
9. Tesco Mobile
10. Virgin Mobile
11. Giffgaff
12. Other (please specify name of provider)

Q14. *ASK ALL*

CODE SEX, DON'T ASK:

1. Male
2. Female

Q15. *ASK ALL*

And finally, which of the following age groups do you fall into?

IF NECESSARY:

This is just to make sure we are surveying a good cross section of the population. This information is only to help analyse the results at a broad level and will not be used to identify you in any way.

READ OUT

1. 16 - 17
2. 18 - 24
3. 25 - 34
4. 35 - 44
5. 45 - 54
6. 55 - 64
7. 65 +

THANK RESPONDENT AND CLOSE

Switching mobile network provider research

Methodology

Prepared for

European Commission Directorate General for Competition

Job number: 22149

Contact:

Tim Barber, Director – Media, Brands & Communications team

tim.barber@bdrc-continental.com

020 7490 9121

BDRC Continental

Overview

A total of 1,200 interviews were conducted with 'active considerers' who had switched their mobile provider or payment plan in the preceding 12 months. All respondents were current customers of one of three mobile providers: Three, O2, or Tesco Mobile. All respondents were screened to ensure that (i) the object of the interview was the respondent's main personal mobile phone plan; (ii) the respondent selected the payment plan herself; and (iii) when the respondent selected her current provider/payment plan she had actively considered other providers.

Fieldwork

All interviews were conducted via telephone from our central London telephone centre. Fieldwork was conducted between 2nd and 22nd November 2015. Calls were conducted 5-9 PM Monday to Friday, 10-6 on Saturday, and 12-6 on Sunday. If a called number didn't answer, it would be called back up to a maximum of four further times, on different days and at different times. We don't leave voicemail messages. We do not withhold the number we are calling from, and if the respondent telephoned the contact number displayed they will hear a recorded message which confirms our status as a genuine market research agency.

Sample and quotas

Sample was provided by the European Commission, who obtained it from each of the three operators.

The sample of switchers interviewed consisted of two types:

1. **Gross Adds** – those that had joined their current supplier from a different supplier
2. **Internal Switchers** – those that had switched or upgraded from a different package with the same supplier.

Minimum quotas were set by customer type for each of three operators, as follows:

<table>
<tr><th></th><th>O2</th><th>3</th><th>Tesco Mobile</th></tr>
<tr><td>PAYM Internal switchers</td><td>100</td><td>100</td><td>100</td></tr>
<tr><td>PAYM Gross adds</td><td>100</td><td>100</td><td>100</td></tr>
<tr><td>PAYG Internal switchers</td><td>100</td><td>0</td><td rowspan="2">200</td></tr>
<tr><td>PAYG Gross adds</td><td>100</td><td>200</td></tr>
<tr><td>TOTAL</td><td>400</td><td>400</td><td>400</td></tr>
</table>

Notes:

O2 PAYG included Giffgaff customers (Giffgaff is a subsidiary of O2).

Tesco PAYG quotas did not include separate quotas for Gross Adds and Internal Switchers due to Tesco's small number of Internal Switchers for PAYG. H3G did not have any internal switchers for PAYG

The sample for each quota type was randomised so that each contact had an equal chance of being interviewed.

Output

Results were provided in the form of respondent-level data in Excel.

ANNEX F[1]

(1) As indicated in recital (14) of the Decision, on 17 March 2016 the Commission addressed to the Parties a Letter of Facts (the "Letter of Facts of 17 March 2016").

(2) In the Letter of Facts of 17 March 2016, the Commission relied upon confidential third party submissions and accompanying documents […]. The Notifying Party's legal advisors received access to those third party submissions and accompanying documents in accordance with the data room procedure.

(3) The third party submissions and accompanying documents included in the data room mentioned in paragraph (2) are referred to in the Decision. Each reference in the Decision has been given a confidential ID number [CONF-ID]. This is done in order to protect in full third party business secrets and other confidential information[2], including the identity of the third party. In particular, in order to fully protect against the possibility of matching a third party respondent to specific arguments, each reference in the Decision has received a separate [CONF-ID] number, even if in certain cases the references concern the same document.

(4) A list of correspondence between the CONF-IDs and the document ID number in the Commission's file is provided here below:

Reference to confidential documents as referred to in the Decision [CONF-ID]	Document Author CONFIDENTIAL	Document title CONFIDENTIAL	Document ID number in the Commission's file (as provided in the access to file) CONFIDENTIAL
1.	[…]*	[…]*	[…]*
2.	[…]*	[…]*	[…]*
3.	[…]*	[…]*	[…]*
4.	[…]*	[…]*	[…]*
5.	[…]*	[…]*	[…]*
6.	[…]*	[…]*	[…]*
7.	[…]*	[…]*	[…]*

* Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.

1 All abbreviations and capitalised terms used in this Annex shall have the same meaning as in the Decision.

2 Commission Notice on the rules for access to the Commission file in cases pursuant to Articles 81 and 82 of the EC Treaty, Articles 53, 54 and 57 of the EEA Agreement and Council Regulation (EC) No 139/2004 (OJ C 325, 22.12.2005), paragraph 17 and following.

Reference to confidential documents as referred to in the Decision [CONF-ID]	Document Author CONFIDENTIAL	Document title CONFIDENTIAL	Document ID number in the Commission's file (as provided in the access to file) CONFIDENTIAL
8.	[…]*	[…]*	[…]*
9.	[…]*	[…]*	[…]*
10.	[…]*	[…]*	[…]*
11.	[…]*	[…]*	[…]*
12.	[…]*	[…]*	[…]*
13.	[…]*	[…]*	[…]*
14.	[…]*	[…]*	[…]*
15.	[…]*	[…]*	[…]*
16.	[…]*	[…]*	[…]*
17.	[…]*	[…]*	[…]*
18.	[…]*	[…]*	[…]*
19.	[…]*	[…]*	[…]*
20.	[…]*	[…]*	[…]*
21.	[…]*	[…]*	[…]*
22.	[…]*	[…]*	[…]*
23.	[…]*	[…]*	[…]*
24.	[…]*	[…]*	[…]*
25.	[…]*	[…]*	[…]*
26.	[…]*	[…]*	[…]*
27.	[…]*	[…]*	[…]*
28.	[…]*	[…]*	[…]*
29.	[…]*	[…]*	[…]*
30.	[…]*	[…]*	[…]*

Reference to confidential documents as referred to in the Decision [CONF-ID]	Document Author CONFIDENTIAL	Document title CONFIDENTIAL	Document ID number in the Commission's file (as provided in the access to file) CONFIDENTIAL
31.	[…]*	[…]*	[…]*
32.	[…]*	[…]*	[…]*
33.	[…]*	[…]*	[…]*
34.	[…]*	[…]*	[…]*
35.	[…]*	[…]*	[…]*
36.	[…]*	[…]*	[…]*
37.	[…]*	[…]*	[…]*
38.	[…]*	[…]*	[…]*
39.	[…]*	[…]*	[…]*
40.	[…]*	[…]*	[…]*
41.	[…]*	[…]*	[…]*
42.	[…]*	[…]*	[…]*
43.	[…]*	[…]*	[…]*