



EUROPEAN COMMISSION
DG Competition

***CASE M.7018 - TELEFÓNICA
DEUTSCHLAND/ E-PLUS***

(Only the English text is authentic)

**MERGER PROCEDURE
REGULATION (EC) 139/2004**

Article 8 (2) Regulation (EC) 139/2004

Date: 02/07/2014

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COMMISSION DECISION

of 2.7.2014

addressed to:

Telefónica Deutschland Holding AG

**declaring a concentration to be compatible with the internal market and the EEA
agreement (Case M.7018 - TELEFÓNICA DEUTSCHLAND/ E-PLUS)**

(Only the English text is authentic)

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COMMISSION DECISION

of 2.7.2014

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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 undertakings¹, and in particular Article 8 thereof,

Having regard to the Commission's decision of 20 December 2013 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 Concentrations²,

Having regard to the final report of the Hearing Officer in this Case³,

Whereas:

1. INTRODUCTION

- (1) On 31 October 2013, the European Commission received notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 (the "Merger Regulation") by which Telefónica Deutschland Holding AG ("Telefónica" or the "Notifying Party") acquires within the meaning of Article 3(1)(b) of the Merger Regulation, sole control over E-Plus Mobilfunk GmbH & Co. KG ("E-Plus") from Koninklijke KPN N.V. ("KPN"). Telefónica and E-Plus are collectively referred to in this Decision as the "Parties".

¹ OJ L 24, 29.1.2004, p. 1. With effect from 1 December 2009, the Treaty on the Functioning of the European Union ("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 86, 13.03.2015, p5.

³ OJ C 86, 13.03.2015, p7.

- (2) Based on the first phase market investigation (the "Phase I Market Investigation"), the Commission raised serious doubts as to the compatibility of the merger with the internal market and adopted a decision to initiate proceedings pursuant to Article 6(1)(c) of the Merger Regulation on 20 December 2013 (the "Article 6(1)(c) Decision"). The Notifying Party submitted written comments on the Article 6(1)(c) Decision on 15 January 2014 (the "Reply to the Article 6(1)(c) Decision").
- (3) Based on a second phase investigation ("Phase II Market Investigation") which supplemented the findings of the Phase I Market Investigation (jointly referred to as the "Market Investigation"), the Commission addressed a Statement of Objections (the "Statement of Objections") dated 26 February 2014 to the Notifying Party pursuant to Article 18 of the Merger Regulation in which the Commission further substantiated its competition concerns. The Notifying Party replied to the Statement of Objections (the "Reply to the Statement of Objections") on 12 March 2014. KPN and E-Plus also replied on the same date (the "KPN and E-Plus Reply to the Statement of Objections").
- (4) An oral hearing took place on 17 March 2014 during which the Commission, the Parties and certain interested third parties – namely [...] – presented their views on the competition concerns addressed in the Statement of Objections. The competition authorities of several Member States as well as the German telecom regulator Bundesnetzagentur ("BNetzA") and the Austrian telecom regulator Rundfunk & Telekom Regulierungs-GmbH ("RTR") attended the oral hearing and had the opportunity to ask questions.
- (5) On 2 April 2014, the time limit for taking a final decision in this Case was extended by 10 working days pursuant to the first subparagraph of Article 10(3) of the Merger Regulation. The Commission issued a letter of facts to the Notifying Party on 4 April 2014 (the "Letter of Facts"). The Notifying Party submitted its comments on the Letter of Facts on 10 April 2014 ("Reply to the Letter of Facts"). KPN and E-Plus also replied on the same date.
- (6) The Notifying Party submitted a first set of commitments on 10 April 2014. The Commission carried out a market test of these commitments on 11 April 2014. On 28 April 2014 the Notifying Party submitted a second set of commitments. A market test of these commitments was sent to market participants on 30 April 2014. The Notifying Party submitted a final set of commitments on 29 May 2014.
- (7) On 19 May as well as on 23 May 2014, the time limit for taking a final decision was extended by another 5 working days respectively pursuant to the second subparagraph of Article 10(3) of the Merger Regulation.
- (8) The Advisory Committee discussed the draft of this decision on 18 June 2014. The Advisory Committee supported all elements of the Commission's draft decision with the exception of: (1) the Commission's conclusion that it is not necessary to reach a final decision on the issue whether the proposed transaction gives rise to a significant impediment of effective competition on the market for wholesale access and call origination in Germany since the Commitments would in any event any such potential concerns; and (2) the Commission's conclusion that (a) the Commitments address the competition concerns identified by the Commission in the retail market for mobile telecommunications services in Germany; (b) subject to full compliance with the Commitments, the proposed transaction is not likely to significantly impede effective competition in the internal market or in a substantial part of it; and (c) the notified transaction must therefore be declared compatible with the common market. As regards point (1) above, a plurality of Member States agreed with the Commission's proposal, a minority disagreed and an even smaller minority abstained.

As regards the three issues under point (2) above, a plurality of Member States disagreed with the Commission, an equal number of Member States abstained and a minority agreed.

- (9) In this Decision, the Commission provides first of all an overview of the rejection of the referral request pursuant to Article 9 of the Merger Regulation (Section 4). It then defines the relevant markets (Section 5). Next, the Commission sets out the competitive assessment including an overview of the German retail market for mobile telecommunications services and demonstrates that the merger is likely to significantly impede effective competition on the retail market for mobile telecommunications services in Germany, as well as on the German wholesale market for access and call origination (Section 6). Section 6 also includes an assessment of the alleged efficiencies submitted by the Parties and evaluates the potential countervailing benefit to consumers. In Section 8 the Commission concludes that, on balance, the merger is likely to significantly impede effective competition, even taking into account possible efficiencies.

2. THE PARTIES AND THE TRANSACTION

- (10) Telefónica provides customers in Germany with wireless telecommunication services such as voice, short message services ("SMS"), multimedia messaging services ("MMS") and mobile data services under its core brand "O2" and its second brands Fonic, Netzclub and Türk Telekom Mobile. To a lesser extent Telefónica also provides fixed line telecommunication services in Germany. Telefónica further provides wholesale network access to third parties, such as Freenet AG ("Freenet"), Drillisch AG ("Drillisch"), Unitymedia GmbH ("Unitymedia") and Kabel BW GmbH ("Kabel BW"), M-net Telekommunikations GmbH ("M-net"), Versatel GmbH ("Versatel"), Breko Bundesverband Breitbandkommunikation e.V. ("Breko") and Star Communications GmbH ("Star Communications") and has various co-operations with resellers, such as Lidl Dienstleistungs GmbH & Co. KG ("Lidl"), Kaufland Warenhandel GmbH & Co. KG ("Kaufland") and RINGFOTO GmbH & Co. ALFO Marketing KG ("Ringfoto").
- (11) Telefónica is an indirect subsidiary of Telefónica S.A, which has its headquarters in Spain, and the ultimate parent company of the Telefónica group, which operates through several subsidiaries in the European Union and in South America.
- (12) E-Plus provides customers in Germany with wireless telecommunications services such as voice, SMS, MMS and mobile data services under its core brands E-Plus and BASE, as well as under its various second brands such as simyo, blau/blauworld, Yourfone, AyYildiz and Ortelmobil. E-Plus does not offer fixed line telecommunications services. E-Plus provides wholesale network access to third parties, such as Freenet and Communication Services Tele2 GmbH ("Tele2"), and has sales partnerships with various resellers, such as Medion AG ("Medion", selling mobile services under the brand Aldi Talk), VIMN Germany GmbH (selling mobile services under the brand MTV mobile), Norma Lebensmittelfilialbetrieb Stiftung & Co. KG (selling mobile services under the brand Normamobil), Netto Marken-Discount AG & Co. KG (selling mobile services under the brand Nettokom) and several others.
- (13) E-Plus is an indirect 100% subsidiary of the Dutch operator Koninklijke KPN N.V., a telecommunications and IT service provider active in the Netherlands, in Belgium and in Germany.

- (14) On 23 July 2013, Telefónica S.A., Telefónica and KPN entered into a Share Purchase Agreement ("SPA"), pursuant to which E-Plus will transfer all its assets, liabilities and contractual positions of and in relation to its current business into a new entity (the "New E-Plus"). Telefónica will then acquire all interests in New E-Plus against the payment to KPN of a cash consideration of EUR 5 billion (EUR 5 000 million) and the granting to KPN of a shareholding of 20.5% in Telefónica. KPN will not be granted any rights conferring control of Telefónica. Following the transaction, Telefónica will exercise sole control over New E-Plus.
- (15) The proposed transaction therefore constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

3. EUROPEAN UNION DIMENSION

- (16) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million. Each of them has an European Union-wide turnover in excess of EUR 250 million, but they do not achieve more than two-thirds of their aggregate European Union-wide turnover within one and the same Member State.
- (17) The proposed transaction therefore has an European Union dimension.

4. REFERRAL REQUEST

- (18) On 20 November 2013, Germany, via the Bundeskartellamt ("BKartA") requested, on the basis of Article 9(2)(a) of the Merger Regulation, a referral of the proposed transaction from the Commission to the BKartA (the "Referral Request").
- (19) In the Referral Request, Germany considers that the proposed transaction threatens to significantly affect competition in the German retail market for mobile telecommunications services, as well as in the German wholesale market for access and call origination, both of which present all the characteristics of distinct markets in accordance with Article 9(2)(a) of the Merger Regulation. Moreover, Germany considers that it is best placed to deal with the proposed transaction.
- (20) As the Commission decided to initiate proceedings, it was unnecessary for it to pronounce on the Referral Request in phase I of its investigation.
- (21) On 2 January 2014 Germany, via the BKartA submitted a reminder of their Referral Request under Article 9(2)(a) of the Merger Regulation, pursuant to Article 9(5) of that regulation.
- (22) By letter dated 10 January 2014, the Commission informed of its intention to reject the Referral Request. By letter dated 17 January 2014, Germany stated that it disagrees with the Commission's view that there are no grounds for a referral of the case.
- (23) On 30 January 2014 the Commission adopted a decision rejecting Germany'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 proposed transaction. However, in exercising its discretion the Commission did not consider it appropriate to refer the proposed transaction to the BKartA for a number of reasons, including the need 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 the fact that the Commission has developed significant expertise in markets for mobile telecommunications services within its jurisdiction over the last years.

5. RELEVANT MARKETS

- (24) In line with the Commission's practice to date, the Notifying Party proposes to define the following product markets:
- the market for mobile telecommunications services to end customers (retail market for mobile telecommunications services),
 - the market for wholesale access and call origination on public mobile telephone networks,
 - the wholesale market for international roaming and
 - the wholesale market for mobile call termination.
- (25) In recitals (26) to (111), the Commission assesses which are the relevant markets in this Case.

5.1. Retail mobile telecommunications services

- (26) End customers purchase voice calls, SMS and data services from mobile network operators ("MNOs") or from operators that purchase wholesale access to a network from an MNO.

5.1.1. Product market definition

- (27) A relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumers, by reason of the products' characteristics, their prices and their intended use.⁴ In determining the relevant market, the Commission assesses demand substitution by determining the range of products which are viewed as substitutes by the consumers.⁵ 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.⁶ 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.⁷

5.1.1.1. Notifying Party's view

- (28) The Notifying Party, also in light of previous Commission decisions⁸ in this sector, considers that there is one overall retail market for mobile telecommunications services, which should not be further divided. Hence, the Notifying Party submits that, due to supply-side substitutability, no further distinction should be made between pre-paid and post-paid services or between services offered through different technologies, namely through Global System for Mobile Communications, the so-called second generation of digital cellular networks ("GSM" or "2G"),

⁴ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 7 (OJ C 372, 09/12/1997, p. 5).

⁵ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 15.

⁶ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 20.

⁷ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 20.

⁸ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*; Commission Decision of 1 March 2010 in Case No COMP/M.5650 – *T-Mobile / Orange UK*.

Universal Mobile Telecommunications System, the third generation network ("UMTS" or "3G") and the fourth generation network technology Long-Term Evolution ("LTE" or "4G"). Likewise, the Notifying Party submits that no distinction should be made according to the type of customer, for instance between residential customers and business customers. Finally the Notifying Party submits that no distinction should be drawn based on the different types of services that are transmitted over mobile telecommunications networks, namely voice, SMS or data.

- (29) In the Notifying Party's view, a more meaningful possible segmentation of the retail market for mobile telecommunications services could be that between high-value and low-value customers. High-value customers ask for high-quality services, notably in relation to data communication, and are ready to pay higher prices, whereas low-value customers' demand is mainly price-driven. However, the Notifying Party acknowledges that there is no clear division line or threshold agreed across the industry between these two categories of customers.

5.1.1.2. Commission's assessment

- (30) In previous decisions, the Commission did not further divide the market for the provision of mobile communications services to end customers by type of customer (that is to say between business or private, post-paid subscribers or pre-paid customers) or by type of network technology (2G or 3G).⁹ The Commission assessed previous merger cases on the basis of the product market defined as a single market for the provision of mobile telecommunications services to end customers. In the Hutchison 3G Austria / Orange Austria decision, one of the key elements underpinning this market definition was the Commission's finding that there was a high degree of supply-side substitutability.¹⁰
- (31) As discussed in more detail in recitals (32) to (55), in this Case the responses of the Market Investigation indicate that, whilst there may be certain differences from the demand-side between the various segments of the retail market, most of these segments are characterised by a high degree of supply-side substitutability.

Private and business customers

- (32) In previous decisions, the Commission did not sub-divide the market between private and business customers. In the T-Mobile / Orange UK Decision, the Commission found that, although business customers were considered "heavy users" as opposed to residential customers who use mobile communication more rarely, the service offered to the two categories of customers were substantially the same.¹¹ In the Hutchison 3G Austria / Orange Austria Decision, the Commission found that there might be distinct demand from private and business customers but nonetheless

⁹ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recital 58; Commission Decision of 1 March 2010 in Case No COMP/M.5650 – *T-Mobile / Orange UK*, recital 24; Commission Decision of 27 November 2007 in Case No COMP/M.4947 – *Vodafone / Tele2 Italy / Tele2 Spain*, recital 14; Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria/Tele.ring*, recital 18 (but leaving open the question whether a separate market exists for specific 3G-only applications); Commission Decision of 24 September 2004 in Case No COMP/M.3530 – *TeliaSonera / Orange* and Commission Decision of 16 September 2003 in Case No COMP/M.3245 – *Vodafone / Singlepoint*.

¹⁰ Commission Decision in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recitals 35, 41 and 52. See also Commission Decision in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring*, recital 11.

¹¹ Commission Decision in Case No COMP/M.5650 – *T-Mobile / Orange UK*, recital 21.

concluded that, due to supply-side considerations, there was an overall product market that included both private and business customers.¹²

- (33) The Notifying Party pointed out that there is no generally accepted distinction within the industry between private and business customers. Telefónica distinguishes business customers from residential customers by asking for certificates of incorporation or registration. It further distinguishes different categories of business customers on the basis of the number of employees, namely small offices and home offices ("SOHO"), small and medium enterprises ("SMEs") and large undertakings. Similar criteria are adopted by the other operators responding to the Market Investigation to identify business customers.
- (34) In response to the Market Investigation, MNOs¹³ considered that [...]*. In particular, they explained that the [...]* relate to (i) [...]*; (ii) [...]*; and (iii) [...]*. In addition, the MNOs offer [...]*. Business customers replying to the Market Investigation mentioned a number of specific requirements that are different from standard residential tariffs.¹⁴
- (35) As regards supply-side substitution, the results of the Market Investigation indicate that in Germany business customers, especially large undertakings, are mainly served by MNOs and, in particular by Deutsche Telekom and Vodafone GmbH (together with Vodafone Group plc "Vodafone"). Telefónica has only a limited presence in this segment of the market and focuses its activities mainly on SMEs and SOHOs. Similarly, E-Plus, as well as mobile virtual network operators ("MVNOs") and Service Providers have very limited activities in the business customer segment and serve mainly SOHO and SMEs (but to a very limited extent also larger undertakings). Some MVNOs and Service Providers explained that the conditions for wholesale access granted to them do not allow for competitive offers to business customers.¹⁵ However, the Commission considers that, at least in relation to some business customers (namely SOHO and SMEs), and particularly in relation to MNOs, there is supply-side substitutability to the extent that MNOs offering services to residential customers could relatively easily start serving at least some business customers (namely SOHO and SMEs) as they would appear to have the necessary infrastructure in place to offer the additional services requested by business customers. It is therefore difficult to identify a clear category of business customers, in relation to which the degree of supply-side substitution between the different mobile operators is so limited that these customers would constitute a separate product market.
- (36) As a result, the Commission considers that private and business customer retail mobile telecommunication services do not constitute separate markets.

Pre-paid and post-paid services

- (37) Regarding pre-paid and post-paid services, the Commission has previously found that the distinction between the two segments is becoming blurred due to the development of different types of offers.¹⁶ It has also found that post-paid services

¹² Commission Decision in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recitals 34 to 35.

¹³ See responses to Questionnaire Q1 to MNOs dated 31 October 2013, question 12.

¹⁴ See responses to Questionnaire Q3 to Business Customers dated 31 October 2013, question 10.

¹⁵ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 12.

¹⁶ Commission Decision in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recitals 38-39; Commission Decision in Case No COMP/M.5650 - *T-Mobile / Orange UK*, recital 21.

are often combined with handset promotions, whereas pre-paid services are not.¹⁷ In the Hutchison 3G Austria / Orange Austria Decision, the Commission concluded that both types of services are part of the same market, in view of supply-side substitution.¹⁸

- (38) The data gathered during the Market Investigation in this Case indicate that the differences between pre-paid and post-paid services have become increasingly blurred due to the existence of post-paid tariffs with very short termination periods and of new pre-paid "comfort" functions (such as automatic charges if the pre-paid balance falls below a certain level) and due to a general convergence in terms of price between the two types of services. The answers to the Market Investigation do not provide clear indications as to the significance of customer switching from one service to the other in response to a price increase.¹⁹ The data gathered during the Market Investigation indicates, however, that there is supply-side substitutability between pre-paid and post-paid services,²⁰ which suggests that pre-paid and post-paid services form part of the same product market.
- (39) As a result, the Commission considers that pre-paid and post-paid retail mobile telecommunications services do not constitute separate markets.

High-value/ low-value customers

- (40) As explained in recital (29), the Notifying Party suggests that a more meaningful possible segmentation of the retail mobile communication service market could be that between: (a) high-value and (b) low-value customers. The Notifying Party submits that, while there is no clear division line or threshold agreed across the industry between these two categories of customers, one such possible dividing line could be between customers with monthly average revenue per user ("ARPU") below and above EUR 30. On that basis, customers with a monthly ARPU smaller than EUR 30 would account for about 43% of the total market revenues, while high-value customers would account for the balance. Among high-value customers, those generating a monthly ARPU between EUR 30 and 44 would account for 28% of the market revenues, customers with a monthly ARPU between EUR 45 and 60 for 18% of the total market revenues and customers with a monthly ARPU above EUR 60 for 9% of the total market revenues.²¹
- (41) According to the respondents to the Market Investigation, there is no clear dividing line shared within the industry to differentiate those two categories of customers. However, some of the respondents also stated that such a distinction corresponds to market conditions and that high-value customers may be differentiated from low-value ones due to their higher consumption (especially in terms of data), their willingness to pay more for better network quality and speed and better customer care services. A small number of respondents clarified that, within their organisation, high-value clients are differentiated from low-value customers in terms of customer offers, services and customer retention.²²

¹⁷ Commission Decision in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recital 40.

¹⁸ Commission Decision in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recital 41.

¹⁹ See responses to Questionnaire Q1 to MNOs and to Questionnaire Q2 to MVNOs dated 31 October 2013, question 10.

²⁰ See responses to Questionnaire Q1 to MNOs and to Questionnaire Q2 to MVNOs dated 31 October 2013, question 10.

²¹ See Morgan Stanley Alphawise Report, January 2013, Document ID 365.

²² See [...]*; responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 13.

- (42) As regards the question whether the pre-paid/ post-paid segments correspond to the low-value/ high-value customer segments, the data gathered during the Market Investigation clearly indicate that, on the one hand, the vast majority of pre-paid customers are likely to be low-value customers. On the other hand, as regards post-paid customers, the respondents to the Market Investigation indicated that a significant number of post-paid customers may also be low-value customers (that is to say, customers having an ARPU below EUR 30).²³ This finding is in line with the data submitted by the Notifying Party in the Form CO. Telefónica explained that only around [20-30%]* of its post-paid customers have an ARPU equivalent to or above EUR 30 per month and would thus qualify as high-value customers. Conversely, [...] of its post-paid customers would comprise customers with a monthly ARPU between EUR 15 and 30 (around [30-40%]*) and below EUR 15 (around [40-50%]*).
- (43) On the demand side, the substitutability between the high-value and the low value segments is limited due to the different characteristics of the two customers group. However, the majority of the respondents to the Market Investigation nonetheless indicated that it does not seem appropriate to distinguish separate markets for high-value or low-value customers, mainly due to supply-side substitutability.
- (44) As a result, the Commission considers high-value and low-value customer retail mobile telecommunications services do not constitute separate markets.
- Type of technology (2G, 3G and future 4G technologies)*
- (45) In previous decisions, the Commission considered that there was a single market for the provision of mobile communication services to end customers, regardless of the network technology used (2G, 3G or 4G).²⁴
- (46) Based on the responses to the Market Investigation, the Commission considers that no distinction should be made between services offered through 2G and 3G technologies.
- (47) As regards the question whether 4G services constitute a separate product market, from the demand side, half of the respondents to the Market Investigation consider that customers to date perceive no difference between (at least the more sophisticated) 3G services and the 4G services. In addition, some of the respondents claimed that, due to the current limited coverage of 4G services in Germany, 4G customers are switched to 3G in areas with no 4G coverage. It was also noted that many customers use 2G, 3G and 4G services in parallel and that, at present, only a limited number of handsets support 4G technology. Therefore, at present, there is demand-side substitutability.

²³ See responses to Questionnaire Q1 to MNOs and to Questionnaire Q2 to MVNOs dated 31 October 2013, question 14. When they were asked why the average revenue generated with a user (ARPU) is much higher in post-paid tariffs, the participants explained that consumers having a high demand are more likely to purchase a post-paid tariff. A further reason pointed out by [...] in its response to the Market Investigation might be that aggregated figures for pre-paid services include a disused subscriber identity module ("SIM") cards that have not been cancelled by the customer because they incur no monthly fee.

²⁴ Commission Decision in Case No COMP/M.5650 – *T-Mobile / Orange UK*, recital 24 (with respect to 2G and 3G technologies); Commission Decision in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring*, recital 18 (for 2G and 3G technologies); Commission Decision in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recitals 43 to 46 (for 2G, 3G and 4G technologies).

- (48) However, a few respondents underline that things might change to a significant extent with the increased use of data consuming services such as high-definition ("HD") streaming, which, according to [...]*, require an amount of bandwidth, which cannot be provided through a 3G connection.²⁵ The vast majority of the respondents²⁶ underline that the demand for 4G services is likely to significantly increase in the future.²⁷ Moreover, at the present time, 4G services are offered only within the more expensive packages to post-paid customers and for broadband offers. One MNO clarified that these services are included only in packages to post-paid customers spending at least EUR [...] per month.
- (49) While the roll-out of a 4G network requires certain investments and specific spectrum holdings, it appears that, at least in the German market, all four MNOs already are, or will likely be in the near future, able to offer 4G services to end customers, in addition to 2G and 3G services. MVNOs and Service Providers are not currently allowed to design own tariffs containing 4G services. They are only allowed to offer the MNO's tariffs including 4G services. It therefore appears that, at least as far as the German MNOs are concerned, there is, or, in any event, there will likely be in the near future, a high degree of supply-side substitutability between these services.
- (50) As a result, the Commission considers that the different technologies for retail mobile telecommunications services do not constitute separate markets.
- Voice / SMS / data services*
- (51) Voice communications, SMS and data services, such as access to e-mail services and general internet services, are often provided together. Demand for data services is increasing, driven in part by the increased popularity of smartphones, which allow for data intensive applications. Data services are also offered on a stand-alone basis, separate from voice services, through mobile broadband dongles (typically attached to a laptop), 3G/ 4G enabled tablets or mobile 3G/ 4G routers.
- (52) In previous cases, the Commission considered that it would not be appropriate to define separate markets for voice services, SMS services and data-only services, due to the fact that all providers offer all these types of services to their customers. In the present case, the Commission has also considered whether data-only services, that is to say data services that are purchased separately from voice services and accessed through mobile broadband dongles, tablets or mobile routers, constitute a distinct market.
- (53) In the Notifying Party's view, due to the increasing penetration of smartphones, data services are not only normally included in the bundled offer together with voice and SMS services, but have become the essential component of all these bundled tariffs whereas flat voice and SMS services are often included in such bundles for free. In addition, data-only tariffs are rapidly losing significance in the German market also due to the increasing use of multi-cards (that is to say, the use of additional SIM cards attached to a voice/SMS/data bundle for another device without the need for a separate data subscription) and the fact that many customers use their mobile

²⁵ See [...]*; responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 25, [...]*

²⁶ See responses to Questionnaire Q1 to MNOs and to Questionnaire Q2 to MVNOs dated 31 October 2013, question 26.

²⁷ See responses to Questionnaire Q1 to MNOs and to Questionnaire Q2 to MVNOs dated 31 October 2013, question 25. Half of the respondents to the Market Investigation indicated that 4G demand will increase by 20 to 30% in the next 2 to 3 years.

telephone as a modem for their tablet or laptop. The Notifying Party emphasises that this is reflected [...]*

- (54) The data gathered during the Market Investigation point towards the existence of a single market including all of these services. It is true that some of the respondents to the Market Investigation indicate that some customers using data-only services would not switch to bundled offers also including voice and SMS in case of a price increase.²⁸ However, they point out that there is likely to be supply-side substitutability between these services. Indeed, as submitted by the Notifying Party, the vast majority of tariffs available on the market consist of voice, SMS and data services.
- (55) As a result, the Commission considers that voice, SMS and data retail mobile telecommunications services do not constitute separate markets.

Multiple-play services

- (56) The Commission has to date left open the question whether a separate market for multiple play offers comprising, for example fixed internet access, fixed telephony and television ("TV") (triple play) or fixed internet access, fixed telephony, TV and mobile services (quadruple play) should be defined.²⁹
- (57) Mobile telecommunications services can be offered in combination with fixed-line services, such as fixed-line telephone, fixed-line internet or fixed-line TV. These combined offerings are sometimes referred to as triple or quadruple play offers.
- (58) The Commission considered whether a distinct market for multiple-play services should be defined. According to the respondents to the Market Investigation, the number of consumers purchasing such multiple-play services is likely to increase in the coming years.³⁰ However, the data gathered during of the Market Investigation does not provide any clear evidence that multiple-play services constitute a distinct product market.
- (59) In any event, for the purpose of this Decision, taking into account that E-Plus is not active in fixed-line telephony, it may be left open whether a distinct market for multiple-play services exists. The Commission considers that the proposed transaction raises competition concerns due to the combination of the Parties' activities in the mobile sector, regardless of whether Telefónica's fixed-line activities in Germany are taken into account.

Mobile data services vs fixed data services

- (60) The Notifying Party submits that fixed broadband services can be substituted by mobile broadband services. The Notifying Party underlines that this is particularly true in some rural areas in Germany given that the BNetzA imposed on MNOs, which have been awarded the 800 MHz frequency spectrum at the 4G auction, an obligation to roll-out 4G in rural areas lacking fixed high-speed internet access. In addition, the Notifying Party considers that there is a high degree of substitutability between mobile data services and fixed data services. According to the Notifying Party, fixed and Wi-Fi services, in particular due to the existence of free Wi-Fi spots

²⁸ Responses to Questionnaire Q10 to business customers dated 1 October 2013, question 5; to Questionnaire Q11 to consumer organisations dated 1 October 2013, question 4.

²⁹ Commission Decision in Case No COMP/M.5900 – *LGL/KBW* recital 186; Commission Decision in Case No COMP/M.5734 – *Liberty Global Europe / Unitymedia* recital 48; Commission Decision in Case No COMP/M.4338 – *Cinven / Warburg Pincus / Casema / Multikabel* recital 18.

³⁰ Responses to Questionnaire Q10 to business customers dated 1 October 2013, question 13.

in many public places, currently exert a significant competitive constraint on mobile internet, especially for young and more price-sensitive consumers.

- (61) The Commission notes that, for the purposes of the assessment of the proposed transaction, the question whether mobile broadband services are at present, or are likely to be in the future, an alternative to fixed broadband services is irrelevant. Indeed, the overlap between the Parties' activities is in the mobile sector. The more relevant question is therefore whether fixed broadband services constitute at present, or are likely to constitute in the future, an alternative to mobile broadband services.
- (62) In line with its previous practice in mobile merger cases, the Commission considers that mobile telecommunications services (including voice, SMS and data) constitute a separate market from fixed telecommunication services. Indeed, among other things, mobile services provide end users with different functionalities, namely with the ability to communicate and to send and receive data on the go, from those offered from fixed services. Moreover, the two types of services are viewed by the majority of the respondents to the Market Investigation as complementary rather than substitutable. As regards, in particular, mobile data transmission, the respondents to the Market Investigation have indicated that they view these services, to date at least, as not substitutable with fixed data services. This lack of substitution between fixed and mobile data services is likely to continue to be the case also in the near future. In order to be a substitute to mobile broadband services, the Wi-fi services would need to provide smooth handover (so that the service is provided seamlessly when mobile), and nationwide coverage, to replicate that of the mobile network, which is not the case for the Wi-fi services that are currently available in Germany.
- (63) In its Reply to the Statement of Objections, the Notifying Party acknowledges that there is no full substitutability between the two types of services, but reiterates that fixed broadband exercises a strong competitive constraint on mobile data services and points to the fact that on average 64% of the data traffic via smartphones in Germany has been transmitted via home Wi-fi. The Commission notes that the fact that the large majority of smartphones data traffic is transmitted via fixed broadband is due to the fact that fixed broadband services are still more powerful and cheaper than mobile. However, the Commission notes that as long as fixed broadband services ensure no nation-wide coverage, they offer customers only a limited service in terms of time and location of their data usage, and therefore cannot fulfill the same demand fulfilled by mobile services, not even to a significant extent. Therefore the Commission considers the competitive constraint arising from fixed broadband services is still not material and concludes, in line with the results of the Market Investigation referred to in recital (31), that fixed broadband services are merely complementary to mobile broadband services.
- (64) As a result, the Commission considers that, for the purpose of this Decision, mobile and fixed telecommunication services, including data services constitute separate markets.

Relative importance of different market segments

- (65) Although one overall retail market for mobile telecommunications services exists, an analysis of competition in the different segments described in recitals (32) to (64) is important to assess whether a competition problem in a particular market segment affects competition in the overall market.
- (66) With respect to the specific distinction between pre-paid and post-paid customers, the Notifying Party submits that the number of pre-paid customers is decreasing and that whilst active pre-paid SIM cards constituted 49% of the total SIM cards in 2011,

they constituted only 47% of the total number of SIM cards at the end of 2012. In addition, the Notifying Party submits that the revenues generated with prepaid customers constituted only 16% of the total revenues realised in Germany from retail mobile services in 2013 and will significantly decrease in the coming years.

- (67) However, in light of the data gathered during the Market Investigation, the Commission considers that pre-paid customers will continue to play a significant role in the German mobile communications market in the next three to five years. The data gathered during the Market Investigation in this Case indicate that the German market today is characterised by a slight prevalence of pre-paid customers over post-paid customers. However, it also emerges from the Market Investigation that the number of post-paid customers is progressively increasing. The popularity of smartphones, the subsidisation of smartphones (especially high-end ones) within post-paid tariff plans and the use of more advanced data intensive services and applications (for example cloud services, streaming, videos, voice over IP ("VoIP") and over-the-top ("OTT") applications) associated to smartphones are mentioned as the factors that are contributing to the increased demand for post-paid services.
- (68) As regards the numbers of subscribers, the vast majority of MVNOs, Service Providers, Branded Resellers and MNOs who responded to the Commission's Phase II Market Investigation Questionnaires were of the view that over 50% of all retail mobile customers will be pre-paid customers at the end of 2016.³¹ Moreover, according to the majority of the MVNOs, Service Providers and to the other MNOs, at the end of 2018, more than 45% of all mobile communication services will still be provided to pre-paid customers.³² This means that more than 50 million subscribers will probably still be pre-paid customers in five years' time.
- (69) As regards the share in the overall retail mobile revenues, which is generated with pre-paid customers, the clear majority of MVNOs, Service Providers and MNOs, which responded to the Commission's questionnaires in the Phase II Market Investigation, does not foresee a decline of these revenues by the end of 2016. In fact, the share of revenues generated with pre-paid customers was estimated to be similar to what it is today (namely, 15 to 20% of the overall mobile revenues).³³ Moreover, [...] does not foresee any change of the situation even by the end of 2018, while [...] estimates a moderate decline of the share of revenues generated with pre-paid customers in the overall retail mobile revenues to 10 to 15% by that date.³⁴ Hence, even according to the most conservative forecast, revenues generated with pre-paid customers would still amount to around EUR 2 billion (based on today's market volume) by the end of 2018.
- (70) As a result, and as further explained in recitals (232) and (233), a distinction between the pre-paid and post-paid sections is relevant, because: (i) the merged entity will be particularly strong in the pre-paid segment (that is to say, a share of more than [...])

³¹ See Responses to the Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 8; to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 8; and to the Questionnaire to mobile network operators active in Germany dated 20 January 2014, question 3.

³² See Responses to the Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 8; and to the Questionnaire to mobile network operators active in Germany dated 20 January 2014, question 3.

³³ See Responses to the Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 9; Q3 to Branded Resellers dated 21 January 2014, question 9; and the Questionnaire to mobile network operators active in Germany dated 20 January 2014, question 4.

³⁴ [...].

of the overall revenues in the pre-paid segment and the market leader in terms of subscribers)³⁵ and in the low-end of the post-paid segment to which pre-paid customers would likely switch in response to price increases in the pre-paid segment; (ii) the pre-paid segment is the segment in which the most price aggressive offers are introduced, as price is a particularly important factor for pre-paid customers³⁶; and (iii) the pricing dynamics in the pre-paid segment are likely to influence, through the competitive interplay between contiguous segments, which follows a bottom up approach, the pricing of the post-paid segment as well as of the overall market. In particular, post-paid customers using a low-value tariff will consider switching to pre-paid tariffs if such tariffs were to be less expensive than low-value post-paid tariffs. A decrease in prices for low-value post-paid tariffs would, in turn, exercise pressure on higher-value post-paid tariffs as customers using such tariffs might consider switching to less expensive low-value post-paid tariffs if they regard the surcharge for a higher-value post-paid tariff as too expensive.

- (71) In light of the matters referred to in recitals (65) to (70), and to the extent it is relevant for the competitive assessment on the relevant market, this Decision also discusses the impact of the proposed transaction on specific segments. The Commission underlines, however, that the effects of the proposed transaction on the different segments are assessed in view of their larger effect on the overall market and not merely within a particular segment.

5.1.2. *Geographic market definition*

- (72) 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.³⁷

5.1.2.1. Notifying Party's view

- (73) The Notifying Party submits that the market for mobile communications services to end customers is national in scope and therefore corresponds to the territory of Germany.

5.1.2.2. Commission's assessment

- (74) In previous cases, the Commission found that the retail market for mobile telecommunications services was national in scope.³⁸ The Commission considers, on the basis of the Market Investigation and taking into account the fact that the licences to mobile operators are granted on a national basis, that this definition is also appropriate in this Case and concludes that the relevant geographic market in this Case is national in scope.

³⁵ See Section 6.3.1.1.

³⁶ See recital (136).

³⁷ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 7.

³⁸ Commission Decision in Case No COMP/M.6497– *H3G Austria / Orange Austria*, recital 73; Commission Decision in Case No COMP/M.5650 – *T Mobile / Orange UK*, recitals 25 and 26.

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

(75) On this market, MNOs sell access to their network and the ability to initiate calls to MVNOs and Service Providers.³⁹ While MVNOs own parts of the infrastructure of a mobile network, Service Providers⁴⁰ do not own any network infrastructure. Both types of market players use the wholesale access granted by MNOs to sell mobile telecommunications services under their own brands and in their own name on the retail market, that is to say they become party to the contracts with the end-customers. MNOs typically provide network access and call origination together to MVNOs and Service Providers.

5.2.1. Product market definition

5.2.1.1. Notifying Party's view

(76) The Notifying Party takes the view that the exact definition of the wholesale market for access and call origination has no influence on the assessment of the proposed transaction and agrees with the Commission's product definition in previous cases.

5.2.1.2. Commission's assessment

(77) In previous cases,⁴¹ the Commission defined a wholesale market for access and call origination on public mobile networks. The services provided by MNOs to MVNOs and Service Providers were considered as the key elements required for MVNOs and Service Providers 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.⁴²

(78) In this Case, the vast majority of MNOs, MVNOs, Service Providers and Branded Resellers that took part in the Market Investigation expressed the view that the Commission's past product market definition, as described in recital (77), is correct,

³⁹ The Commission notes that, as opposed to MVNOs and Service Providers, Branded Resellers (see recital (187) for a more detailed description of this type of players) are not active on the demand-side of this market, as Branded Resellers essentially act as distribution or 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 communication services on behalf of MNOs using their own brand and their own distribution channels.

⁴⁰ Note that the legal definition of "Diensteanbieter" (Service Providers) adopted in point 6 under Section 3 of the German Telecommunications Act ("TKG") is broader and encompasses anyone who entirely or partially professionally offers telecommunication services or contributes to the delivery of such services ("Diensteanbieter" [ist] jeder, der ganz oder teilweise geschäftsmäßig a) Telekommunikationsdienste erbringt oder b) an der Erbringung solcher Dienste mitwirkt). However, this definition is not necessarily identical with the use of the term Service Provider in the 2G and 3G licences that precede the inclusion of the definition of Service Providers in the TKG.

⁴¹ See Commission Decision of 12 December 2014 in case COMP/M.6497 – *Hutchison 3G Austria/ Orange Austria*, recitals 61, 62 and 63; Commission Decision of 1 March 2010 in case COMP/M.5650 – *T-Mobile/ Orange*, recitals 27 to 30; Commission Decision of 27 November 2007 in case COMP/M.4947 *Vodafone/ Tele2 Italy/ Tele2 Spain* recital 15.

⁴² The definition of a single market for wholesale access and call origination on public mobile networks is also in line with the Commission Recommendation of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to *ex ante regulation* in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services (OJ L 108, 24/04/2002, p. 33), see definition of market 15 in the Annex to that Directive.

essentially because they are not aware of any factors in Germany that would justify a different conclusion from the one reached in other Member States.⁴³

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

5.2.2. *Geographic market definition*

5.2.2.1. Notifying Party's view

(80) In line with the Commission's practice in previous cases, 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 dimensions of the MNOs networks, which are in general limited to national borders, essentially owing to regulatory barriers.

5.2.2.2. Commission's assessment

(81) 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 licences granted to MNOs are generally national in scope.⁴⁴

(82) In the Market Investigation the vast majority of respondents were of the view that the relevant geographic market is national in scope.⁴⁵

(83) Based on the foregoing, the Commission considers 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 Germany, as the wholesale market corresponds to the dimension of the MNOs networks, which are limited to the German territory given that the licences granted by the BNetzA to mobile operators are granted on national basis.

5.3. **Wholesale market for mobile call termination services**

(84) Call termination services are provided when calls originate from one network and terminate on another network. For such calls, the operator on whose network the call terminates, routes the call and connects it to the called party. This service is provided at wholesale level between two network operators.

(85) Both Parties are MNOs and therefore active on this market. Each has a share of 100% on call termination services on its respective network. Both Parties are also buying these services from the other MNOs.

5.3.1. *Product market definition*

5.3.1.1. Notifying Party's view

(86) The Notifying Party submits that there is no substitute for call termination on each individual network since the operator transmitting the outgoing call can reach the intended recipient only through the network to which the recipient is connected. Accordingly, the Notifying Party submits that the exact definition has no influence on the assessment of this Case and agrees with the finding of the Commission in

⁴³ See the responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 81 and Questionnaire Q1 to MNOs dated 31 October 2013, question 94.

⁴⁴ See Commission Decision of 12 December 2014 in case COMP/M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 74 to 77 with references to further decisions.

⁴⁵ See the responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 82 and Questionnaire Q1 to MNOs dated 31 October 2013, question 95.

previous cases that each individual network constitutes a separate relevant product market.

5.3.1.2. Commission's assessment

- (87) For the termination of a call, there can be no substitute other than the access to the network to which the called party belongs. Accordingly, the Commission has previously defined each individual network as a separate product market for call termination services.⁴⁶
- (88) The Market Investigation did not provide any indication that the product market should be defined in a different manner in this Case.
- (89) The Commission therefore concludes, in line with previous decisions, that each individual mobile network constitutes a separate product market.

5.3.2. Geographic market definition

5.3.2.1. Notifying Party's view

- (90) The Notifying Party submits that the market should correspond to the dimensions of the operators' networks and therefore be considered as national in scope in line with previous Commission's decisions.

5.3.2.2. Commission's assessment

- (91) Previous decisions of the Commission have defined the markets to be national in scope.⁴⁷ The Market Investigation did not provide any indication that the geographic market definition should be changed in the present case. The Commission therefore concludes that the markets for call termination of mobile calls are national.

5.4. Wholesale market for international roaming

- (92) In order for a provider of retail mobile services to be able to provide its end customers with telecommunication services outside their home countries, it must enter into agreements with providers of wholesale international roaming which are primarily active in other national markets.
- (93) Roaming agreements can be concluded with a preferred foreign operator which offers tailor-made service conditions, as can be seen in particular in the creation of international roaming alliances, such as the Freemove Alliance or the Vodafone partners.⁴⁸
- (94) The roaming market is regulated within the European Union. Prices are capped at European Union level by Regulation (EU) No 531/2012 of the European Parliament and of the Council (the "Roaming Regulation").⁴⁹ Under the Roaming Regulation, retail prices for making and receiving calls, sending SMS and providing data services are capped for European Union customers when using their mobile telephones

⁴⁶ See notably Commission Decision of 20 September 2013 in case COMP/M.6990 - *Vodafone/Kabel Deutschland*, recital 238; Commission Decision of 3 July 2012 in case COMP/M.6584 *Vodafone/Cable & Wireless*, recital 47 and Commission Decision of 1 March 2010 in case COMP/M.5650 *T-Mobile/Orange*, recital 37.

⁴⁷ See notably Commission Decision of 20 September 2013 in case COMP/M.6990 - *Vodafone/Kabel Deutschland*, recital 242 and Commission Decision of 1 March 2010 in case COMP/M.5650 *T-Mobile/Orange*, recital 38.

⁴⁸ See Commission Decision of 12 December 2012 in case COMP/M.6497 *Hutchison 3G Austria/Orange Austria*, recital 65.

⁴⁹ Regulation (EU) No 531/2012 of the European Parliament and of the Council of 13 June 2012 on roaming on public mobile communications networks within the Union (OJ L 172, 30.6.2012, p. 10).

abroad, while receiving SMS is free. At the wholesale level, prices for voice roaming charges, SMS and data roaming are equally capped for operators from European Union Member States.

- (95) Both Parties are active on the wholesale market for international roaming by providing foreign MNOs with wholesale roaming services on their networks.

5.4.1. *Product market definition*

5.4.1.1. Notifying Party's view

- (96) The Notifying Party submits that the exact definition has no influence on the assessment of this Case and agrees with the market definition developed by the Commission in previous cases.

5.4.1.2. Commission's assessment

- (97) Because the Market Investigation did not provide any indication that the product market should be defined in a different manner, the Commission retains its previous product market definition of a separate wholesale market for international roaming comprising both terminating calls and originating calls in this Case.

5.4.2. *Geographic market definition*

5.4.2.1. Notifying Party's view

- (98) The Notifying Party agrees with the Commission's previous decisions that the relevant geographical scope of the market for the supply of wholesale international roaming is national.

5.4.2.2. Commission's assessment

- (99) In previous decisions, the Commission found the wholesale markets for international roaming to be national in scope, given that wholesale international agreements can be concluded only with companies which have an operating licence in the relevant country and licences to provide mobile services are restricted to a national territory.⁵⁰
- (100) In this Case, the Commission retains its previous' geographic market definition and considers the respective market to be national in scope.

5.5. Affected Markets

- (101) The proposed transaction will give rise to the affected markets referred to in recitals (102) to (108):

5.5.1. *Horizontally affected markets*

- (102) The German retail market for mobile telecommunications services and the German market for wholesale access and call origination on public mobile telephone networks are affected, since the Parties' combined shares on these markets exceed 15%.
- (103) Moreover, the wholesale market of international roaming in Germany is horizontally affected, as both Parties are active on this market with a combined market share above 15%.

⁵⁰ See Commission Decision 12 December 2012 in case COMP/M.6497 *Hutchison 3G Austria/Orange Austria*, recital 78; Commission Decision of 1 March 2010 in case COMP/M.5650 *T-Mobile/Orange*, recital 35; Commission Decision of 20 August 2007 in case COMP/M.4748 *T-Mobile/Orange Netherlands*, recital 27; Commission Decision of 26 April 2006 in case COMP/M.3916 *T-Mobile Austria/Tele.ring*, recital 28.

5.5.2. *Vertically affected markets*

- (104) The German retail market for mobile telecommunications services and the German wholesale market for access and call origination on public mobile telephone networks are also vertically affected, as both Parties are active on both market levels and their combined shares exceed 25% on both the retail and the wholesale level.
- (105) Moreover, the wholesale markets for international roaming in Spain, the Czech Republic, the United Kingdom, Ireland and Slovakia are vertically affected. In order to offer international roaming to their end-customers, MNOs need to procure wholesale international roaming services in those Member States where they are not active themselves. Hence, there is a vertical link between the German retail mobile communication market and wholesale international roaming markets outside of Germany. Telefónica offers wholesale international roaming services in each of those five Member States. Given the fact that the Parties' combined market share on the German retail mobile communication market exceeds 25%, those markets for international roaming outside of Germany, where Telefónica is active, are vertically affected.
- (106) The retail mobile communication services markets in Spain, the Czech Republic, the United Kingdom, Ireland and Slovakia are likewise affected due to the fact that Telefónica is active in these markets, which are vertically related to the German wholesale market for international roaming, where the Parties hold a combined market share above 25%.
- (107) Furthermore, the wholesale markets for call termination on Telefónica's public mobile telephone networks in Germany, Spain, the Czech Republic, the United Kingdom, Ireland and Slovakia are vertically affected, as Telefónica holds a market share of 100% on each of these markets, which are upstream to the German retail market for mobile telecommunications services, where both Parties are active. Likewise, the wholesale market for call termination on E-Plus' public mobile telephone network in Germany where E-Plus holds a market share of 100% is vertically affected, as Telefónica is active in the downstream retail mobile communications markets in Germany, Spain, the Czech Republic, the United Kingdom, Ireland and Slovakia.
- (108) For addition, the retail mobile communication markets in Germany, Spain, the Czech Republic, the United Kingdom, Ireland and Slovakia are also vertically affected given their respective vertical link to the upstream activities of Telefónica and E-Plus in the provision of call termination services on their respective public mobile telephone networks.
- (109) As regards the affected wholesale markets for international roaming, as well as the respective vertically affected retail markets, the Commission considers that competition concerns are not likely to arise from the proposed transaction. The Roaming Regulation imposes a price cap on the wholesale prices that MNOs may charge their roaming customers. At the wholesale level, that Regulation caps prices for operators from Member States for voice roaming charges, SMS and data. In addition, MNOs must meet all reasonable requests for wholesale roaming access. MNOs are, therefore, prevented from refusing access to their network and from charging excessive termination fees. Moreover, the respondents to the Commission's market investigation questionnaires have not raised any specific concerns regarding these markets.
- (110) As regards the affected wholesale markets for call termination on Telefónica's and E-Plus' public mobile telephone networks, as well as the respective vertically affected

retail markets, the Commission considers that competition concerns are also not likely to arise as rates for mobile voice call termination services are subject to an *ex ante* rate regulation by national telecoms regulators, such as BNetzA in Germany. Furthermore, the respondents to the Commission's market investigation questionnaires have not raised any specific concerns regarding these markets.

- (111) In light of the matters referred to in recitals (109) and (110), the affected wholesale markets for international roaming and for call termination on Telefónica's and E-Plus' public mobile telephone networks as well as the respective vertically affected retail markets are not discussed any further in this Decision. Therefore, the Commission analyses concerns as to the compatibility of the proposed transaction with the internal market with respect to the retail market for mobile telecommunications services and the market for wholesale access and call origination on public mobile telephone networks in Germany.

6. COMPETITIVE ASSESSMENT

6.1. Legal test

- (112) 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.
- (113) The Merger Regulation recognises that in oligopolistic markets, it is all the more necessary to maintain effective competition.⁵¹ 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, first, the elimination of important constraints that the parties had exerted on each other, and, second, a reduction of competitive pressure on the remaining competitors may result in a significant impediment to effective competition, even in the absence of a likelihood of coordination between the members of an oligopoly.⁵²
- (114) Under the new substantive test introduced by the Merger Regulation (see Articles 2(2) (3) of that Regulation), the Commission is no longer required to show the creation or strengthening of a dominant position in order to declare a merger incompatible with the internal market on the grounds that it would significantly impede effective competition. The Merger Regulation makes it clear that the determination of whether effective competition would be significantly impeded in the internal market or in a substantial part of it goes beyond the question of whether a merger would create or strengthen a dominant position on the markets concerned. According to recital 25 of the Regulation, the notion of "significant impediment to effective competition" in Article 2(2) and (3) of that Regulation should be interpreted, as extending, beyond the concept of dominance, to the anti-competitive effects of a concentration that result from the non-coordinated behaviour of undertakings which do not have a dominant position on the market concerned.⁵³

⁵¹ Recital 25 of the Merger Regulation.

⁵² Recital 25 of the Merger Regulation.

⁵³ Recital 25 of the Merger Regulation refers to the fact that 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 under certain circumstances result in a significant impediment to effective competition even in the absence of a likelihood of coordination between the members of the oligopoly.

(115) The Commission guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (the "Horizontal Merger Guidelines")⁵⁴ 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. Non-coordinated effects may significantly impede effective competition by eliminating important competitive constraints on one or more firms, which consequently would have increased market power, without resorting to coordinated behaviour. In that regard, the Horizontal Merger Guidelines consider not only the direct loss of competition between the merging firms, but also the reduction in competitive pressure on non-merging firms in the same market that could be brought about by the merger.⁵⁵

(116) The Horizontal Merger Guidelines list a number of factors which may influence whether or not significant 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 if a merger would create or strengthen a dominant position, or would otherwise significantly impede effective 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.⁵⁶

6.1.1. *The concept of closeness between the merging parties' products*

(117) As further explained in Section 6.3.1.2, contrary to what the Notifying Party submits⁵⁷, the Commission is not required, for the purposes of finding non-coordinated effects in the absence of dominance, to show that the merging parties are each other's closest competitors on the relevant markets. The Horizontal Merger Guidelines refer to merging firms being "close competitors" as opposed to being each other's closest competitors, as submitted by the Notifying Party.⁵⁸

(118) Moreover, closeness of competition is only one of the factors listed in the Horizontal Merger Guidelines as potentially influencing whether or not significant non-coordinated effects are likely to result from a merger. The qualification of a firm as an important competitive force can be equally relevant. This has already been recognised in previous Commission decisions.⁵⁹

6.1.2. *The concept of important competitive force*

(119) Paragraph 37 of the Horizontal Merger Guidelines points out that firms may have more of an influence on the competitive process than their market shares or similar measures would suggest.

(120) An assessment of whether an undertaking has more of an influence on the competitive process than its market share would suggest is carried out against an

⁵⁴ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, (OJ C 31, 5.2.2004, p. 5).

⁵⁵ Horizontal Merger Guidelines, paragraph 24.

⁵⁶ Horizontal Merger Guidelines, paragraph 25.

⁵⁷ See Reply to the Statement of Objections.

⁵⁸ Horizontal Merger Guidelines, heading for paragraphs 28 to 30.

⁵⁹ See, for instance, Commission Decision of 21 January 2010 in Case No COMP/M.5529, *Oracle / Sun Microsystems*, paragraph 164.

objective benchmark, namely the firm's own market share. The competitive influence that a firm exerts, as set against that benchmark, is assessed on the basis of those competitive parameters that are relevant to the market under investigation. Similarly, the assessment of whether the removal of this firm would change competitive dynamics in an anti-competitive manner, is carried out with reference to the likely incentives of the merged entity and the remaining competitors to compete on these parameters if the merger would go ahead. This approach is fully in line with the Merger Regulation and paragraph 37 of the Horizontal Merger Guidelines.

- (121) In light of the matters referred to in recitals (119) and (120), the Commission disagrees with the position advocated by the Notifying Party, namely that an undertaking may be considered as an important competitive force only if its offers have a disproportionately high impact on the competitive dynamics or if it plays a maverick role.⁶⁰
- (122) The argument by the Notifying Party referred to in recital (121), which would unduly raise the evidentiary burden for finding that a firm is an important competitive force and for the finding of anti-competitive non-coordinated effects in merger cases in the absence of dominance, is not supported by the Horizontal Merger Guidelines.

6.1.3. *Standard of Proof*

- (123) The standard of proof that the Commission is required to meet to find non-coordinated effects leading to a significant impediment of effective competition, including on the basis that a merger would combine two close competitors or remove an important competitive force, is the same as the standard that it must meet when assessing whether or not other relevant factors are present. The Commission applies the general legal standard to show that a significant impediment to effective competition arises. This standard requires the Commission to assess the economic outcome attributable to the concentration which is most likely to ensue.⁶¹
- (124) As regards the evidence used in this Decision, the Commission notes that its assessment of a concentration must be supported by a sufficiently cogent and consistent body of evidence that must be factually accurate, reliable and consistent. The body of evidence must contain all the information required to be taken into account in order to assess a complex situation and it must be capable of substantiating the conclusions drawn from it. Against this background, the Commission has assessed all available sources of evidence in this Case, including: (i) the data gathered throughout the Market Investigation; (ii) the reports and contributions submitted by a number of telecommunication regulators in the European Union (BNetzA in Germany, Office of Communications ("Ofcom") in the United Kingdom) and national expert committees (Monopolkommission⁶²); (iii) economic evidence based on the quantitative analysis referred to in recital (213); and (iv) the analysis of internal documents submitted by each of the Parties and in particular those that were submitted and described in further detail by E-Plus in response to the Statement of Objections and the Article 6(1)(c) Decision.
- (125) In this respect, it should be noted that the Commission took into account while assessing the internal documents referred to in recital (124) not only the specific

⁶⁰ See KPN and E-Plus Reply to the Statement of Objections, Document ID 2253, p. 10 *et. seq.*

⁶¹ See Case C-413/06 P, *Bertelsmann v. Impala*, [2008] ECR I-4951, paragraph 52.

⁶² The Monopolkommission is an independent expert committee, which advises the German government and legislature in the areas of competition policy-making and regulation.

circumstances of their preparation and use, but also the general market situation at the time when those documents were drawn up. As regards, in particular, internal documents the Commission relied, as referred to in further detail in recitals (386) to (391), on internal documents that were either approved by or submitted to each of Parties' decision making bodies prior to the adoption of strategic decisions. The Commission considers therefore such internal documents to reflect the Parties' strategy and views. In addition, most of the internal documents relied upon also form part of the set of internal documents that the Parties appear to consider particularly important as they explicitly draw the Commission's attention to them in their submissions in response to the Statement of Objections and the Article 6(1)(c) Decision.

6.2. General description of the German telecommunications sector

6.2.1. Introduction

- (126) The German mobile communications market is the largest market for mobile telecommunications services in the European Union. It accounts for around 113 million subscribers.⁶³ Around 53% of the SIM cards currently on the German market (47% in terms of active subscribers) are pre-paid and 47% (53% in terms of active subscribers) are post-paid.⁶⁴ According to figures provided by the Communications Committee, the German mobile communication market is worth around EUR 26 billion in terms of revenues of which EUR 19.1 billion were generated with services to end customers (excluding sales of mobile devices). According to the Notifying Party's estimates, 83% of the end customer revenues are generated with post-paid customers, while 17% are generated with pre-paid customers.⁶⁵
- (127) Prices for retail telecommunications services in Germany, as in most Member States, have been declining during recent years. According to the Notifying Party, the decrease in retail prices has been caused by regulatory intervention such as a decrease of mobile termination rates and roaming fees, as well as by increased competition from services offered by OTT players, such as free messaging services. As a result of such price decrease, the overall revenues generated with mobile communication services decreased as well. The average revenue per minute (ARPM) in Germany in 2011 was 8.8 cents/minute (slightly below the EU average which is 9.1 cents/minute).⁶⁶ In terms of ARPU, Germany is currently one of the Member States with rather low ARPU (the 2011 ARPU in Germany is EUR 187.3/year, while the average ARPU in 2011 was EUR 195.4/year within the European Union).⁶⁷

⁶³ See Tätigkeitsbericht Telekommunikation 2012/ 2013 of the BNetzA, p. 22, Doc ID 4140.

⁶⁴ According to Tätigkeitsbericht Telekommunikation 2012/ 2013 of the BNetzA, Doc ID 4140, in 2012, 60.27 million pre-paid and 52.89 million post-paid cards were in circulation in Germany. The figures relating to active subscribers are provided by the Communications Committee, a committee composed of representatives of EU Member States whose main role is to provide an opinion on the draft measures that the Commission intends to adopt in the in the framework of the Commission's Digital Agenda, Doc ID 4442.

⁶⁵ See Telefónica's presentation Project Montreal prepared for the first meeting with the European Union Commission Case Team on 6 August 2013, p. 8.

⁶⁶ [http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={"indicator-group":"mobile","indicator":"mob_arpm","breakdown-group":"total","breakdown":"TOTAL_MOB",](http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={)

⁶⁷ [http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={"indicator-group":"mobile","indicator":"mob_arpu","breakdown-group":"total","breakdown":"TOTAL_MOB",](http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={)

- (128) However, based on the Organisation for Economic Co-operation and Development (OECD) study comparing the prices of baskets of products including both voice and data services across the OECD countries, it appears that some baskets are more expensive in Germany than in other Member States, such as the United Kingdom, Sweden, France, the Netherlands, Ireland and Finland.⁶⁸
- (129) As in other markets in the European Union, in Germany the demand for data traffic is increasing mainly due to the high penetration of smartphones. The Notifying Party estimates that the penetration rate of smartphones in Germany is in the range of [60-70]*% and submits that, according to the statistics of the German industry association Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (BITKOM), 81% of the handsets sold in Germany in 2013 were smartphones.

6.2.2. *Trend towards increasing consumption of mobile data services*

- (130) Due to the penetration of smartphones, but also tablets, demand for mobile data services has risen over recent years. According to a study commissioned in 2013 by the German industry association of telecommunication providers, the overall mobile data consumption of post-paid customers increased from 11.8 million gigabytes ("GB") in 2008 to estimated 170.1 million GB in 2013. The average monthly mobile data consumption of post-paid customers increased from 22 megabytes ("MB") in 2008 to estimated 261 MB in 2013.⁶⁹
- (131) Based on the responses to the Market Investigation, the Commission assumes that mobile data consumption will further increase in the future. Participants in the Commission's Phase I Market Investigation were of the opinion that mobile data consumption and demand for 4G services will further increase within the next two to three years.⁷⁰ Likewise, respondents in the Phase II Market investigation believed that mobile data consumption will continue to increase.⁷¹
- (132) However, the Commission regards that trend towards greater mobile data consumption as a gradual change that, together with the declining prices for traditional voice services, causes a shift of revenues from voice to data services. Revenues generated with mobile voice services will continue to play an important role within the next three to five years. Indeed, Deutsche Telekom and Vodafone, both expect to still generate around [...] *% of their mobile services revenues by the end of 2018 with voice services, as opposed to [...] *% today.⁷² The Notifying Party, which generates [50-60]*% of its mobile services revenues with voice services today, expects that revenues from voice services will constitute [40-50]*% of its mobile services revenues by the end of 2016, and [30-40]*% of its mobile services revenues by the end of 2018.⁷³ E-Plus, which generates [50-60]*% of its retail mobile services revenues with voice services today, expects to generate [40-50]*%

"unit-measure": "euro", "ref-area": ["BE", "BG", "CZ", "DK", "DE", "EE", "IE", "EL", "ES", "FR", "IT", "CY", "LV", "LT", "LU", "HU", "MT", "NL", "AT", "PL", "PT", "RO", "SI", "SK", "FI", "SE", "UK", "EU27"]}

⁶⁸ The OECD Communications Outlook 2013, Document ID 4205, p. 219 *et seq.*

⁶⁹ Dialog Consult/VATM, 15. TK-Marktanalyse Deutschland 2013, p. 27, Document ID 4137.

⁷⁰ See responses to Questionnaire Q1 to MNOs dated 31 October 2013, questions 25 and 26 and to Questionnaire Q2 to MVNOs dated 31 October 2013, question 25.

⁷¹ [...].

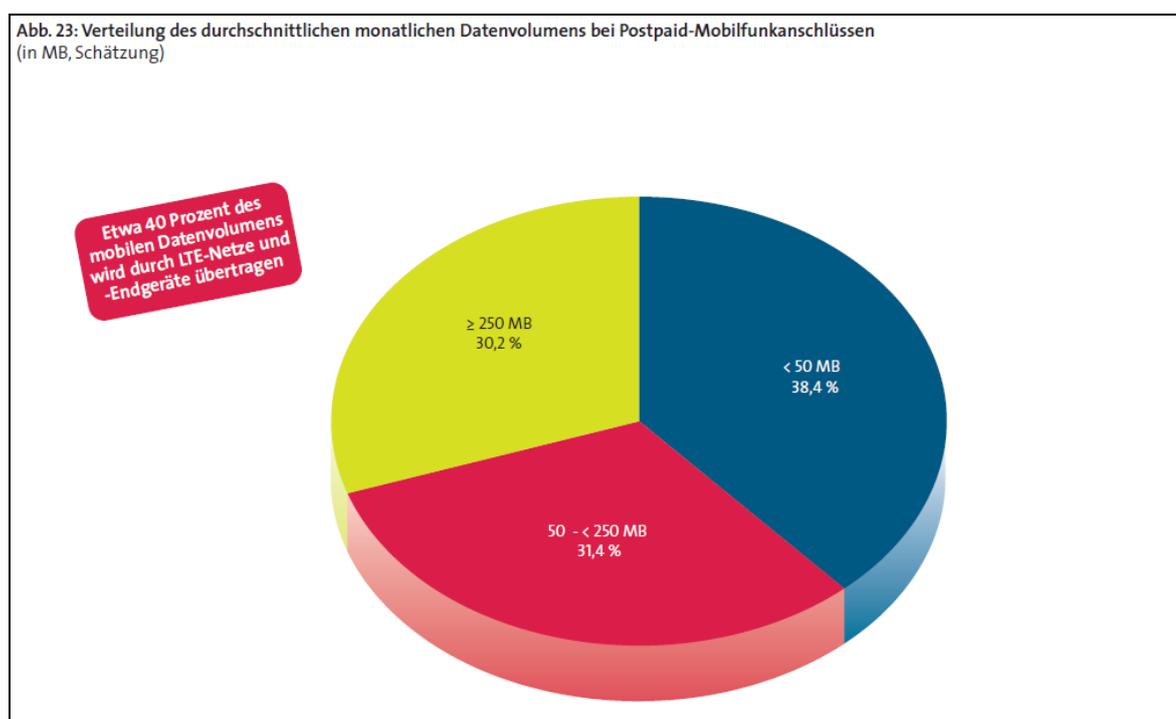
⁷² Responses to Questionnaire to mobile network operators active in Germany dated 20.1.2014, question 5.

⁷³ Telefónica's response to the Commission's RFI No 8 dated 24.1.2014, Document ID 1524, question 4.

of its retail mobile revenues with voice services by the end of 2016 and respectively [40-50]*% by the end of 2018.⁷⁴

- (133) In this context, the Notifying Party points out that data services come in addition to voice services. Hence, according to the Notifying Party, the percentage of revenues generated with voice services provides limited information concerning the impact of data services. The Notifying Party claims that instead it is the smartphone penetration rate that is significant.⁷⁵ In the Commission's view, this argument has no impact on the finding that revenues generated with voice services will continue to play an important role during the next three to five years.
- (134) It should also be pointed out that mobile customers contribute to a variable extent to the trend of increased mobile data consumption. According to a study by the German association of telecommunications and value-added service providers (Verband der Anbieter von Telekommunikations- und Mehrwertdiensten, VATM), around 70% of all post-paid customers use mobile data services for less than 250 MB per month. More precisely, 38.4% of all post-paid customers use less than 50 MB of mobile data services per month, 31.4% of all post-paid customers use between 50 and 250 MB mobile data services per month, and 30.2% of all post-paid customers use more than 250 MB per month.⁷⁶

Table 1: Distribution of monthly average mobile data consumption of post-paid customers



Source: Dialog Consult/VATM, 15. TK-Marktanalyse Deutschland 2013, page 28

- (135) Even though these average numbers will certainly increase as well, the Commission notes that certain customers will have less demand for data than others.
- (136) In addition, it appears that pre-paid customers value high-speed mobile data services less than post-paid customers. In the view of respondents to the Commission's Market Investigation, pre-paid customers deem 4G network coverage and quality as

⁷⁴ E-Plus' response to the Commission's RFI No 4 dated 24.12.2014, Document ID 1527, question 2.

⁷⁵ See Reply to the Statement of Objections, paragraph 10.

⁷⁶ Dialog Consult/VATM, 15. TK-Marktanalyse Deutschland 2013, p. 28, Document ID 4137.

well as download speed, which is crucial for mobile data consumption, significantly less important than post-paid customers.⁷⁷ Likewise, pre-paid customers are seen to be less willing to pay more for higher 4G network coverage and quality and increased download speed than post-paid customers.⁷⁸ For pre-paid customers, competitive prices for voice and SMS services were seen to be more important than competitive prices for data services or bundles including voice, SMS and data services. Furthermore, pre-paid customers were seen to attribute more importance to competitive prices for voice and SMS services than to network coverage and quality, including a higher down-load speed.⁷⁹

- (137) In this context, the Notifying Party submits that the Statement of Objections underestimates the importance of data services for all customers. It claims that the fact that pre-paid customers value price more than 4G network coverage is to be explained by the fact that they have not yet experienced the value of a 4G network. According to the Notifying Party, the fact that prepaid customers are very price sensitive (for example due to income constraints) does not imply that they do not value a good quality network. Furthermore, the Notifying Party claims that there is no indication that pre-paid customers are less interested or even have no interest at all in data services and 4G.⁸⁰
- (138) As regards that criticism put forward by the Notifying Party, the Commission firstly notes that mobile data consumption of pre-paid customers is on average lower than the average mobile data consumption of post-paid customers⁸¹. Hence, they are indeed less interested in mobile data services than post-paid customers. Moreover, they may be less willing to pay a considerable premium for higher network speed or quality.

6.2.3. *Description of the German MNOs*

- (139) Currently, four MNOs are active in Germany: Deutsche Telekom, Vodafone, Telefónica and E-Plus.
- (140) As the successor of the former state-owned company Deutsche Bundespost Telekom, the incumbent Deutsche Telekom today offers fixed network, broadband and mobile communications, Internet and Internet Protocol Television ("IPTV") services to consumers, as well as information and communication technology ("ICT") solutions to business and corporate customers. Mobile communication services are offered under the core brand "Deutsche Telekom" (previously: "T-Mobile") through Deutsche Telekom's wholly owned subsidiary Telekom Deutschland GmbH and under the second brand "Congstar" through its wholly owned subsidiary Congstar GmbH. To a limited extent, through its subsidiary Congstar Services GmbH,

⁷⁷ See Responses to the Questionnaire Q2 to MVNOs and to Service Providers dated 21.1.2014, question 14; Questionnaire Q3 to Branded Resellers dated 21.1.2014, question 14 and Questionnaire to mobile network operators active in Germany dated 20.1.2014, question 12.

⁷⁸ See Responses to the Questionnaire Q2 to MVNOs and Service Providers dated 21.1.2014, question 16; Questionnaire Q3 to Branded Resellers dated 21.1.2014, question 16 and Questionnaire to mobile network operators active in Germany dated 20.1.2014, question 14.

⁷⁹ See Responses to the Questionnaire Q2 to MVNOs and Service Providers dated 21.1.2014, question 14; Questionnaire Q3 to Branded Resellers dated 21.1.2014, question 14 and Questionnaire to mobile network operators active in Germany dated 20.1.2014, questions 12.

⁸⁰ See Reply to the Statement of Objections paragraphs 10 to 15.

⁸¹ See for example the average mobile data consumption per subscriber in the respective segments based on the replies by E-Plus and Telefónica to the data RFI of 4 October 2013.

Deutsche Telekom also offers mobile services in cooperation with Branded Resellers of the REWE group under the brands "Ja!Mobil" and "Penny Mobil." In addition, Deutsche Telekom provides wholesale access to its network and call origination services to MVNOs and Service Providers. Deutsche Telekom's mobile network (D1) is based on 2G, 3G and to a lesser extent also on 4G⁸² technology.

- (141) Vodafone offers mobile communication services, as well as fixed line telephony, broadband Internet access services (using DSL technology over Deutsche Telekom's access network) and IPTV to consumers and enterprise customers in Germany. Apart from its core brand "Vodafone", Vodafone provides these services under its second brand "o.tel.o". Under the brand "BILDmobil," Vodafone offers specific tariffs in cooperation with the Branded Reseller Axel Springer SE under the brand "BILDMobil". In addition, Vodafone recently acquired control over the German cable operator Kabel Deutschland Holding AG ("Kabel Deutschland"), which enables it to offer cable TV services as well as fixed telephony and broadband Internet access via the newly acquired cable network.⁸³ Moreover, Vodafone provides wholesale access to its network and call origination services to MVNOs and Service Providers. As the successor of Mannesmann, which entered the German mobile communication market in 1992, Vodafone can be considered as the second incumbent in the German mobile communication market. Its mobile network (D2) is based on 2G, 3G and to a lesser extent also on 4G⁸⁴ technology.
- (142) E-Plus, a subsidiary of the Dutch telecommunication operator KPN, provides mobile communication services under its core brands "E-Plus+" and "BASE" and under its second brands including "simyo," "blau/blauworld," "Yourfone," "AyYildiz" and "Ortelmobil" to customers in Germany. Moreover, it has entered into a sales partnership with Medion for mobile services under the brand Aldi Talk, VIMN Germany GmbH for mobile services under the brand MTV mobile, Norma Lebensmittelfilialbetrieb Stiftung & Co. KG for mobile services under the brand Normamobil and Netto Marken-Discount AG & Co. KG for mobile services under the brand Nettokom. Moreover, E-Plus provides wholesale access to its network and call origination services to MVNOs and Service Providers. E-Plus was the third MNO to enter the German market in 1993. Unlike the mobile networks of the other three MNOs, E-Plus' mobile network (E1) is currently based on 2G and 3G and only to a limited extent 4G technology (in March 2014, E-Plus launched 4G services in Berlin, Leipzig and Nurnberg). Furthermore, as the business focus of E-Plus is not business customers, it does not offer any specific business customer tariffs and services. Moreover, E-Plus is the only MNO in Germany that does not offer any fixed line products.
- (143) Telefónica, a subsidiary of the Spanish telecoms group Telefónica, provides mobile and to a certain extent also fixed line communication services (telephony and Internet access) to consumers and business customers in Germany. In Germany it is active under its core brand "O2" and its second brands "Fonic," "Netzclub," and "Türk Telekom Mobile". In addition, Telefónica maintains sales partnerships with resellers such as Lidl, Kaufland and Ringfoto. Moreover, Telefónica provides wholesale access to its network and call origination services to MVNOs and Service Providers. As the successor of VIAG Interkom GmbH & Co. KG, Telefónica entered

⁸² For details see recital (170).

⁸³ See the Commission Decision of 20 September 2013 in case COMP/M.6990 - *Vodafone/Kabel Deutschland*.

⁸⁴ For details see recital (171).

the German market in 1995, that is to say after the three other MNOs. Its mobile network (E2) is based on 2G, 3G and to a certain extent also on 4G⁸⁵ technology.

6.2.3.1. Spectrum allocation

- (144) In Germany, BNetzA is responsible for spectrum allocation according to the relevant provisions of the Telecommunications Act (Telekommunikationsgesetz, "TKG"). In those cases where demand for frequencies exceeds the volume of available radio spectrum for the use of mobile networks, the BNetzA proceeds to an award of frequency usage rights by auction. Accordingly, in 2000, the predecessor of the BNetzA, the Regulierungsbehörde für Telekommunikation und Post, carried out an auction of 3G licences and in 2010 the BNetzA auctioned licences to use spectrum in the 800 MHz, 1800 MHz, 2000 MHz and 2600 MHz bands, which are technology neutral.
- (145) While the licences awarded in 2010 are technology neutral and can be used for 4G, but also for other technologies, earlier licences were originally subject to the use of a specific technology. Accordingly, the frequencies in the 900 MHz band and parts of the 1800 MHz band were to be used for 2G networks, while the frequencies in the 2000 MHz band were to be used for 3G networks. Frequencies in the 3500 MHz band were to be used with suitable technologies for Broadband Wireless Access ("BWA"). However, upon request, BNetzA can allow the licence holders to flexibly use the respective spectrum with a different technology. Flexible use has been granted for several 2G and 3G licences to date.
- (146) Tables 2 and 3 give an overview of the current allocation of spectrum⁸⁶ and the allocation following the proposed transaction.

Table 2: Frequency holdings of the four German MNOs today (in MHz)

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	20.0	24.8	40.0	24.8	45.0	0.0
Vodafone	20.0	24.8	10.8	34.7	65.0	0.0
Telefónica	20.0	10.0	34.8	48.9	50.0	0.0
E-Plus	0.0	10.0	54.8	44.6	30.0	84.0

Source: BNetzA

Table 3: Frequency holdings of the remaining German MNOs post-transaction (in MHz)

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	20.0	24.8	40.0	24.8	45.0	0.0
Vodafone	20.0	24.8	10.8	34.7	65.0	0.0
Merged entity	20.0	20.0	89.6	93.5	80.0	84.0

Source: BNetzA

- (147) While most of the frequency usage rights that are currently awarded will only expire on 31 December 2020 or thereafter, the licences for the usage of the 900 MHz

⁸⁵ For details see recital (172).

⁸⁶ Spectrum holdings reflected in tables 2 and 3 contain paired and unpaired spectrum. An arrangement whereby a block of spectrum in a lower frequency band is associated with a block of spectrum in an upper frequency band is called paired spectrum. Paired spectrum allows MNOs to use different frequency blocks for the uplink and downlink of mobile traffic. In addition to the licences to use paired spectrum, the BNetzA also awarded to a limited extent usage rights for unpaired spectrum. In order to use unpaired spectrum for two-way-communication a special technique, so called time division duplex (TDD) can be deployed. However, TDD is commercially not used in Germany. As both, mobile voice and data traffic, constitute two-way communication, this means that in Germany, the unpaired spectrum essentially remains unused today.

frequencies, as well as part⁸⁷ of the licences for the usage of 1800 MHz frequencies, which are used for 2G, will terminate on 31 December 2016. For this reason, the BNetzA is currently engaged in preparations for the award procedure for the frequency usage rights that will expire on 31 December 2016, as well as, possibly, certain frequencies in the 700 MHz band, which are currently used for TV signal transmission (so-called "Project 2016").

- (148) Table 4 gives an overview of the expiry dates of currently awarded frequency usage rights.

Table 4: Overview of expiry dates of currently awarded mobile licences

2,6 GHz
3,5 GHz

Source: BNetzA

- (149) When the 2G licences expire on 31 December 2016, the four MNOs active in Germany will retain the following spectrum holdings:

Table 5: Frequency holdings of four German MNOs after 31 December 2016 (in MHz)

⁸⁷ While Vodafone's and Telefónica's entire spectrum holdings in the 1800 MHz band will expire on 31 December 2016, Deutsche Telekom will keep 30 MHz in this frequency band and E-Plus 20 MHz.

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	20.0		30.0	24.8	45.0	0.0
Vodafone	20.0		0.0	34.7	65.0	0.0
Telefónica	20.0		0.0	48.9	50.0	0.0
E-Plus	0.0		20.0	44.6	30.0	84.0

Source: Commission based on information provided by BNetzA

- (150) The overview set out in Table 5 does not take into account any additional spectrum, which the four MNOs or possible new entrants may acquire in the course of the spectrum auctions to be organised within the framework of Project 2016.
- (151) Accordingly, Table 6 shows what the merged entity's and its competitors' spectrum holdings would look like after 31 December 2016 (excluding any spectrum holdings to be possibly acquired in the course of Project 2016).

Table 6: Frequency holdings of the remaining German MNOs after 31 December 2016 (in MHz)

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	20.0		30.0	24.8	45.0	0.0
Vodafone	20.0		0.0	34.7	65.0	0.0
Merged entity	20.0		20.0	93.5	80.0	84.0

Source: Commission based on information provided by BNetzA

- (152) Taking into account the expiration of 3G licences on 31 December 2020, the four MNOs active in Germany would have the following spectrum holdings (again without any spectrum holdings which the four MNOs may acquire in future auctions):

Table 7: Frequency holdings of four German MNOs after 31 December 2020 (in MHz)

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	20.0		30.0	0.0	45.0	0.0
Vodafone	20.0		0.0	9.9	65.0	0.0
Telefónica	20.0		0.0	29.1	50.0	0.0
E-Plus	0.0		20.0	19.8	30.0	84.0

Source: Commission based on information provided by BNetzA

- (153) Accordingly, the merged entity's and its competitors' spectrum holdings would look like as shown in Table 8 after 31 December 2020 (without any spectrum holdings which they may acquire in future auctions).

Table 8: Frequency holdings of four German MNOs after 31 December 2020 (in MHz)

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	20.0		30.0	0.0	45.0	0.0
Vodafone	20.0		0.0	9.9	65.0	0.0
Merged entity	20.0		20.0	48.9	80.0	84.0

Source: Commission based on information provided by BNetzA

- (154) According to the spectrum usage concept for the merged entity submitted by the Notifying Party, the merged entity will need the aggregated spectrum of both Parties. Taking into account that the majority of 2G licences, namely the licences in the 900 MHz frequency band, will already expire on 31 December 2016 and it is currently unclear to what extent the merged entity will be in a position to secure licences in the 900 MHz spectrum after 2016, the Notifying Party plans to [...]*
- (155) Finally, it should be noted that the BNetzA has also started its separate regulatory review of the proposed transaction under the TKG. Pursuant to the TKG, BNetzA is empowered to assess the impact of the aggregation of the Parties' respective spectrum holdings in the merged entity on competition and on the efficient use of

spectrum. The review of the proposed transaction by the BNetzA is still in process and, as the Commission understands it, is not subject to any pre-determined deadline.

6.2.3.2. Status of 4G implementation

- (156) 4G is currently considered to be the technically advanced solution to cope with the rising demand for mobile data services, given that it allows data traffic of up to 300 megabit per second ("Mbit/s"), whereas the current standard 3G technology allows only for data rates of up to 42 Mbit/s. However, due to capacity constraints the current average speed is limited to a range of 1.3-5.7 Mbit/s. The next technical step will be the 4G advanced standard which enables speeds of up to 1 gigabit per second ("Gbit/s").
- (157) The demand for 4G is driven by innovations in the handset and in the content offerings (for example applications, audio, video or TV). Producers of handsets are constantly creating new 4G-capable devices (for example tablets and smartphones such as the iPad and the iPhone) enabling consumers to use mobile telecommunications services at a higher speed with larger data-volumes, even in rural areas.
- (158) In addition to higher speed of data download, 4G ensures better coverage and latency compared to previous technologies. In particular, 4G allows the achievement of full coverage for rural areas in Germany, where 2G or 3G is either not always available or available only with an inferior quality.
- (159) Germany has been one of the first Member States to experience the roll-out of 4G. This is because Germany was the first Member State to auction the spectrum for 4G services in May 2010.
- (160) During the 2010 auction, Deutsche Telekom, Vodafone and Telefónica acquired spectrum in the 800 MHz spectrum band, which is well suited to ensure a large coverage of a 4G network. E-Plus did not acquire any spectrum in the 800 MHz band, but did acquire spectrum in the 1800 MHz band, which is particularly suited to roll-out a 4G network with high capacity.
- (161) In this context, the Notifying Party underlines that the optimal spectrum package for a roll-out of 4G is a mixture of frequency spectrum. Lower frequencies (below 1GHz) are characterised by wider propagation in the field and a better penetration of walls, which makes them best suited to realise a large coverage of a mobile network. Higher frequencies (above 1GHz) are more suited to ensure capacity of a mobile network. Therefore, whilst the frequencies below 1GHz (for example 800MHz band) are used for mobile area coverage and the coverage of rural areas, the frequencies above 1GHz (for example 1800MHz or 2.6GHz) are deployed for capacity coverage, that is to say in urban areas.
- (162) The Commission notes, however, that it is feasible to effectively roll-out 4G networks without access to either 800 MHz or 1800 MHz, even though such networks might have the shortcomings described in recitals (163) to (168).
- (163) According to the experience of MNOs active outside of Germany, the roll-out of a 4G network solely on 800 MHz is feasible.⁸⁸ Respondents to the Market Investigation also explain that the possible capacity or speed restraints of a 4G network solely based on 800 MHz may be addressed by having a sufficient amount of spectrum in the 800 MHz band (that is to say, 2x20 MHz). Alternatively, the roll-

⁸⁸

See responses to Questionnaire Q1 to MNOs outside Germany dated 20.1.2014, question 12.

out of a 4G network based on 800 MHz would need to be complemented by adding a capacity layer on 1800 MHz or 2600 MHz.

- (164) In this context, the Notifying Party submits in its response to the Statement of Objections that rolling out a 4G network solely on 2x20 MHz in the 800 MHz band is only a theoretical option in Germany as the 2010 auction rules by BNetzA did not allow any of the four German MNOs to acquire 2x20 MHz in the 800 MHz band. Hence, for an effective roll-out of a 4G network, Deutsche Telekom, Vodafone and Telefónica which acquired spectrum in the 800 MHz band in the 2010 spectrum auctions need to add a capacity layer on 1800 MHz or 2600 MHz.
- (165) In this context, the Commission finds that according to the responses to the Market Investigation, it is possible to complement a coverage layer in the 800 MHz band with a capacity layer in the 2600 MHz band. The German LTE network of Vodafone is based on these two bands. Therefore, spectrum in the 1800 MHz is not needed for successfully rolling-out an LTE-network.
- (166) Likewise, an effective roll-out of a 4G network mainly based on 1800 MHz is considered feasible by MNOs active outside of Germany.⁸⁹ For example, [...] explains: "The 1800 MHz band provides a good combination of coverage and capacity properties. [...] considers that it would be possible to provide a network for both urban and rural areas only based on 1800 MHz."⁹⁰ [...] further explains that "[t]he first wave of LTE roll-out in Denmark has been solely on 1800 MHz both for Telia Sonera, Telenor and Hi3G".⁹¹ MNOs active outside Germany also named other examples of Member States, where MNOs have rolled out a 4G network solely on 1800 MHz. These include France (Bouygues Telekom S.A.), Italy (H3G S.p.a.), Netherlands (T-Mobile Netherlands B.V.), the United Kingdom (EE Limited).⁹²
- (167) The Commission considers that, in Member States such as Germany, a large part of the population (that is to say, that part which lives in urban areas) can be reached by a 4G network based on 1800 MHz. In this context, the Notifying Party puts forward that a 4G network roll-out based only on 1800 MHz would not be efficient in Germany. The Notifying Party explains that in France, Italy, and the United Kingdom, MNOs rolled out 4G networks on 1800 MHz, as spectrum in the 800 MHz band was not available to them at the time when they started their 4G roll-outs. However, according to the Notifying Party, in those three Member States, most MNOs announced their intention to supplement their 4G networks by adding a coverage layer based on 800 MHz. Only in Italy, H3G would continue to operate its 4G network solely on 1800 MHz. The Notifying Party adds that in the Netherlands, T-Mobile Netherlands does not use 800 MHz spectrum for its 4G network because it did not acquire any 800 MHz in the auction in 2012. Furthermore, the Notifying Party submits that the Statement of Objections does not properly reflect all answers of the respondents to the questionnaire regarding 4G networks based on 1800 MHz, as some respondents also mentioned possible cost-disadvantages of a roll-out of 4G networks in rural areas compared to the use of a 800 MHz coverage band in these areas. Hence, the deployment of a 4G network based on 1800 MHz would not be efficient in rural areas.

⁸⁹ See responses to Questionnaire Q1 to MNOs outside Germany dated 20.1.2014, question 14.

⁹⁰ [...] response to Questionnaire Q1 MNOs outside Germany dated 20.1.2014, Document ID 1871, question 14.

⁹¹ [...] response to Questionnaire Q1 MNOs outside Germany dated 20.1.2014, Document ID 1871, question 15.

⁹² See responses to Questionnaire Q1 MNOs outside Germany dated 20.1.2014, question 15.

- (168) As regards these arguments put forward by the Notifying Party, the Commission firstly notes that the examples of France, Italy, the Netherlands and the United Kingdom show that an initial roll-out of 4G networks solely based on 1800 MHz is feasible, even if MNOs at a later point in time decide to add a coverage layer based on 800 MHz. Furthermore, the Commission in its assessment took into consideration that the deployment of 4G networks based on 1800 MHz in rural areas is more costly than the deployment based on 800 MHz. Against this background, the Commission considers that in a Member State such as Germany large parts of the population living in urban areas can be reached by a 4G network based on 1800 MHz. This finding does not contradict the Notifying Party's argumentation. Indeed, as set out in recital (173), E-Plus which currently does not hold any spectrum in the 800 MHz band [...] aims at covering [...] % of the German population by the end of 2018.
- (169) The four MNOs in Germany pursue different strategic approaches with regard to 4G, which is also reflected in their respective spectrum holdings.
- (170) According to the Notifying Party's estimate based on publicly available data, Deutsche Telekom is rolling out 4G on the basis of 1800MHz spectrum in cities and on the basis of 800MHz spectrum outside of cities in Germany. According to the Notifying Party, Deutsche Telekom has announced that it aims to reach nationwide 4G coverage by the end of 2016. According to the Notifying Party, Deutsche Telekom is operating 9000 4G sites and announced that it reached 70% of the population (outdoor coverage) in 2013.
- (171) According to the Notifying Party's estimate based on publicly available data, Vodafone is rolling out 4G in Germany on the basis of 800MHz spectrum in the countryside as well as cities. In addition, 4G sites on the basis of 2600MHz spectrum are set up in "hotspots", that is to say areas with particularly high traffic. According to the Notifying Party, to date, Vodafone has built 6300 4G sites on 800MHz spectrum basis plus 400 sites operating with 2600MHz spectrum. Vodafone's 4G network currently covers 70% of the population. Vodafone announced recently to increase its investment in 4G and plans to achieve nation-wide 4G coverage in 2015.⁹³
- (172) Telefónica to date is rolling out 4G on the basis of 800 MHz spectrum. It has focussed mainly on specific areas such as [...]*. Furthermore, 2600MHz 4G is deployed [...]*. By the end of 2013, Telefónica operated around [...]* 4G sites covering approximately [40-50]*% of the population.⁹⁴ On a stand-alone basis, Telefónica aims at [...]*, as shown by its plans summarised in Table 9.

⁹³ See Document ID 4186.

⁹⁴ See Form CO, paragraph 418.

Table 9 Standalone LTE 800 MHz roll-out plan Telefónica 2014 to 2020

	2014	2015	2016	2017	2018	2019	2020	Total
LTE 800 sites (rollout)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
LTE 800 sites (cumulated)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
LTE Capex (Mio. EUR)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source: E.CA Economics based on synergy case provided by Telefónica.

- (173) In contrast to the other three German MNOs, E-Plus rolls out a 4G network solely on 1800 MHz. At the end of 2013, E-Plus had [...]* sites equipped with 4G network elements.⁹⁵ The commercial launch of 4G took place in March 2014. In the absence of the proposed transaction, E-Plus plans to rollout 4G network elements on [...]* sites until 2018, initially deploying [...]* MHz in the 1800 MHz band to its 4G network, which shall be later [...]* to [...]* MHz.⁹⁶ As shown by Table 10, E-Plus plans to achieve [...]*% outdoor population coverage with its 4G network by the end of 2018.⁹⁷ In this context, it should also be noted that E-Plus as opposed to the other three German MNOs is not subject to a roll-out obligation in specified rural areas. Whereas the licences for the 800 MHz spectrum contain such obligation, the 2010 licences for 1800 MHz spectrum only contain the obligation to reach 50% of the population by 1 January 2016. By the end of 2020, E-Plus intends to have rolled out 4G network elements on [...]* sites.⁹⁸

Table 10: E-Plus network deployment forecast 2013 to 2018⁹⁹

<u>SP 2014-2018 (Oct 2013)</u>		<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
<u>Network deployment: base case</u>		<u>EoY</u>	<u>EoY</u>	<u>EoY</u>	<u>EoY</u>	<u>EoY</u>	<u>EoY</u>
Total Sites	#	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
<u>Thereof BB backhaul</u>	#	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
<u>Thereof HSPA+</u>	#	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
<u>Thereof LTE</u>	#	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
<u>HSPA+ pop coverage outdoor</u>	%	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
<u>LTE pop coverage outdoor</u>	%	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source: E-Plus

⁹⁵ See E-Plus' response to the Commission's RFI No 6 dated 6.2.2014, Document ID 1689, question 2.

⁹⁶ See E-Plus' response to the Commission's RFI No 5 dated 24.1.2014, Document ID 1529, question 12.

⁹⁷ See E-Plus' response to the Commission's RFI No 5 dated 24 January 2014, Document ID 1529, question 12.

⁹⁸ See Form CO, paragraph 420.

⁹⁹ HSPA+ stands for evolved high speed packet access and is a technical standard for wireless telecommunication that is based on 3G networks but allows for higher speed than standard 3G networks.

6.2.4. *Role of other market players*

- (174) The German mobile communications market is characterised by the presence of providers of mobile communication services, which do not operate a mobile network themselves. These operators comprise so-called Mobile Virtual Network Operators ("MVNOs") and Service Providers. Branded Resellers also operate in the market as distributors of mobile communication services on behalf of MNOs using their own brand and their own distribution channels.
- (175) MVNOs and Service Providers sell mobile communication services to end-customers in their own name and for their own account based on wholesale access granted by MNOs to their respective mobile networks. While MVNOs partially own network infrastructure, such as the core network, which allows them to control their traffic, Service Providers do not own any network infrastructure at all. Hence, MVNOs are characterised by a higher degree of vertical integration. Furthermore, MVNOs have the ability to issue their own SIM cards, whereas Service Providers use SIM cards issued by their respective host MNO(s).
- (176) In contrast to MVNOs and Service Providers, Branded Resellers do not provide their own mobile communication services, but distribute mobile communication services contracts on behalf of MNOs. That is to say, while Branded Resellers use their own brand and distribution channels for offering mobile communication services, they do not enter into a contractual relationship for mobile services with the customer, but act as agents for the respective MNOs. The cooperation between E-Plus and Medion is a prominent example for the business model of a Branded Reseller. Under the brand Aldi Talk, Medion offers customers of Aldi-Nord GmbH & Co. oHG and Aldi-Süd GmbH & Co. oHG (together "Aldi") mobile communication services contracts with E-Plus. Other examples include Lidl Mobil and BILDmobil.
- (177) Based on revenue, MVNOs and Service Providers held an aggregate market share of around [10-20]*% in the overall retail market for mobile communication services in 2012.¹⁰⁰ Based on the number of subscribers, the aggregate market share of MVNOs and Service Providers in 2012 was slightly higher and reached around [10-20]*% of the total market.

6.2.4.1. MVNOs

- (178) At present, the number of MVNOs active in Germany appears to be limited to OnePhone Deutschland GmbH ("OnePhone") that targets SMEs,¹⁰¹ Sipgate Wireless GmbH ("Sipgate") that offers mobile communication services to consumers and SMEs, Lycamobile Germany GmbH ("Lycamobile")¹⁰² and Lebara Germany Limited ("Lebara") that focus on offering international mobile calls to consumers. Moreover, at the end of 2013, Truphone GmbH ("Truephone"), a new MVNO also specialising in international calls, appears to have started its operations in Germany.¹⁰³ The aggregated market share of MVNOs in the overall retail mobile communication market is [0-10]*%. The limited presence of MVNOs in the German market (especially compared to Service Providers) may depend on a number of factors. Some respondents to the Market Investigation pointed out that this limited

¹⁰⁰ The Commission considers that sales achieved by Branded Resellers are to be attributed to the MNO, whose products are distributed by the relevant Branded Reseller. See recital (255) for more information.

¹⁰¹ See OnePhone's website <http://www.onephone.de/service/servicephilosophie/>.

¹⁰² See Lycamobile's website <http://www.lycamobile.de/en/aboutus>.

¹⁰³ <http://www.truphone.com/de/pressebereich/2014-news/truphone-in-deutschland---international-zu-hause/>.

presence may be due to the fact that contrary to their legal obligation towards Service Providers, MNOs do not have any legal obligation to grant MVNOs access to their networks (for more information, see Section 6.2.4.5).

- (179) According to the information available to the Commission, MVNOs mainly market their own retail tariffs designed within the parameters of the wholesale access conditions negotiated with their respective host MNOs.

6.2.4.2. Service Providers

- (180) The number of Service Providers currently active in Germany, which amounts to roughly around 20, as well as their aggregated market share, is more significant than those of the German MVNOs.

- (181) In 2012, Freenet, the largest Service Provider, held a market share of around [10-20]*% in terms of revenue and [10-20]*% in terms of number of subscribers on the overall retail market for mobile telecommunications services, while 1&1, a fixed line internet provider which also operates as Service Provider, held a share of [0-10]*% both in terms of revenue and number of subscribers and Drillisch, another Service Provider, a share of around 1% in terms of revenue and around [0-10]*% in terms of the number of subscribers.

- (182) Freenet has wholesale access agreements with all four MNOs and sells its retail services in particular under the brands "callmobile," "debitel-light," "freenet-mobile," "klarmobil," "mobilcom-debitel" and "talkline." Freenet's distribution network comprises around 530 branded shops operated under its main brand mobilcom-debitel, about 6000 additional sales points at retailers, electronics dealers and superstores, as well as online and direct-to-customer sales.¹⁰⁴

- (183) 1&1 obtains wholesale access from Vodafone and markets its mobile communication services over the internet.¹⁰⁵ 1&1 also recently entered into a wholesale access agreement with E-Plus.

- (184) Drillisch has concluded wholesale access agreements with Vodafone and Telefónica and markets its retail mobile communication services offers over the internet. Drillisch's operations are mainly carried out by its wholly owned subsidiaries Drillisch Telecom GmbH, MS Mobile Services GmbH und eteleon AG. Drillisch's brands include "simplytel", "McSIM", "EmaXXim", "helloMobil", "smartmobil.de", "Phonex.de", "discotel", "discoplus", "discosurf", "eteleon", "fastSIM", "winSIM", "DeutschlandSIM" and "m2m-mobil."¹⁰⁶

- (185) There are many other Service Providers active on the German market (such as Unitymedia/Kabel BW, GTCOM GmbH ("GTCOM"), Versatel, Netcologne Gesellschaft für Telekommunikation mbH, Tele2), all of which, however, have an extremely limited market presence of less than 0.2% market shares based on subscribers.

- (186) Service Providers market both the original retail offers of their host MNOs and tariffs designed by the Service Providers within the parameters of the wholesale access conditions negotiated with their respective host MNOs.

¹⁰⁴ See Freenet's website <http://www.freenet-group.de/company/company-profile/index.html>.

¹⁰⁵ See 1&1's website <https://mobile.1und1.de/?linkOrigin=login-kundenshop&linkId=hd.mainnav.mobilfunk&ucuoId=PUlead.EUE.DE-20131209184226-52F239593757AD1646834AA6DAA3A07E.TCpfix117a>.

¹⁰⁶ Further information on Drillisch is available at its website <http://www.drillisch.de/>.

6.2.4.3. Branded Resellers

- (187) Branded Resellers are typically companies with a strong brand, a large customer base and well established sales channels, such as the consumer stores Aldi, Lidl, Tchibo, Edeka, Rossmann, Rewe or other entities with a well-established distribution network and well-known brand such as the automotive association Allgemeine Deutsche Automobil-Club e. V. (ADAC) or the newspaper Bild.
- (188) Branded Resellers market specific tariffs that the MNO design for distribution by them.

6.2.4.4. Pricing in wholesale agreements

- (189) There are different forms of wholesale agreements negotiated between MNOs, on the one hand, and MVNOs or Service Providers, on the other hand. Based on the data gathered during the Market Investigation, the Commission considers that the following types of pricing mechanism in current wholesale contracts can be distinguished from each other: (i) retail-minus pricing; (ii) price per unit pricing; and (iii) revenue or gross margin sharing.
- (190) Under the retail-minus model type of wholesale agreement, MVNOs and Service Providers offer original tariffs of their host MNO at their own retail prices. The fee that each MVNO or Service Provider must pay for each customer that is hosted on the MNO's network is based on a recommended retail price minus a margin for the MVNO or Service Provider. The recommended retail prices for those tariffs are set on the basis of the MNO's own retail prices for the respective tariffs. Each MVNO or Service Provider is therefore limited to offering original MNO tariffs at the recommended retail price, if it does not want to sacrifice its negotiated margin. In other words, the retail-minus prices which each MVNO or Service Provider must pay on the wholesale level to the host MNO constitute a crucial cost item for the retail pricing of the MVNO or Service Provider. For this reason, the Notifying Party considers that the retail-minus pricing does not significantly differ from the other two types of wholesale pricing agreements. It further submits that in the case of retail-minus wholesale agreements, the commercial risk of over-usage lays with host MNO and not with the MVNOs or Service Providers. For this reason, the retail-minus model would be widely requested by MVNOs and Service Providers.
- (191) In the case of price per unit pricing, the prices to be paid by the MVNO or Service Provider are based on the units of services obtained (that is to say per minute, SMS, MB or MB packages). The MVNO or Service Provider is free to design its own retail tariffs. The negotiated wholesale prices constitute, however, a limit for the minimum retail prices that a MVNO or Service Provider can offer while covering its costs. Furthermore, MVNOs and Service Providers are limited in their own design of tariffs including a pre-packaged data component, as they can only build them on the pre-defined packages by their host MNO. If the host MNO only offers to the MVNOs or Service Providers 500 MB packages, the MVNOs or Service Provider cannot offer, for example, 250 MB packages or 750 MB packages without significant commercial risks. Indeed, in order to do so, it would either have to purchase the data by the MB, which, given the wholesale price per MB, it is most of the times not viable from a commercial perspective (to be competitive on the retail market, a pre-packaged tariff with a data component would have to be priced at a level which would be loss-making for the MVNOs or Service Providers given the high wholesale price per MB). In this context, Telefónica submits that its wholesale offers for data components [...]*.

- (192) In the case of revenue or gross margin sharing between the MNO and the MVNO or Service Provider, the MNO participates in the revenue or gross margin realised by the MVNO or Service Provider with customers hosted by the MNO. The relevant revenue or gross margin is calculated by deducting the host MNO's costs of goods sold (COGS), such as termination fees to be paid to third parties, from the revenues realised by the MVNO or Service providers with its end-customers.¹⁰⁷ In this context, Telefónica submits that in the case of the revenue sharing agreements, the risk of over-usage by end-customers lies with Telefónica and not with the MVNO or Service Provider.
- (193) Compared to the retail-minus model, which pre-defines the tariff structure and the pricing which can be offered by the MVNOs or Service Providers, the price per unit pricing and the revenue or gross margin sharing models leave it to the MVNOs or Service Providers to design the tariff structure and set the retail price. In the light of opinions by MVNOs and Service Providers expressed in the course of the Market Investigations,¹⁰⁸ the Commission considers that the retail-minus model leaves less flexibility to the MVNOs and Service Providers to design and price their retail tariffs. In fact, if they would like to deviate from the tariff structure designed by the host MNO, they would have to rerate the original MNO tariff and bear the commercial risk inherent to such rerating. While the price per unit and the revenue or gross margin sharing models offer MVNOs and Service Providers more ability to design their tariffs and set the retail price, the scope of any such ability always remain dependent on the access conditions determined by the host MNO.
- (194) Often wholesale agreements also include advertising subsidies, bonuses and incentive payments, which are paid by the MNO to the MVNO or Service Provider, for instance for the acquisition of new customers or for achievement of certain target figures. These bonuses and incentive schemes appear to play an important role in the decisions of the MVNOs and Service Providers as to what tariffs and from which MNO to market and promote more aggressively with their customers. If, for example, an MNO grants an attractive marketing or promotional subsidy to the MVNO or Service Provider to market or promote its tariffs, MVNOs and Service Providers may be more inclined to specifically promote that MNO's tariffs.

6.2.4.5. Regulatory regime

- (195) As regards the regulatory regime applicable to MVNOs and Service Providers, a distinction can be made between: (1) possible obligations with which MVNOs and Service Providers would have to comply when entering the German market; and (2) obligations imposed upon MNOs to facilitate market entry of MVNOs and Service Providers. The Notifying Party's submission regarding BNetzA's alleged power to regulate the retail mobile telephony market in Germany will also be discussed.

Regulatory obligations applicable to MVNOs and Service Providers

- (196) As regards the first set of obligations, in order to enter the market for the retail provision of mobile communication services, MVNOs and Service Providers do not need any particular authorisation or licence. Like other providers of publicly available telecommunications services, they are only required to notify the BNetzA

¹⁰⁷ [...]*.

¹⁰⁸ See responses to Questionnaire Q1 to MNOs dated 31 October 2013, question 46; Questionnaire Q2 to MVNOs dated 31 October 2013, question 45; Questionnaire Q2 to MVNOs and to Service Providers dated 21 January 2014, questions 52 and 53; Questionnaire to mobile network operators active in Germany dated 20 January 2014, questions 41 and 42.

about the start of their operations in accordance with Section 6 of the German Telecommunication Act (*Telekommunikationsgesetz*, TKG). Hence, from a legal perspective, it is sufficient for a new entrant planning to be active as an MVNO or a Service Provider to negotiate a wholesale access agreement with an MNO.

Service Provider Obligation

- (197) As regards the second set of obligations referred to in recital (195), market entry as a Service Provider (but not as a MVNO) is currently supported by a regulatory access regime, which is mainly based on the 2G licences of Deutsche Telekom, Vodafone and E-Plus granted in 1990. Clause 17 of these licences requires the respective licence holders to admit suitable Service Providers, which shall be entitled to market in their own name and for their own account the mobile services of the licence holder and to develop and offer to their customers additional services within the scope of the licence, the so-called Service Provider Obligation (*Diensteanbieterverpflichtung*). The Service Provider Obligation also requires that the 2G licence holders grant wholesale access to their mobile network on a non-discriminatory basis. The licence holders may not offer any less favourable conditions to Service Providers than those that apply to its own marketing organisation and may also not discriminate between different Service Providers. Telefónica's 2G licence, which was granted later than those of the other three MNOs, is not subject to the Service Provider Obligation. The 2G licences of all four MNOs will expire on 31 December 2016.
- (198) In addition to the Service Provider Obligation stipulated in the 2G licences, the 3G licences of all four MNOs contain an access and a non-discrimination obligation in their respective clause 15. According to the Notifying Party,¹⁰⁹ there are different views on the legal validity of the clause 15 of the 3G licences, because it refers, as its legal basis, to Section 4(1) and (2) of the former Telecommunications Customer Protection Ordinance (*Telekommunikations-Kundenschutzverordnung*, "TKV"), which is no longer in force.¹¹⁰ In the decision of its presidency chamber of 12 October 2009,¹¹¹ the BNetzA considered that the Service Provider Obligation in the 2G and 3G licences remain in force on the basis of Section 150(4) of the TKG.¹¹² Furthermore, in that decision, the BNetzA considered that the Service Provider Obligation constitutes a personal obligation of the respective licence holders and is therefore not limited to a specific spectrum.¹¹³ The 3G licences will expire on 31 December 2020.
- (199) The 4G licences, which have been awarded to date, do not contain any Service Provider Obligation. Based on the BNetzA's decision of 12 October 2009, the BNetzA takes the view that [...]*.¹¹⁴ However, this question has not yet been dealt with by the German courts. Based on the current refusal of MNOs to grant MVNOs and Service Providers access to LTE services (despite reselling MNO LTE tariffs),

¹⁰⁹ See Form CO, paragraph 242.

¹¹⁰ Section 4 (1) and (2) TKV was abrogated in 2004 as part of the amendment of the TKG in that same year.

¹¹¹ The respective decision ("Entscheidung der Präsidentenkammer der Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen vom 12. Oktober 2009", Document ID 4139, ruled that the frequencies to be awarded in 2010 were to be awarded by way of an auction and stipulated the rules applicable to this auction.

¹¹² See "Entscheidung der Präsidentenkammer der Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen vom 12. Oktober 2009", p. 107, Document ID 4139.

¹¹³ See "Entscheidung der Präsidentenkammer der Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen vom 12. Oktober 2009", p. 106, Document ID 4139.

¹¹⁴ See Document ID 1633, comments by BNetzA on Reply to the Article 6(1)(c) Decision.

MNOs presumably do not sharing the view of the BNetzA. According to internal documents, Telefónica regards the potential risks of denying wholesale access to LTE as "[...]*".¹¹⁵

- (200) Given that clauses 15 and 17 of the 2G and 3G licences explicitly refer to Service Providers and do not mention MVNOs, it appears that the Service Provider Obligation does not entitle MVNOs to obtain wholesale access to an MNOs mobile network. The Service Provider Obligation is probably one of the main reasons why the German mobile communication market is characterised by a stronger presence of Service Providers than MVNOs.
- (201) Several respondents to the Phase I Market Investigation expressed the view that, in the absence of that legal obligation, MNOs would not be willing to grant wholesale access to their mobile network.¹¹⁶ Even [...]* stated that "[t]he Service Provider obligation plays a significant role in negotiations with potential new partners, and with existing partners. As MNO we cannot just decide on commercial facts whether to cooperate with a new partner, or offer a new product to an existing partner, but have to consider the service provider obligation."¹¹⁷ MNOs and MVNOs and Service Providers also report instances where Service Providers invoked the Service Provider Obligation in proceedings before the BNetzA and the German courts,¹¹⁸ which shows that the Service Provider Obligation can actually be enforced. Likewise, in response to the Commission's Phase II Market Investigation, Service Providers have underlined the importance of the Service Provider Obligation.¹¹⁹
- (202) However, the continued existence of the explicit Service Provider Obligation is uncertain. The 2G licences containing such an obligation on the part of Deutsche Telekom, Vodafone and E-Plus will expire on 31 December 2016. As of the date of this decision, it is not known whether the BNetzA will include access obligations similar to the current Service Provider Obligations in future licences.
- (203) Furthermore, given the legal uncertainty as to the applicability of the Service Provider Obligation in relation to the 3G and 4G networks, after 31 December 2016 it is likely to be more difficult than it is at present for Service Providers to negotiate favourable wholesale access conditions and thus to effectively compete on the market – at least unless or until it has ultimately been decided by the competent courts that (i) the non-discrimination obligation in the 3G licences is valid despite its reference to an ordinance that is no longer in force (see Recital (198)); (ii) that such a non-discrimination obligation has the same scope as the Service Provider Obligation in the 2G licences; and (iii) that such an obligation also extends to the 4G licence. The Commission notes the argument of the Notifying Party that this uncertainty does not arise, as the BNetzA takes the view that [...]*. However, there is legal uncertainty as to the legal basis of these clauses and the 3G licences will expire on 31 December 2020. Hence, even if the Notifying Party's argumentation were accepted, the Service Provider Obligation becomes more uncertain and would still be limited in time.

¹¹⁵ See recital (631).

¹¹⁶ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 89.

¹¹⁷ See response to Questionnaire Q1 to MNOs dated 31 October 2013, question 104.

¹¹⁸ See responses to Questionnaire Q1 to MNOs dated 31 October 2013, question 105 and Questionnaire Q2 to MVNOs dated 31 October 2013, question 89.1.

¹¹⁹ See responses to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 54.

- (204) To conclude, the Commission notes that the BNetzA has the power to impose an access obligation by administrative order on an MNO in accordance with Section 21(2) No. 3 of the TKG where it has found that that MNO has significant market power.¹²⁰ In order to impose that remedy, BNetzA must first prove that significant market power is held by the MNO in question.¹²¹ In this context, the Commission also notes that the wholesale market for access and call origination is no longer susceptible to *ex ante* regulation according to Commission Recommendation 2007/879/EC of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services.¹²² Hence, before assessing whether an MNO holds significant market power, BNetzA would also have to perform the three criteria test laid out in the second recommendation of that Recommendation in order to determine whether the market is relevant for ex-ante regulation.¹²³
- (205) As regards the Notifying Party's submission that the BNetzA is has the power to impose a Service Provider Obligation on the basis of the second sentence of Section 18(1) of the TKG at its due discretion, the Commission firstly notes that this interpretation of Section 18(1) of the TKG is [...]*.¹²⁴ Indeed, the BNetzA pointed out that [...]*. Moreover, Section 18(1) of the TKG provides that the BNetzA may only impose certain measures in order to ensure end-to-end connectivity of services.¹²⁵ Hence, Section 18(1) of the TKG cannot be regarded as a possible legal basis to impose a general Service Provider Obligation on MNOs.

Alleged Powers of BNetzA to regulate the market

- (206) In its Reply to the Article 6(1)(c) Decision, the Notifying Party submitted that the BNetzA has extensive powers to regulate the retail mobile communications market in

¹²⁰ In this context, also see Article 12 ("Obligations of access to, and use of, specific network facilities") of Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive) (OJ L 108, 24.4.2002, p. 7), as well as the Directive 2002/21/EC of the European Parliament and the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) (OJ L 108, 24.4.2002, p. 33), the provisions of which have been transposed into German telecommunications law.

¹²¹ See comments by the BNetzA on the Reply to the Article 6(1)(c) Decision, Document ID 1633, [...]*.
¹²² OJ L 344, 28.12.2007, p. 65.

¹²³ That provision stipulates the following: "2. When identifying markets other than those set out in the Annex, national regulatory authorities should ensure that the following three criteria are cumulatively met: (a) the presence of high and non-transitory barriers to entry. These may be of a structural, legal or regulatory nature; (b) a market structure which does not tend towards effective competition within the relevant time horizon. The application of this criterion involves examining the state of competition behind the barriers to entry; (c) the insufficiency of competition law alone to adequately address the market failure(s) concerned."

¹²⁴ See Document ID 1633, comments by the BNetzA on the Reply to the Article 6(1)(c) Decision.
¹²⁵ The provision reads as follows: "*§ 18 Kontrolle über Zugang zu Endnutzern, (1) Die Bundesnetzagentur kann Betreiber öffentlicher Telekommunikationsnetze, die den Zugang zu Endnutzern kontrollieren, in begründeten Fällen verpflichtet, auf entsprechende Nachfrage ihre Netze mit denen von Betreibern anderer öffentlicher Telekommunikationsnetze zusammenzuschalten, soweit dies erforderlich ist, um die Kommunikation der Nutzer und die Bereitstellung von Diensten sowie deren Interoperabilität zu gewährleisten. Darüber hinaus kann die Bundesnetzagentur Betreibern öffentlicher Telekommunikationsnetze, die den Zugang zu Endnutzern kontrollieren, weitere Zugangsverpflichtungen auferlegen, soweit dies zur Gewährleistung des End-zu-End-Verbunds von Diensten erforderlich ist.*"

Germany, including the enforcement of the Service Provider Obligations contained in the 2G and 3G licences, the imposition of Service Provider Obligations on the basis of Sections 18 and 21 of the TKG, the prohibition of abusive behaviour on the basis of Sections 42 *et seq.* of the TKG, and Articles 101 and 102 of the Treaty on the Functioning of the European Union, the allocation of frequencies in accordance with Section 55 of the TKG, and the monitoring of the use of frequencies after the allocation procedures. In the view of the Notifying Party, these powers of the BNetzA should be taken into account when assessing any possible anti-competitive effects of the proposed transaction. The Notifying Party further explained that a correct merger control assessment needs to consider to what extent any competition concerns are addressed timely and effectively by sector specific regulation. The Notifying Party argues that due to the far-reaching regulatory powers of the BNetzA in Germany, the transaction can be cleared because certain possible anti-competitive effects relating to the wholesale access of MVNOs and Service Providers could be addressed by the BNetzA after the proposed transaction.

- (207) In that respect, the Commission points out that sector specific regulation and competition law may have different objectives and exist in parallel.¹²⁶ Nevertheless, any possible competence held by a national regulator, such as BNetzA, to regulate the market (which, in any event, the BNetzA [...]*)¹²⁷ does not, as such, mitigate the likely anti-competitive effects of a concentration affecting the relevant sector. In other words, if the Commission considers that a proposed concentration gives rise to competition concerns, the fact that a national regulator may have certain powers to intervene *ex post* and regulate the conduct of the merged entity on the market does not mitigate these concerns. Furthermore, certain powers of the BNetzA are based on the finding of significant market power. Given that the merged entity will not have a dominance position in the German market, such powers are not sufficient to mitigate the competition concerns the proposed transaction gives rise to.
- (208) In this context, the Notifying Party submits that in accordance with paragraph 9 of the Horizontal Merger Guidelines, the Commission should take into account a possible regulatory intervention by the BNetzA by imposing a wholesale access obligation, if such intervention can be reasonably predicted.¹²⁸ As regards this issue, the Commission firstly emphasises, that according to paragraph 9 of the Horizontal Merger Guidelines, in most cases the competitive conditions existing at the time of the merger constitute the relevant comparison for evaluating the effects of a merger. Only in some circumstances, the Commission may take into account future changes to the market that can reasonably be predicted. At in the present time, however, it cannot be reasonably predicted that the BNetzA will include a Service Provider Obligation in the spectrum licences to be awarded following the expiry of the 2G licences on 31 December 2016 given that the BNetzA itself has not yet given any clear indication on this question. Furthermore, in light of the Commission's findings set out in recitals (204) and (205), it can not be reasonably predicted that the BNetzA will impose any access obligations on the German MNOs in accordance with Sections 18 (1) 2 or 21 (2) No. 3 of the TKG.

¹²⁶ See the judgment of the Court of First Instance of 10 April 2008 in Case T-271/03, Deutsche Telekom v. Commission, ECR [2008] II-477, paragraph 113; and the judgment of the Court of Justice of 14 October 2010 in Case C-280/08 Deutsche Telekom vs. Commission, ECR [2010] I-9555, paragraphs 80 to 96.

¹²⁷ See Document ID 1633, Comments by the BNetzA on the Reply to the Article 6(1)(c) Decision.

¹²⁸ See Reply to the Statement of Objections, paragraph 189.

6.3. Retail market for mobile telecommunications services

6.3.1. Horizontal non-coordinated effects

(209) The Commission has assessed whether the proposed transaction is likely to lead to horizontal non-coordinated effects in the retail market for mobile telecommunications services to end customers. 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."¹²⁹

(210) Generally, a merger giving rise to such non-coordinated effects would significantly impede effective competition by creating or strengthening the dominant position of a single firm, one which, typically, would have an appreciably larger market share than the next competitor post-merger. Furthermore, mergers that do not lead to the creation or the strengthening of the dominant position of a single firm may also create competition concerns. In particular, mergers in oligopolistic markets involving the elimination of important competitive constraints that the parties previously exerted upon each other with a reduction of competitive pressure on the remaining competitors may, even where there is little likelihood of coordination between the members of the oligopoly, also result in a significant impediment to competition.¹³⁰

(211) The proposed transaction will create a market with three MNOs of similar size. The merged entity will be the market leader in the pre-paid segment ([40-50]*% in terms of revenues and [50-60]*% in terms of subscribers), that currently constitutes more than half of the German retail market (in terms of subscribers) and will continue to account for a very significant portion of the German market in the foreseeable future (see recital (67)). In addition, the market and segment share increments brought about by the proposed transaction are significant on the overall retail market and its various segments. In addition, the Parties' market shares on each of (i) the overall market, (ii) the post-paid and (iii) the pre-paid segments have been stable or increasing (especially in pre-paid) during the last three years.

(212) The proposed transaction will also give rise to a very concentrated market structure and will eliminate two close, aggressive players in the market by combining them in one sole entity with a larger subscriber basis with fewer incentives to price aggressively. This is likely to result in a significant relaxation of the competitive pressure on the market. It is unlikely, contrary to what the Notifying Party seems to suggest, that the other MNOs, which to date have never been price challengers, but merely price (typically slow) followers, would change their strategy post-transaction,

¹²⁹ Horizontal Merger Guidelines, paragraph 24.

¹³⁰ Horizontal Merger Guidelines, paragraph 25.

when they could indirectly benefit of a possible price increase by the merged entity. Further, neither the MVNOs, nor the Service Providers or the Branded Resellers are likely to be able to counteract a possible price increase by the merged entity and the other MNOs or more generally to effectively threaten the market equilibrium that could be reached in a stable and effective way post-transaction by the players in a more symmetric market structure. The economic analysis performed by the Commission indicates that the proposed transaction is likely to trigger significant price increases on the relevant market as a result of a significant lessening of competition. Telefónica's own internal analysis of the likely effects of the proposed transaction on the market [...]*, [...]*, Telefónica itself considers that the proposed transaction will lead to a "[...]"¹³¹, will result in an "[...]"¹³² and by [...] will lead to a "[...]"¹³³.

- (213) The different factors that led the Commission to identify the competition concerns outlined in recitals (211) and (212) are explained in the following subsections. First the Commission sets out the high degree of concentration in the retail mobile telephony market in Germany (Section 6.2.1.1). Subsequently, the Commission examines the closeness of competition between the Parties (Section 6.2.1.2). The Commission then considers whether the Parties are currently important competitive forces (Section 6.2.1.3) and whether post-transaction their incentives to compete will change (Section 6.2.1.4). The Commission then considers the incentive and ability of other MNOs to compete after the proposed transaction (Section 6.2.1.5), as well as the incentive and ability of MVNOs, Service Providers and Branded Resellers to compete after the proposed transaction (Section 6.2.1.6). Finally, the Commission undertakes an in-depth quantitative analysis of the non-coordinated effects of the proposed transaction, consisting of: (i) an extension and further refinement of the standard Upward Pricing Pressure ("UPP") analysis set out in the Article 6(1)(c) Decision; and of (ii) an econometric estimation of consumer demand. Both of these approaches are used to assess whether the elimination of competition between the Parties will generate an incentive to increase prices for the merged entity post-transaction (Section 6.2.1.7).

6.3.1.1. Shares on the overall market and on the different possible segmentation thereof

Notifying Party's view

- (214) The Notifying Party claims that the proposed transaction will not lead to any negative non-coordinated effects on either the overall market or any particular sub-segment of the market.
- (215) In the Notifying Party's view, the effects of the proposed transaction should be assessed on the overall retail market, which due to the supply-side substitutability, constitutes the most appropriate market definition. The Notifying Party emphasises that on the overall market the merged entity will have a share below 35% (in terms of subscribers) or 30% (in terms of revenues) and will be facing competition from two strong players namely Vodafone and Deutsche Telekom. According to the Notifying Party, these MNOs will have an advantage over the merged entity due to the perception that they have a better network quality and their ability to offer bundled triple and quadruple play offers, combining fixed and mobile lines, TV and Internet. In addition, the Notifying Party submits that the market shares data contained in the

¹³¹ Presentation by Telefónica: "Project Dylan" dated 11 May 2012, Document ID 991-12163, p. 3 and 8.

¹³² Presentation by Telefónica: "Project Dylan" dated 11 May 2012, Document ID 991-12163, p. 8

¹³³ Presentation by Telefónica: "Project Flower" dated 26 April 2012, Document ID 991-16379, slide 3.

Tables 11 to 23 set out in recitals (225) to (231) overestimate E-Plus' market position. E-Plus has gained, according to the Notifying Party, only a limited number of subscribers in recent years and the increase of its market shares between 2009 and 2012 is a result of [...] (a Branded Reseller) significant sales.

- (216) The Notifying Party disputes that the sales realised by Branded Resellers should be taken into account for the calculation of Telefónica's and E-Plus' market shares. In particular, the Notifying Party emphasises that [...], due to its large customer base, is able to exercise a strong countervailing power vis-à-vis E-Plus and the other MNOs. [...]. In addition, the Notifying Party claims that [...] as E-Plus [...]
- (217) Furthermore, the Notifying Party submits that Lidl's share should not be attributed to the merged entity [...]. In addition, the Notifying Party submits that the market share of Tchibo Mobilfunk GmbH & Co. KG ("Tchibo Mobil"), a joint venture between Telefónica and Tchibo GmbH ("Tchibo"), should not be taken into account as Telefónica does not fully control it. [...]. Finally, the Notifying Party claims that all other Branded Resellers of Telefónica (Vzmobil GmbH, Kaufland and Ringfoto) have strong incentives to offer lower prices to acquire new clients [...].
- (218) If the Branded Resellers' sales were to be deducted from the Parties' total share, the merged entity would account for [20-30]% (in terms of subscribers) and [20-30]% (in terms of revenues) of the overall retail market and would be only the third player behind Deutsche Telekom and Vodafone.
- (219) As regards the possible segment(s) for post-paid customers, the Notifying Party argues that the merged entity will have a market share of around [20-30]% and will continue to face competition from Vodafone and Deutsche Telekom, which have a better perceived image and brand, remain strong players and will have market shares similar to (or greater than) that of the merged entity. The Notifying Party claims that in the post-paid segment, particularly in relation to the possible segment for post-paid business customers, E-Plus, due to its low brand reputation and the perceived poor quality of its network, plays a limited role. In that respect, the Notifying Party stressed that the merger will have a strong pro-competitive effect in the post-paid segment, and in particular in the business post-paid segment, of the market to the extent that the merged entity will be able to compete on an equal footing with Deutsche Telekom and Vodafone, who continue to invest heavily in their network. The Notifying Party claims that in the absence of the merger, E-Plus and Telefónica would not be able to undertake the necessary investments. On the post-paid residential segment, the Notifying Party claims that the merged entity will face competition not only from the other MNOs, but also from a number of MVNOs and Service Providers such as Drillisch, 1&1 and Freenet.
- (220) As regards the segment for pre-paid and lower-value customers, the Notifying Party claims that the segment shares overestimate the Parties' position and, in particular, that of E-Plus. This reflects, in particular, the fact that a significant part of E-Plus' sales on this segment are achieved via its Branded Reseller [...], which had [...] customers and a share of [10-20]% in this segment in 2012.
- (221) If the Branded Resellers' sales were to be deducted from the Parties' total share on this segment, the merged entity would account for [30-40]% (in terms of revenues) and [20-30]% (in terms of subscribers) of the pre-paid segment. Furthermore, the fact that consumers in this segment are very price sensitive and can switch suppliers very easily without incurring costs indicates, according to the Notifying Party, that the merged entity's ability to increase prices is very constrained. According to the Notifying Party, this is particularly true given that pre-paid and low value customers

are easily aware of the different tariffs because pre-paid tariffs are normally marketed through distribution channels proposing most of the times all operators' tariffs.

- (222) Furthermore the Notifying Party stresses that, even if the shares of Branded Resellers were to be attributed to the host MNOs, the merged entity's shares in some segments and in particular on the pre-paid market are not informative of its position on the overall market. The Notifying Party claims that, because the pre-paid market segment accounts for only around [10-20]*% of the total market in terms of revenues, the strong position of the merged entity on this segment ([50-60]*%) would translate, if projected on the total market, into a very limited share ([0-10]*%), and cannot be considered as indicative of any market power of the merged entity in the overall market.
- (223) Finally, the Notifying Party reiterates that the effects of the proposed transaction should be assessed on the overall market and that due to the high level of supply side substitutability between the pre-paid/low level and the post-paid/high value segments of the market, other players could easily extend their activities in the pre-paid/low end segments of the market and react to a possible price increase by the merged entity. In addition, according to the Notifying Party, due to the increasing demand-side substitutability between pre-paid and post-paid offers, post-paid offers exert a significant competitive pressure on pre-paid ones. Moreover, the Notifying Party underlined that the merged entity will face also in the pre-paid and low value segments strong competition deriving from the MNOs (in particular, Deutsche Telekom is active in this market using its Congstar brand and is offering together with Vodafone discount prices and promotions to win customers from the discount brands).

Commission's assessment

Market shares

- (224) Tables 11, 12 and 13 and 14, 15, and 16 set out in recital (225) illustrate the Parties' and the other MNOs' market share at a network level (that is to say by allocating to each MNO also the revenues and subscribers of the MVNOs, Service Providers and Branded Resellers hosted on their respective networks) for 2012 and 2013 respectively. The Commission considers that that data is relevant since: (a) it provides a snapshot of the relative position of the only four network operator in Germany; and (b), as further explained in Section 6.3.1.6, MVNOs, Service Providers and Branded Resellers do not own a network, are largely dependent on the host MNOs and, hence, either they cannot be considered as independent competitive forces in the market (Branded Resellers) or they do not exercise the same degree of competitive constraints as MNOs (MVNOs and Service Providers).
- (225) The proposed transaction will reduce the number of network players from four to three in Germany by combining the two smallest MNOs. It will create the largest MNO in terms of subscribers, while the merged entity would still remain the number three player in terms of revenues on the overall retail market, as well as on the post-paid segment. In the pre-paid segment, the merged entity would be by far the leader in terms of both subscribers and revenues.

Table 11: Market shares on the German overall retail mobile market at network level (2012)

	Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties' combined
Subscribers	[30-40]**%	[30-40]**%	[10-20]**%	[20-30]**%	[30-40]**%
Revenues	[30-40]**%	[30-40]**%	[10-20]**%	[10-20]**%	[30-40]**%

Source: The Notifying Party's estimates

Table 12: Market shares on the German overall retail mobile market at network level (2013)

	Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties' combined
Subscribers	[30-40]**%	[20-30]**%	[10-20]**%	[20-30]**%	[30-40]**%
Revenues	[30-40]**%	[30-40]**%	[10-20]**%	[10-20]**%	[30-40]**%

Source: The Notifying Party's estimates provided in the Reply to the RFI No 13 dated 27 March 2014

Table 13: Segment shares on the German post-paid segment at network level (2012)

	Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties' combined
Subscribers	[30-40]**%	[30-40]**%	[10-20]**%	[10-20]**%	[30-40]**%
Revenues	[30-40]**%	[30-40]**%	[10-20]**%	[10-20]**%	[20-30]**%

Source: The Notifying Party's estimates

Table 14: Segment shares on the German post-paid segment at network level (2013)

	Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties' combined
Subscribers	[30-40]**%	[30-40]**%	[10-20]**%	[10-20]**%	[30-40]**%
Revenues	[30-40]**%	[30-40]**%	[10-20]**%	[10-20]**%	[20-30]**%

Source: The Notifying Party's estimates provided in the Reply to the RFI No 13 dated 27 March 2014

Table 15: Segment shares on the German pre-paid segment at network level (2012)

	Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties' combined
Subscribers	[20-30]**%	[30-40]**%	[10-20]**%	[20-30]**%	[40-50]**%
Revenues	[20-30]**%	[20-30]**%	[10-20]**%	[30-40]**%	[50-60]**%

Source: The Notifying Party's estimates

Table 16: Segment shares on the German pre-paid segment at network level (2013)

	Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties' combined
Subscribers	[20-30]**%	[20-30]**%	[10-20]**%	[20-30]**%	[40-50]**%
Revenues	[20-30]**%	[20-30]**%	[10-20]**%	[30-40]**%	[50-60]**%

Source: The Notifying Party's estimates provided in the RFI No 13 dated 27 March 2014

- (226) Tables 17 and 18 illustrate the shares of the four MNOs, Service Providers and MVNOs on the overall retail market. Based on that data, the merged entity will have an overall market share similar to that of the other two MNOs (greater in terms of subscribers and slightly lower in terms of revenues). It should also be observed that [...] * As further explained in recitals (618) et seq., whilst some individual Service Providers might have increased their shares, the aggregate market shares of Service Providers in subscribers and in revenue is in constant decline since the earliest days of mobile telephony in Germany.

Table 17: Market shares on the German overall retail mobile market (MVNOs and Service Providers reported separately) (2012)

	Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties' combined	Freenet	Drillisch	1&1	Other MVNOs
Subscribers	[20-30]**%	[20-30]**%	[10-20]**%	[10-20]**%	[30-40]**%	[10-20]**%	[0-10]**%	[0-10]**%	[0-10]**%
Revenues	[20-30]**%	[20-30]**%	[10-20]**%	[10-20]**%	[20-30]**%	[10-20]**%	[0-10]**%	[0-10]**%	[0-10]**%

Source: The Notifying Party's estimates

Table 18: Market shares on the German overall retail mobile market (MVNOs and Service Providers reported separately) (2013)

	Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties' combined	Freenet	Drillisch	1&1	Other MVNOs
Subscribers	[20-30]**%	[20-30]**%	[10-20]**%	[20-30]**%	[30-40]**%	[10-20]**%	[0-10]**%	[0-10]**%	[0-10]**%
Revenues	[20-30]**%	[20-30]**%	[10-20]**%	[10-20]**%	[20-30]**%	[10-20]**%	[0-10]**%	[0-10]**%	[0-10]**%

Source: The Notifying Party's estimates provided in Reply to the RFI n. 13 dated 27, March 2014

- (227) Moreover, as it emerges from Table 19 set out in recital (227), the merged entity will have more post-paid customers than the other MNOs which is caused by its particular strong position based on subscribers and revenues among post-paid residential customers.

(228) In addition, the merged entity will be, by far, the leader in the pre-paid market segment, based both on revenue and on the number of subscribers (see table 20).

Table 19: Shares on the post-paid segment of the German retail mobile market (MVNOs and Service Providers reported separately) (2012)

		Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties combined	Freenet	Drillisch	1&1	Other MVNOs
Post-paid	Subscribers	[20-30]*%	[20-30]*%	[10-20]*%	[10-20]*%	[20-30]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%
	Revenue	[20-30]*%	[20-30]*%	[10-20]*%	[10-20]*%	[20-30]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%
Post-paid business	Subscribers	[40-50]*%	[30-40]*%	[0-10]*%	[0-10]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%	[0-10]*%
	Revenues	[40-50]*%	[30-40]*%	[0-10]*%	[0-10]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%	[0-10]*%
Post-paid private	Subscribers	[20-30]*%	[10-20]*%	[10-20]*%	[10-20]*%	[30-40]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%
	Revenues	[20-30]*%	[20-30]*%	[10-20]*%	[10-20]*%	[20-30]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%

Source: The Notifying Party's estimates

Table 20: Shares on the post-paid segment of the German retail mobile market (MVNOs and Service Providers reported separately) (2013)

		Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties combined	Freenet	Drillisch	1&1	Other MVNOs
Post-paid	Subscribers	[20-30]*%	[20-30]*%	[10-20]*%	[10-20]*%	[20-30]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%
	Revenue	[30-40]*%	[20-30]*%	[10-20]*%	[10-20]*%	[20-30]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%
Post-paid business	Subscribers	[40-50]*%	[30-40]*%	[0-10]*%	[0-10]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%	[0-10]*%
	Revenues	[40-50]*%	[40-50]*%	[0-10]*%	[0-10]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%	[0-10]*%
Post-paid private	Subscribers	[20-30]*%	[10-20]*%	[10-20]*%	[10-20]*%	[30-40]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%
	Revenues	[20-30]*%	[20-30]*%	[10-20]*%	[10-20]*%	[20-30]*%	[10-20]*%	[0-10]*%	[0-10]*%	[0-10]*%

Source: The Notifying Party's estimates provided in the Reply to the RFI No 13 dated 27 March 2014

Table 21: Shares on the pre-paid segment of the German retail mobile market (MVNOs and Service Providers reported separately) (2012)¹³⁴

		Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties combined	Freenet	Drillisch	Other MVNOs
Pre-paid	Subscribers	[20-30]*%	[20-30]*%	[10-20]*%	[20-30]*%	[40-50]*%	[10-20]*%	[0-10]*%	[0-10]*%
	Revenue	[10-20]*%	[10-20]*%	[10-20]*%	[30-40]*%	[50-60]*%	[0-10]*%	[0-10]*%	[0-10]*%

Source: The Notifying Party's estimates

Table 22: Shares on the pre-paid segment of the German retail mobile market (MVNOs and Service Providers reported separately) (2013)¹³⁵

		Deutsche Telekom	Vodafone	Telefónica	E-Plus	Parties combined	Freenet	Drillisch	Other MVNOs
Pre-paid	Subscribers	[20-30]*%	[20-30]*%	[10-20]*%	[20-30]*%	[40-50]*%	[10-20]*%	[0-10]*%	[0-10]*%
	Revenue	[10-20]*%	[10-20]*%	[10-20]*%	[30-40]*%	[50-60]*%	[0-10]*%	[0-10]*%	[0-10]*%

Source: The Notifying Party's estimates provided in the Reply to the RFI No 13 dated 27 March 2014

- (229) In the light of the data referred to in recitals (214) to (228), the Commission considers that the proposed transaction will create a market with three MNOs of similar size. The merged entity will have more subscribers than Deutsche Telekom and Vodafone (with a market share of [30-40]*% in terms of subscribers) and will be the market leader in the pre-paid segment ([40-50]*% in terms of revenues and [50-60]*% in terms of subscribers), that currently constitutes more than half of the German retail market (in terms of subscribers) and will continue to account for a very significant portion of the German market in the foreseeable future (see recital (67)). In addition, the market and segment share increments brought about by the proposed transaction are significant on the overall retail market and its various segments, including, in particular, the pre-paid segment. In the latter segment, the increment brought about by the proposed transaction will exceed [...] both in terms of revenues and of subscribers.
- (230) In addition, the Parties' market shares on each of (a) the overall market, (b) the post-paid and (c) the pre-paid segments have been stable or increasing (especially in pre-paid) during the last three years, as it is shown by the Table 23 set out in recital (231). [...]*
- (231) Finally, the Commission notes that the most recent BNetzA report states that the aggregate market share of the "E-networks" in Germany in terms of subscribers

¹³⁴ Telefónica's, Vodafone's and E Plus' market shares in this table include the respective Branded Resellers' market shares.

¹³⁵ Telefónica's, Vodafone's and E Plus' market shares in this table include the respective Branded Resellers' market shares.

increased by five percentage points in 2013.¹³⁶ This also indicates that the allegedly disruptive year of 2013 did not materially affect the Parties' position.

Table 23: Parties' shares on the overall market, post-paid and pre-paid segments of the German retail mobile market during the years 2010 to 2012

		2010		2011		2012	
		Telefónica	E-Plus	Telefónica	E-Plus	Telefónica	E-Plus
Overall	Subscribers	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
	Revenue	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
Post-Paid	Subscribers	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
	Revenue	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
Pre-paid	Subscribers	[10-20]*%	[20-30]*%	[10-20]*%	[20-30]*%	[10-20]*%	[20-30]*%
	Revenue	[10-20]*%	[20-30]*%	[10-20]*%	[30-40]*%	[10-20]*%	[30-40]*%

Source: The Notifying Party's estimates

- (232) In this context, the Notifying Party's argument that the segment shares are not relevant for the assessment of the effects of the proposed transaction is not convincing. The Commission notes that, notwithstanding the fact that as explained in Section 5.1.1.2, the relevant market is the overall retail market for mobile telecommunications services, in this Case the position of the Parties on the different segments provides a useful insight on the effects of the proposed transaction on the overall market. The reason for this is the relative importance, in terms of size and impact on the competitive dynamics of the retail market, of the segments on which the Parties' focus their activities over the total retail market. This is due to the following factors: (a) the merged entity will be particularly strong in the pre-paid segment (that is to say a share of [50-60]*% of the overall revenues in the pre-paid segment and the market leader in terms of subscribers)¹³⁷, which corresponds to [...]*, in terms of subscribers, as explained in recital (67); (b) it will be very strong as well in the low-end of the post-paid segment to which pre-paid customers would likely switch in response to price increases in the pre-paid segment; (c) post-paid residential and pre-paid customers constitute the low value segments, in which as shown by Table 24 set out in recital (238) the Parties will have a significant share, and these two segments account for [70-80]*% in terms of revenues of the total retail market; (d) the pre-paid segment is the segment in which the most price aggressive offers are introduced and (e) the pricing dynamics in the pre-paid segment are likely to influence, through the competitive interplay between contiguous segments, which

¹³⁶

Tätigkeitsbericht Telekommunikation 2012/2013 of the Bundesnetzagentur, Document ID 4140, p. 60.

¹³⁷

See Section 6.3.1.1.

follows a bottom up approach, the pricing of the post-paid segment as well as of the overall market.

- (233) As explained in recital (220), the Notifying Party claims that in markets for differentiated products, such as the one for mobile services, only the revenue data are informative, and that, due to the marginal importance of the revenues derived from the pre-paid segment compared to the revenues of the overall market, the merged entity's position on this segment cannot be indicative of its market power on the overall market. In that respect, the Commission considers, first, ungrounded the Notifying Party's claim that relying on subscribers number will not provide a reliable picture of the German market since the number of total mobile subscribers in Germany outnumbers the number of inhabitants. The Commission is aware that customers may use different SIM cards for different purposes and that MNOs compete with their offers for each of these purposes. Therefore, the comparison of market shares based on subscribers shows, at an aggregate level, how successful each MNO is in competing for the different purposes a SIM card is used for. Furthermore, even when assessing differentiated markets, data on numbers of customers or subscribers cannot be ignored because they are still informative of the effects of the proposed transaction especially if, as in this Case, they relate to segments comprising a large number of subscribers. In this Case, in particular, the pre-paid segment accounts for around 50 million customers.
- (234) Secondly, contrary to what the Notifying Party appears to suggest, the Commission did not infer from the merged entity's position on the pre-paid market that the merged entity will have market power on the overall retail market. The Commission notes that it did assess the merged entity's position on the overall market including on the basis of revenues data and that it is on this overall market that, according to the Commission's assessment, the proposed transaction will likely lead to a significant impediment to effective competition.
- (235) In particular, the Commission considers, contrary to what the Notifying Party claims, that the merged entity will not only be the market leader in the pre-paid segment, but will have a very strong position among the low value post-paid customers. In this context, contrary to what the Notifying Party claims, the existence of increasing demand-side substitutability between pre-paid and post-paid offers is not likely to reduce the merged entity's market power. In fact, pre-paid customers constitute the most price sensitive category of customers and would likely switch to a post-paid tariff similar to their pre-paid tariff plans (a low value tariff plan) in response to a price increase. Thus, there is a category of customers (mostly private individuals or SMEs) which, irrespective of whether they use a pre-paid or post-paid tariff, will switch between low-value tariffs. As it can be seen from Table 24 set out in recital (238) provided by the Notifying Party, the merged entity is particularly strong among customers with an ARPU of EUR [...] or less.
- (236) The Table 24 set out in recital (238) clearly illustrates, in the absence of more aggregated data, that the merged entity is particularly strong in a large part of the overall mobile market irrespective of whether such customers have pre-paid or post-paid tariffs.
- (237) The Notifying Party claims that the data contained in Table 24 set out in recital (238) should be disregarded because it does not distinguish between pre-paid and post-paid and focusing on that table would not permit the competitive pressure exercised by the post-paid segment towards the pre-paid segment to be taken into account. According to the Notifying Party, what is significant is that market players active in the post-paid segment are able to make attractive offers to pre-paid customers. Therefore,

according to the Notifying Party, the market players' shares in the post-paid segment are important and not the ARPU allocation.

- (238) The Commission reiterates that the post-paid segment is very differentiated and includes both business and residential customers, which have both different requirements and different abilities and willingness to pay (see recital (32)). Whilst it is true that for business customers the Parties' offers currently have only a limited attractiveness (which explains their limited shares in this segment), for the residential post-paid customers and small businesses the Parties' offers are more attractive (as it is explained by the more significant shares held by the Parties in this segment). These customers constitute the low end of the post-paid segment whose demand, as shown by Table 24, is largely served by the Parties. In other words, contrary to what the Notifying Party appears to imply, certain levels of ARPUs correspond to certain categories of customers preferring certain tariff plans and having certain usage patterns. Customers belonging to the low end of the market, irrespective of whether they are pre-paid or post-paid, are either customers opting for low tariffs and/or customers that use their telephone less often. For these customers, the Parties' offers, as it is shown, are very attractive. Given the relative importance of the low-value segment (including pre-paid and residential post-paid customers) on the overall retail market, in terms of both subscribers and revenues, the Parties' significant position in this segment will have an impact on the competitive dynamics of the overall market.

Table 24: Overview of MNOs' subscriber shares in customer categories 2013

Consumer ARPU cluster	MNO subs share, in Percent
	[...]*
	NewCo
	DT plus VF

- (239) The Commission considers that the claim put forward by the Notifying Party in its Reply to the Statement of Objections that the Parties' combined shares do not reflect the actual shares of the merged entity due to the churn rates that were frequently experienced in other mergers in the telecommunications sector is unsubstantiated. Conversely, the Commission considers, on the basis of the evidence gathered during the Market Investigation, that the combined shares of the Parties will not significantly decrease in the future given that: (a) the pre-paid segment, even if decreasing, will still constitute a significant part of the market for the next years; (b) each of the Parties are active in the post-paid segment and, as further explained in Section 6.3.1.3 have managed to adapt their commercial strategy so as to cater to the

needs of a large category of customers (mostly residential customers and small businesses) even in the future.

- (240) In addition, the Commission considers that whilst residential customers and small businesses are very price sensitive and possibly, according to the Notifying Party, well informed, they do not have any bargaining power and are therefore exposed to the market power of the MNOs. The position of these customers is likely to significantly deteriorate in a more concentrated, oligopolistic market where they would have fewer choices of providers and the MNOs would have fewer incentives to pursue a more aggressive pricing policy (see recitals (498) to (560)) or to grant access under attractive conditions to Service Providers and MVNOs, for the reasons further explained in Section 6.4.2.2. In that respect, it should be noted that the Commission considers in any case Service Providers and MVNOs to exercise only a limited competitive constraint in the market (see Section 6.3.1.6).

Concentration levels

- (241) In this respect, the Commission notes that the proposed transaction will significantly increase the concentration levels of an already concentrated market. The post-transaction Herfindahl-Hirschman Index ("HHI") on the overall retail market based on 2012 revenue market shares would exceed 2400, representing an increase of more than 400 points (the corresponding HHI/ delta would be more than 2 300/ 596 based on subscriber market shares). On the post-paid segment the post-transaction HHI will be around 2 000 with a delta of more than 300 based on 2012 revenue shares (the corresponding HHI/ delta would be above 2 100/ 387 based on subscriber shares). On the pre-paid segment the post-transaction HHI will be around 3 500 with a delta of more than 1 200 based on 2012 revenue shares (the corresponding HHI/ delta would be more than 2 800/ 787 based on subscriber shares).
- (242) The Horizontal Merger Guidelines explain that, while the absolute 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, and thus the competitive pressure, directly brought about by the merger.¹³⁸ The very high values referred to in recital (241) indicate the high concentrated nature of this market and may be considered indicators, also taking into account the other circumstances of this Case, and notably the fact that the merging parties are important innovators in ways not reflected by their market shares, of likely competition concerns in this Case.¹³⁹
- (243) Generally, in very concentrated or oligopolistic markets the elimination of the competitive constraints that the merging parties previously exerted upon each other may result into a reduction of competitive pressure on the remaining competitors.¹⁴⁰ In particular, since the merging firms' price increase may switch some demand to the rival firms, the non-merging firms may find it profitable to either increase their prices or not lower them in response to a price increase by the merged entity. This is particularly the case when the merger is removing an important competitive constraint, such as the most aggressive player(s) of the market.

Shares based on gross adds as well as on gross adds and retained customers

¹³⁸ Horizontal Merger Guidelines, paragraph 16.

¹³⁹ Horizontal Merger Guidelines, paragraphs 20 and 21.

¹⁴⁰ Horizontal Merger Guidelines, paragraph 25.

- (244) The Commission also notes that in the mobile telecommunications services sector market shares based on existing subscribers do not fully capture the competitive strength of market participants, in particular because recent trends may not be properly reflected.¹⁴¹ 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 any mobile telecommunications services). Consequently it may take some time before trends in winning new business are fully reflected in the overall market share.
- (245) Therefore, especially in order to form a view of the likely dynamics in the market for the years following the implementation of the proposed transaction, shares of contestable customers are important, amongst other relevant factors. However, precise 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, at the expiration of their contract, decide to either stay in their existing contract or to switch to another tariff offered by the same MNO.
- (246) If shares of contestable customers cannot be precisely and reliably calculated, an alternative (though less accurate) measure that contributes, among other relevant factors, to capturing the current competitive strength of market participants is to consider gross-add market shares (see Tables 25, 26 and 27 set out in recital (248)).¹⁴² The Notifying Party claims that gross adds would have several limitations as indicators of competitive strength. Whilst it is true that gross adds capture only the subscribers acquired by one firm and do not capture subscribers lost by the same firm to its competitors and, for this reason, may not have a strong relationship to installed base shares, this does not render gross adds uninformative as to the competitive strength of market participants. The Commission considers, contrary to what the Notifying Party claims, that gross adds should be preferred to other indicators, such as net-adds, resulting from the difference between gross adds and the customers lost to the competitors, which additionally reflect lost subscribers. Net-adds are typically less suited to capture the current competitive strength since the number of customers that can be potentially lost typically increases with the size of the installed base.¹⁴³ Hence, net-adds tend to be low for firms, whose competitive strength is still high, but possibly not as high as in the past.
- (247) Finally the Commission notes that gross adds are normally used by [...] ¹⁴⁴.
- (248) At the Commission's request, the Notifying Party provided shares in terms of gross adds. The Parties' combined share (at the network level) calculated based on this methodology is significantly higher than its actual share in terms of subscribers on the overall retail market ([40-50]*% vs. [30-40]*%), as well as on the post-paid ([40-

¹⁴¹ Commission Decision of 12 December 2012 in Case No COMP/M.6497 - *Hutchison 3G Austria / Orange Austria*, recitals 164 to 170.

¹⁴² Commission Decision of 12 December 2012 in Case No COMP/M.6497 - *Hutchison 3G Austria / Orange Austria*, recital 170.

¹⁴³ For example, the net adds of a strong market player that captures a large share of the contestable customers may, at a given point in time, become negative, whereas the net adds of an entrant would not be negative since no customers can be lost. In this example, the net adds would not properly reflect the competitive strength of these two market participants.

¹⁴⁴ See inter alia [...] *presentation "[...] *dated [...] *Document ID 991.

50]**% vs. [30-40]**%) and on the pre-paid ([40-50]**% vs. [40-50]**%) segment. In the Commission's view this shows that the Parties' actual market share may actually underestimate the competitive pressure that each of the Parties currently exercises on the market.

Table 25: Shares of gross adds at network level on the overall market (2009 to 2012)

	2009	2010	2011	2012
Deutsche Telekom	[20-30]**%	[20-30]**%	[20-30]**%	[20-30]**%
Vodafone	[30-40]**%	[30-40]**%	[30-40]**%	[20-30]**%
E-Plus	[20-30]**%	[20-30]**%	[20-30]**%	[20-30]**%
Telefónica	[20-30]**%	[10-20]**%	[10-20]**%	[20-30]**%
Merged entity	[40-50]**%	[40-50]**%	[40-50]**%	[40-50]**%

Source: The Notifying Party's estimates¹⁴⁵

Table 26: Shares of gross adds at network level on the post-paid (2009 to 2012)

	2009	2010	2011	2012
Deutsche Telekom	[20-30]**%	[20-30]**%	[20-30]**%	[30-40]**%
Vodafone	[30-40]**%	[30-40]**%	[20-30]**%	[20-30]**%
E-Plus	[10-20]**%	[10-20]**%	[10-20]**%	[10-20]**%
Telefónica	[20-30]**%	[20-30]**%	[20-30]**%	[20-30]**%
Merged entity	[40-50]**%	[40-50]**%	[40-50]**%	[40-50]**%

Source: The Notifying Party's estimates

¹⁴⁵

Annex B to the Form CO, p. 16.

Table 27: Shares of gross adds at network level on the pre-paid segment (2009 to 2012)

	2009	2010	2011	2012
Deutsche Telekom	[20-30]*%	[10-20]*%	[10-20]*%	[20-30]*%
Vodafone	[30-40]*%	[30-40]*%	[40-50]*%	[30-40]*%
E-Plus	[20-30]*%	[20-30]*%	[20-30]*%	[20-30]*%
Telefónica	[10-20]*%	[10-20]*%	[10-20]*%	[20-30]*%
Merged entity	[40-50]*%	[40-50]*%	[40-50]*%	[40-50]*%

Source: The Notifying Party's estimates

- (249) In addition, at the Commission's request, the Notifying Party provided shares in terms of retained subscribers and gross adds (Tables 28, 29, 30). As set out in recital (246), that data provides another indication of the choices of contestable customers (that is to say, all new customers and customers who had the option, due to the termination of their contract, to either extend their contract or change provider).

Table 28: Retained customers and gross adds shares – total retail market

	2010	2011	2012	Q1-Q3 2013
Deutsche Telekom	[30-40]*%	[20-30]*%	[20-30]*%	[30-40]*%
Vodafone	[30-40]*%	[30-40]*%	[30-40]*%	[20-30]*%
E-Plus	[20-30]*%	[20-30]*%	[20-30]*%	[20-30]*%
Telefónica	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
Merged entity	[30-40]*%	[30-40]*%	[40-50]*%	[40-50]*%

Source: The Notifying Party's estimates

Table 29: Retained customers and gross adds shares – post-paid total

	2010	2011	2012	Q1-Q3 2013
Deutsche Telekom	[30-40]*%	[30-40]*%	[30-40]*%	[40-50]*%
Vodafone	[30-40]*%	[30-40]*%	[20-30]*%	[20-30]*%
E-Plus	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
Telefónica	[10-20]*%	[20-30]*%	[20-30]*%	[10-20]*%
Merged entity	[30-40]*%	[30-40]*%	[30-40]*%	[30-40]*%

Source: The Notifying Party's estimates

Table 30: Retained customers and gross adds shares – pre-paid total

	2010	2011	2012	Q1-Q3 2013
Deutsche Telekom	[30-40]*%	[20-30]*%	[20-30]*%	[20-30]*%
Vodafone	[30-40]*%	[30-40]*%	[30-40]*%	[20-30]*%
E-Plus	[20-30]*%	[20-30]*%	[20-30]*%	[20-30]*%
Telefónica	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
Merged entity	[30-40]*%	[30-40]*%	[40-50]*%	[40-50]*%

Source: The Notifying Party's estimates

- (250) A comparison between the shares based on retained customers and gross adds in the total retail market and its post-paid and pre-paid segments with the shares based on subscriber numbers in the total retail market and its post-paid and pre-paid segments at network level (see Tables 11, 12 and 13 for 2012 and 14, 15 and 16 for 2013, set out in recital (225)) shows that the Parties' combined shares based on retained customers and gross adds are higher than their combined share in the total retail market, as well as in each of its two segments (post-paid and pre-paid). In the Commission's view, this shows that the Parties' actual market share may underestimate the competitive pressure that each of the Parties currently exercises on the market.
- (251) The difference is particularly pronounced in the post-paid segment (2012 merged entity: [30-40]*% on retained customers and gross adds versus [20-30]*% based on subscribers). This essentially confirms that also in the post-paid segment, where, according to the Notifying Party, the Parties allegedly face greater difficulties to

compete with Deutsche Telekom and Vodafone, the Parties have played a significant role.¹⁴⁶

Market shares including the split for Branded Resellers

- (252) Vodafone’s, Telefónica’s and E-Plus’ shares in the Tables 11 to 22 set out in recitals (225) to (228) include the shares of those Branded Resellers, which market/distribute contracts on their respective networks (Deutsche Telekom does not achieve significant sales via Branded Resellers).
- (253) Tables 31 and 32 illustrate the MNOs’ and their respective Branded Resellers’ shares on the overall retail market and on the pre-paid segment, which is the segment in which Branded Resellers are mostly present.

Table 31: Market shares on the German overall retail mobile market (2012)

	Subscribers	Revenues
Deutsche Telekom	[20-30]*%	[20-30]*%
Vodafone (incl. Branded Resellers)	[20-30]*%	[20-30]*%
Vodafone’s Resellers	[0-10]*%	[0-10]*%
Telefónica (incl. Branded Resellers)	[10-20]*%	[10-20]*%
Telefónica’s Resellers (Tchibo, Lidl and others)	[0-10]*%	[0-10]*%
E-Plus (incl. Aldi and other Branded Resellers)	[10-20]*%	[10-20]*%
Aldi (E-Plus Reseller)	[0-10]*%	[0-10]*%
E-Plus’other Branded Resellers	[0-10]*%	[0-10]*%
Parties’ combined (incl. Branded Resellers)	[30-40]*%	[20-30]*%
Parties’ combined (w/o Branded Resellers)	[20-30]*%%	[20-30]*%
Freenet	[10-20]*%	[0-10]*%
Drillisch	[0-10]*%	[0-10]*%
1&1	[0-10]*%	[0-10]*%
Other MVNOs	[0-10]*%	[0-10]*%

Source: The Notifying Party's estimates

¹⁴⁶ That data is in line with the data on the merging parties' static market share in terms of subscribers that have been increasing in the period from 2009 to 2012 in this segment. A further analysis of these data is carried out in recital 179, 180 and 181.

Table 32: Segment shares on the pre-paid segment (2012)

	Subscribers	Revenues
Deutsche Telekom	[20-30]*%	[10-20]*%
Vodafone (incl. Branded Resellers)	[20-30]*%	[10-20]*%
Vodafone's Resellers'	[0-10]*%	[0-10]*%
Telefónica (incl. Branded Resellers)	[10-20]*%	[10-20]*%
Telefónica's Resellers (Tchibo, Lidl and others)	[0-10]*%	[0-10]*%
E-Plus (incl. Aldi and other Branded Resellers)	[20-30]*%	[30-40]*%
Aldi (E-Plus Reseller)	[10-20]*%	[10-20]*%
E-Plus'other Branded Resellers'	[0-10]*%	[0-10]*%
Parties' combined (incl. Branded Resellers)'	[40-50]*%	[50-60]*%
Parties' combined (w/o Branded Resellers)'	[20-30]*%	[30-40]*%
Freenet	[10-20]*%	[0-10]*%
Drillisch	[0-10]*%	[0-10]*%
Other MVNOs	[0-10]*%	[0-10]*%

Source: The Notifying Party's estimates

- (254) Table 33 illustrates the evolution of the Parties' and their competitors' market shares (with sales of Branded Resellers reported separately) during the period from 2010 to 2013.

Table 33: Evolution of the Parties' shares on the overall market, post-paid and pre-paid segments

		2010		2011		2012		2013 ¹⁰⁶	
		Telefónica	E-Plus	Telefónica	E-Plus	Telefónica	E-Plus	Telefónica	E-Plus
overall	Subscriber	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
	Revenues	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
post-paid	Subscriber	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
	Revenues	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
pre-paid	Subscriber	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%
	revenues	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%	[10-20]*%

Source: The Notifying Party's estimates

- (255) The Commission considers that, on the basis of the evidence gathered in the Market Investigation, the Notifying Party's claim that Branded Resellers' sales should not be taken into account for the calculation of the Parties' (and the merged entity's) market share should be rejected. Instead, that evidence indicates, as explained in more detail in Section 6.3.1.6, that Branded Resellers are not independent of the MNOs given

that the tariffs offered by the Branded Resellers are often designed or have to be at least approved by the MNOs. Moreover, for legal and technical reasons, network switching of existing customers would be extremely difficult for Branded Resellers, which further limits their negotiation power vis-à-vis the MNOs. Hence, there appears to be no reason to consider Branded Resellers as independent players from, and possible competitors of, the MNOs and to exclude the Branded Resellers' sales for the calculation of the Parties' and the merged entity's market shares. These findings are also true in relation to [...]*, as further explained in recitals (668) to (673). In addition, with specific regard to Tchibo Mobil, a company that is jointly controlled by Telefónica, the Commission notes that it is consistent with its practice when calculating market shares, to attribute the shares of joint ventures to their parent companies.¹⁴⁷

6.3.1.2. Closeness of competition

Notifying Party's view

- (256) In the Form CO, the Notifying Party argues that the applicable legal standard regarding closeness of competition requires that a substantial group of customers regards E-Plus and Telefónica as their first and second choice on the market in order to regard the Parties as each others' closest competitor. It submits that the Parties are not viewed as the first and second choice for a substantial number of customers, taking into account the differences in brand positioning and customers' perception.
- (257) As regards brand positioning strategy, the Notifying Party emphasises that whilst Telefónica operates a strong premium core brand and a few no-frills brands, E-Plus employs a large variety of brands none of which is positioned above the mid-range of the market.
- (258) Moreover, the Notifying Party submits that the degree of substitutability (and hence closeness of competition) of two products or firms may be evaluated through diversion ratios. Diversion ratios measure the closeness of competition between the Parties and the remaining market participants. They indicate to which extent sales lost by one of the Parties are taken up by the other Party or the remaining market participants.
- (259) According to the Notifying Party, the Mobile Number Portability ("MNP") data shows that, on the overall retail market for mobile communications and on the post-paid segment, [...] is the closest competitor to both Parties. The Notifying Party underlines that the data from INFO Markt- und Meinungsforschungs GmbH ("INFO") suggests that whilst [...] is the closest competitor to Telefónica, [...] is the closest competitor to E-Plus' network.
- (260) On the pre-paid segment, the Notifying Party considers that data from the different sources is not conclusive. [...] is the closest competitor to Telefónica, according to the MNP data provided by the Notifying Party, in relation to the entire Telefónica network as well as in relation to Telefónica's core brand. However, the Notifying Party emphasises that the MNP data indicates that customers switch almost to the same extent to [...] network ([30-40]%) as to [...] network ([30-40]%). On the

¹⁴⁷ See Commission Decision of 30 October 2001 in Case No COMP/M.2420 - Mitsui/CVRD/Caemi; Commission Decision of 12 April 2000 in Case No COMP/M. 1795 Vodafone Airtouch/Mannesmann; and Commission Decision of 22 December 2008 in Case COMP/M.5389 – Aéroports de Paris –The Nuance Group..

other hand, the INFO survey found that pre-paid customers leave Telefónica's network mainly for [...] whilst [...] pre-paid customers switch mainly to [...].

- (261) In its Reply to the Article 6(1)(c) Decision, the Notifying Party takes the view that the closeness of competition test requires that the Merging Parties' products are closer substitutes than all other products supplied by other market players.¹⁴⁸ Therefore, according to the Notifying Party, there must be a significantly higher degree of substitutability between the products of the Merging Parties as opposed to those supplied by rival firms.
- (262) In particular, the Notifying Party argues as regards the use of diversion ratios in the assessment of closeness of competition, that in the standard assessment of closeness of competition the following conditions need to be assessed: (a) the products are differentiated so that some products are closer substitutes than others; (b) the higher the degree of substitutability between the merging firms' products, the higher the incentive to raise prices (a substantial number of customers view the parties products as their first and second choice); (c) high pre-merger margins are indicative of incentives to increase prices; and (d) an incentive to increase prices post-merger is constrained if competitors produce close substitutes to the merging parties' products. According to the Notifying Party, it follows that this implies that there must be: (i) a significantly higher degree of substitutability between the merging parties products as opposed to the products offered by competitors; and (ii) the merging Parties' products must be regarded by a substantial number of consumers as their first and second choice. According to the Notifying Party, this would imply that it must be established that the merging parties are each other's closest substitutes.
- (263) The Notifying Party is furthermore of the view that the benchmarking approach used in the Article 6(1)(c) Decision is incorrect and that a comparison of the absolute MNP must be made. The Notifying Party concludes that even if benchmarking were carried out, the analysis reveals that the Parties are not each other's closest competitors.
- (264) Moreover, the Notifying Party claims that internal documents of the Notifying Party demonstrate that Telefónica does not perceive [...] as its closest competitor but instead views [...] as a particularly strong competitor. As to the perspective of E-Plus, the Notifying Party states that E-Plus is closely monitoring the entire market [...].
- (265) In addition, the Notifying Party points out that the strategies and the perception of the core brands of the Parties are different. While Telefónica's brand strategy would be based on developing the brand "O2" as [...], the brands "E-Plus" and "Base" would be focussed [...] in which O2 only has a limited presence.
- (266) The Notifying Party also argues that the results of the Phase I Market Investigation did not take into account that all operators compete by using various brands which are differently positioned, that other market players reacted faster or more directly to original price innovations introduced by the Parties and that the Parties are different from each other in terms of frequencies and of focus on customer services.
- (267) In its Reply to the Statement of Objections, the Notifying Party criticises that the Statement of Objections discusses only diversion ratios between the Parties and not between the Parties and other competitors. Furthermore, the Notifying Party complains that the Commission analysed in the Statement of Objections only

¹⁴⁸ Reply to the Article 6(1)(c) Decision, paragraph 112.

diversion ratios for 2012 and states that the figures for 2013 "demonstrate that 2013 was a year of change for Germany".¹⁴⁹ The Notifying Party further claims that "pure" diversion ratios are the most objective criteria to measure closeness of competition and objects that the Commission compared the diversion ratios to benchmarks based on the market shares of the respective MNOs.

- (268) Regarding the answers to the Market Investigation, the Notifying Party claims that "half or nearly half of the respondents" did not regard Telefónica and E-Plus as closest competitors. Furthermore, the Notifying Party reiterates that according to its view internal documents of the Notifying Party show that Telefónica regards Vodafone as its competitor.

Commission's assessment

- (269) The Commission considers that retail mobile telecommunications services constitute a differentiated product.¹⁵⁰ Mobile telecommunications services vary in terms of several factors which include, among others, network technology, quality, coverage and price. This view is also shared by the majority of respondents to the Phase II Market Investigation¹⁵¹ and by the Notifying Party.¹⁵²
- (270) Based on the analysis of the diversion ratios between the Parties, the data gathered during the Market Investigation and the review of the Parties' internal documents, the Commission considers that there are a number of elements suggesting that the Parties are close competitors, in particular in the pre-paid segment, but also in the overall retail market.
- (271) The Commission notes that this assessment is shared by the German Monopolkommission.¹⁵³
- (272) The elements which, in the Commission's view, point in the direction of the Parties being close competitors are discussed in recitals (273) to (320).

Diversion ratios

- (273) As regards the analysis of diversion ratios, the Commission considers that a useful tool to assess whether the Parties are close competitors is to compare the actual diversion ratios between the Parties to so-called "benchmark" diversion ratios, that is to say, diversion ratios based on: (a) the number of the Parties' subscribers; and (b) their shares based on contestable customers (where the contestable customers are defined as the sum of new and retained subscribers)¹⁵⁴ in each of the pre-paid segment and the post-paid segment. This comparison provides an indication of whether the actual number of subscribers which switch between the Parties is higher than the number of subscribers which one would expect to switch based on their share. If the actual number of switching customers is higher than the Parties' shares would suggest, this suggests closeness of competition between them.

¹⁴⁹ Reply to Statement of Objections, paragraph 215.

¹⁵⁰ See also Section 6.3.1.7 and Annex A.

¹⁵¹ See Responses to the Questionnaire Q1 to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 1; see also the responses to the Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 3 and to the Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 3.

¹⁵² Reply to Statement of Objections, paragraph 160.

¹⁵³ See the opinion of the Monopolkommission "Stellungnahme der Monopolkommission zu COMP/M.7018 – Telefónica/E-Plus", Document ID 1685, p. 3.

¹⁵⁴ For the use of contestable customers within in the UPP analysis, see recital (684).

- (274) Based on the Commission's calculations, while the results for 2012 in the post-paid segment are mixed (the actual diversion ratio from E-Plus to Telefónica is higher than each of the respective benchmarks, while the actual diversion ratio from Telefónica to E-Plus is lower than their diversion ratios expected on the basis of segment shares)¹⁵⁵, the actual diversion ratios in the pre-paid segment in 2012 from E-Plus to Telefónica and Telefónica to E-Plus are higher than what would be expected on the basis of segment shares.¹⁵⁶ When analysing the diversion from Telefónica to E-Plus in the pre-paid segment in 2012, the actual diversion ratios are at [40-50]*% compared to diversion ratios based on subscribers or on contestable customers which are both at [30-40]*%. When analysing the diversion from E-Plus to Telefónica in the pre-paid segment in 2012, the actual diversion ratios are at [30-40]*%, compared to [20-30]*% for diversion ratios based on subscriber shares and [20-30]*% based on contestable customers.
- (275) A comparison of the diversion ratios based on the data available for 2013¹⁵⁷ leads to the same conclusions as set out for 2012 in recital (274). While the results for the post-paid segment remain mixed in 2013, the actual diversion ratios in the pre-paid segment in 2013 from E-Plus to Telefónica and from Telefónica to E-Plus are higher than what would be expected on the basis of their shares.¹⁵⁸ When analysing diversion from Telefónica to E-Plus in the pre-paid segment in 2013, the diversion ratio is at [30-40]*% compared to [30-40]*% for benchmark diversion ratios based on subscriber shares and [30-40]*% based on contestable customers. When analysing the diversion from E-Plus to Telefónica in the pre-paid segment in 2013, the diversion ratio is at [30-40]*%, compared to benchmark diversion ratios of [20-30]*% based on subscribers and [20-30]*% based on contestable customers.
- (276) A comparison of the data for 2013 with the data for 2012 shows that 2013 was not, as claimed by the Notifying Party, a "year of change". Instead, in both those years the diversion ratios in the pre-paid segment between the Parties were consistently higher than one would expect based on their shares. While the diversion from E-Plus to Telefónica remained basically unchanged ([30-40]*% in 2012 and [30-40]+% in 2013), the only difference is that the diversion from Telefónica to E-Plus decreased from [...]times the benchmark diversion ratio to [...]times the benchmark diversion ratio. While this is a considerable decrease, E-Plus has still remained a close competitor to Telefónica in 2013.¹⁵⁹
- (277) The claims of the Notifying Party that the Parties must be each other's "closest" competitor and that only the "absolute" diversion ratios should be taken into account without comparing them to the market shares of the Parties contradict the concept of closeness set out in the Horizontal Merger Guidelines.

¹⁵⁵ The actual diversion ratios represent the observed diversion ratios based on Mobile Number Portability (MNP) data (see Annex A, Table 7 and Table 8).

¹⁵⁶ The calculations of these diversion ratios are based on the diversion matrix presented in Annex A, Table 7 and Table 8.

¹⁵⁷ That is to say, Mobile Number Portability (MNP) data submitted by all four MNOs (Deutsche Telekom – Document ID 885; Vodafone – Document ID 830; Telefónica – [...]Document ID 956-122; E-Plus – Document [...]ID 1246) for the first and second quarters of 2013 and InfoSurvey data submitted by Telefónica ([...]Document ID 853-154 to 853-157) and E-Plus ([...]Document ID 1464 and 1465) for the same period.

¹⁵⁸ The calculations of these diversion ratios are based on the diversion matrix set out in Annex A, Table 13 and Table 14.

¹⁵⁹ The diversion ratio from Telefónica to E-Plus are still similar at [40-50]*% in 2012 and [30-40]*% in 2013.

- (278) First, the Parties are not required to be each other's closest competitors according to the Horizontal Merger Guidelines. The Horizontal Merger Guidelines clearly provide for a relative approach to the closeness of competition between merging parties. According to 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."¹⁶⁰
- (279) This implies that the higher the degree of substitutability of the products of the merging parties, the higher the likelihood to find competition concerns caused by a proposed merger. It thus does not require the products of the merging parties to be each other's closest substitute. 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 correlation between the degree of substitutability of the products of the merging parties and the likelihood and seriousness of competition concerns raised by the proposed merger.
- (280) For this reason, previous decisions of the Commission stating that the respective merging parties' products are each other's closest substitutes do not support the claim by the Notifying Party that only a merger between closest competitors raises competition concerns. If the merging parties' products are each other's closest substitute, the competition concerns may be particularly strong. However, a merger between firms producing close, but not necessarily the closest substitutes also makes price increases more likely than a merger between firms producing products with a low degree of substitutability. For this reason, the heading preceding paragraph 28 of the Horizontal Merger Guidelines reads: "Merging firms are close competitors".
- (281) Second, the comparison of diversion ratios to the market shares of the respective merging parties provides an important scale to measure the closeness of competition between these parties. In a homogeneous market, it would be expected that the diversion ratios between all competitors would be more or less equal to their overall share of business acquired in such a market in the respective period. In a market with differentiated products, diversion ratios between close substitutes would be expected to be higher than what would be suggested by their respective market shares. The more the diversion ratios between two firms exceed such benchmark: (a) the higher is the degree of substitutability between these firms' products compared to the rest of the market; (b) the closer is the competition between these firms; and (c) the more these firms' market shares underestimate the actual competitive constraints imposed on each other.
- (282) According to paragraph 14 of the Horizontal Merger Guidelines, market shares constitute useful first indications of the market structure. However, according to paragraph 37 of the Horizontal Merger Guidelines, some firms may have more of an influence on the competitive process than their market shares would suggest. The comparison of diversion ratios with market shares is a means to measure the competitive constraints that the merging parties impose on each other.¹⁶¹

¹⁶⁰ Horizontal Merger Guidelines, paragraph 28.

¹⁶¹ By way of illustration: In a market with three firms A, B, and C with market shares of 20, 10 and 70 percent, 30% of A's customers divert to B and 70% divert to C. The market shares would suggest a diversion ratio of 12.5% to B and 87.5% to C as all customers leaving A will either turn to B or C (not taking A's share of the market into account, B's share of the remaining customers amounts to 12.5% and C's share to 87.5%). The fact that many more customers divert to B than would be assumed based on

- (283) In this Case, the diversion from Telefónica to [...] ¹⁶² is similar to or slightly higher than the respective benchmark diversion ratios ¹⁶³ while the diversion from E-Plus to [...] ¹⁶⁴ is slightly lower than the respective benchmark diversion ratios. ¹⁶⁴ In addition, the diversion from the Parties to [...] ¹⁶⁵ is much lower than the respective benchmark diversion ratios. ¹⁶⁶
- (284) As regards the close competitors of E-Plus, the Commission finds, based on the reasoning set out in recitals (273) to (283), that diversion ratios suggest that Telefónica is the only close competitor of E-Plus. During 2012 and 2013, the diversion from E-Plus to Telefónica was almost 1.5 times the respective benchmark diversion ratio, while the diversion from E-Plus to [...] ¹⁶⁴ was slightly below and the diversion to [...] ¹⁶⁵ was much lower than the respective benchmark diversion ratio.
- (285) As regards the close competitors of Telefónica, the diversion ratios suggest that in 2012 E-Plus was the only close competitor of Telefónica because the respective diversion ratio was approximately 1.35 times the respective benchmark diversion ratio, while the diversion from Telefónica to [...] ¹⁶⁴ was similar to the respective benchmark diversion ratio and the diversion from Telefónica to [...] ¹⁶⁵ was much below the respective benchmark diversion ratio. In 2013, E-Plus and [...] ¹⁶⁴ were equally close competitors of Telefónica while the diversion from Telefónica to [...] ¹⁶⁵ was much lower than the respective benchmark diversion ratio, which suggests that in 2013, [...] ¹⁶⁵ was a more distant competitor to Telefónica than suggested by its market share.

B's market share militates in favour of the conclusion that the products of A and B are close substitutes and that A and B are therefore close competitors. Contrary to the arguments of the Notifying Party, the fact that A and B are close competitors does not imply that the competition between A and C is irrelevant. It just means that A and B impose stronger constraints on each other than suggested by their market shares.

¹⁶² The benchmark diversion ratios to [...] ¹⁶⁴ are calculated on the basis of the shares on the pre-paid segment at network level as shown in Tables 15 and 16 set out in recital (225) and on the basis of retained customers and gross add shares in the pre-paid segment as shown in Table 30 set out in recital (249).

¹⁶³ When analysing the diversion from Telefónica to [...] ¹⁶⁴ in the pre-paid segment, the actual diversion ratios in 2012 were at [30-40] ¹⁶⁵ compared to benchmark diversion ratios based on subscribers or on contestable customers which were both at [30-40] ¹⁶⁵ and actual diversion ratios in 2013 were at [30-40] ¹⁶⁵ based on MNP data compared to benchmark diversion ratios based on subscribers or on contestable customers which were both at [30-40] ¹⁶⁵.

¹⁶⁴ When analysing the diversion from E-Plus to [...] ¹⁶⁴ in the pre-paid segment, the actual diversion ratios in 2012 were at [30-40] ¹⁶⁵ compared to benchmark diversion ratios which were at [40-50] ¹⁶⁵ based on subscribers and [40-50] ¹⁶⁵ based on contestable customers and actual diversion ratios in 2013 were at [30-40] ¹⁶⁵ compared to benchmark diversion ratios based on subscribers or on contestable customers which were both at [30-40] ¹⁶⁵.

¹⁶⁵ The benchmark diversion ratios to [...] ¹⁶⁴ are calculated on the basis of the shares on the pre-paid segment at network level as shown in Tables 15 and 16 set out in recital (225) and on the basis of retained customers and gross add shares in the pre-paid segment as shown in Table 30 set out in recital (249).

¹⁶⁶ When analysing the diversion from Telefónica to [...] ¹⁶⁴ in the pre-paid segment, the actual diversion ratios in 2012 were at [20-30] ¹⁶⁵ compared to benchmark diversion ratios based on subscribers or on contestable customers which were both at [30-40] ¹⁶⁵ and actual diversion ratios in 2013 were at [20-30] ¹⁶⁵ based on MNP data compared to benchmark diversion ratios which were at [30-40] ¹⁶⁵ based on subscribers and [30-40] ¹⁶⁵ based on contestable customers. When analysing the diversion from E-Plus to [...] ¹⁶⁴ in the pre-paid segment, the actual diversion ratios in 2012 were at [30-40] ¹⁶⁵ compared to benchmark diversion ratios based on subscribers or on contestable customers which were both at [30-40] ¹⁶⁵ and actual diversion ratios in 2013 were at [30-40] ¹⁶⁵ compared to benchmark diversion ratios based on subscribers or on contestable customers which were both at [40-50] ¹⁶⁵.

- (286) To conclude, an analysis of diversion ratios suggests that Telefónica has been the only close competitor of E-Plus in the pre-paid segment in 2012 and 2013 and E-Plus has been the only close competitor of Telefónica in the pre-paid segment in 2012. In 2013, E-Plus and [...] have both been equally close competitors of Telefónica. Overall, and also in light of other evidence analysed below in recitals (289) to (319) these findings strongly suggest that the two Parties are close competitors.
- (287) The finding that [...] has also been a close competitor of Telefónica in 2013 does not affect that overall conclusion. In particular, it does not affect the finding that E-Plus has been a close competitor. Diversion ratios already reflect the closeness of all substitutes offered in the market. The Horizontal Merger Guidelines do not, as the Notifying Party suggests, require that the merging parties must be each other closest competitor.
- (288) As regards the degree of closeness between the Parties, the comparison of diversion ratios with the respective benchmarks show that the competitive pressure of E-Plus on Telefónica in 2012 and 2013 was higher than suggested by E-Plus' shares: the diversion ratio from Telefónica to E-Plus was [130-140]*% of the respective benchmarks in 2012 and [110-120]*% of the respective benchmarks in 2013. In addition, the diversion ratios from E-Plus to Telefónica suggest that Telefónica continually imposed a considerably higher competitive pressure than implied by its share as the diversion ratio from E-Plus to Telefónica was [140-150]*% or [150-160]*% of the respective benchmarks in 2012 and of [140-150]*% or [150-160]*% of the respective benchmarks in 2013. In particular the competitive pressure of Telefónica on E-Plus in 2012 and 2013 was thus considerably higher than what could be assumed based on the shares of the Parties.

Market investigation

- (289) The fact that the Parties are close competitors is further supported by data gathered during the Market Investigation. According to the Market Investigation, the Parties are perceived to be similar with regard to a number of differentiating factors referred to in recital (269). In the Phase II Market Investigation, the Commission asked market participants to rate on a scale from one to five¹⁶⁷ the importance of competitive prices for: (a) voice/ SMS; (b) data; and (c) voice/ SMS and data for customers of the four MNOs. The average ratings of all responding MNOs, MVNOs, Service Providers and Branded Resellers allow for the same conclusion: competitive prices are least important for customers of Deutsche Telekom, followed by customers of Vodafone. In the view of the responding market participants, customers of Telefónica rate the importance of competitive prices second highest, surpassed only by customers of E-Plus.¹⁶⁸
- (290) According to market participants referred to in recital (289), the importance of the factors "High download speed", "2G/ 3G network coverage", "2G/ 3G network quality", "4G network coverage" and "4G Network quality" is inverted: customers of Deutsche Telekom rate these factors highest, followed by (in the order of their

¹⁶⁷ One meaning "unimportant" and Five meaning "very important".

¹⁶⁸ See Responses to the Questionnaire Q1 to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 13; Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 15 and Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 15.

importance ratings) customers of Vodafone, customers of Telefónica and customers of E-Plus.¹⁶⁹

- (291) In the Form CO, the Notifying Party states that "Deutsche Telekom and Vodafone have been the clear leaders in network quality for many years. Telefónica was able to achieve medium results whereas E-Plus was always lagging behind."¹⁷⁰ The Notifying Party states that [...] and [...] have been a major cause for the fact [...] do not translate into higher market shares.¹⁷¹ The Notifying Party further explains that due to "customer demand for high network quality, these factors are heavily used for marketing purposes"¹⁷² and that network quality is a "crucial competitive factor"¹⁷³. Answers to the Phase II Market Investigation also stress the importance of network quality for differentiating products in the retail market,¹⁷⁴ while according to the answers to the Phase I Market Investigation the market participants also regard the network quality and network coverage of Deutsche Telekom and Vodafone as superior to those of Telefónica and E-Plus.¹⁷⁵
- (292) Based on the matters referred to in recitals (289) to (291), the Commission finds that the Parties' networks (the so called "*E-Netze*") are perceived of being of lower quality than the networks of Deutsche Telekom and Vodafone (so called "*D-Netze*"). Given the importance of network quality as a differentiator, as explained in those recitals, the Commission regards the Parties as close competitors for mobile products that offer a network quality below the level achieved by the networks of Deutsche Telekom and Vodafone.
- (293) The fact that the Parties have a lower network quality than all other competitors means that the Parties compete for the same subset of customers: customers that do not place as high a value on network quality. Obviously, they will have to offer these customers advantages compared to the offers of Deutsche Telekom and Vodafone because even a customer who does not place a high value on network quality will be attracted to a high network quality if an offer is also attractive enough to the customer in all other regards. However, both Parties will target these customers because they have a more difficult task in attracting customers who place a very high value on network quality. Therefore, sharing a low network quality forces the Parties to compete for customers who ascribe the same importance to network quality. Given the importance of network quality as a differentiator, this indicates that the Parties are close competitors for such customers.

¹⁶⁹ See Responses to the Questionnaire Q1 to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 13; to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 15 and to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 15.

¹⁷⁰ Form CO, paragraph 405.

¹⁷¹ Form CO, paragraph 482.

¹⁷² Form CO, paragraph 406.

¹⁷³ Form CO, paragraph 407.

¹⁷⁴ See Responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 1; to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014 and to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 3.

¹⁷⁵ See Responses to Questionnaire Q1 to MNOs dated 31 October 2013, question 36; to Questionnaire Q2 to MVNOs dated 31 October 2013, question 35; to Questionnaire Q3 to Business Customers dated 31 October 2013, question 28; to Questionnaire Q4 to Resellers dated 31 October 2013, question 26; Responses to Questionnaire Q5, Consumer Associations dated 31 October 2013, question 22 and to Questionnaire Q7 to Handset Suppliers dated 31 October 2013, question 22.

- (294) In addition, as already shown in Table 24 set out in recital (238), the merged entity will have a strong position not only among the pre-paid customers but also among all customers seeking a low-value tariff, such as pre-paid customers and most residential post-paid customers. As it can be seen from Table 24 provided by the Notifying Party, the merged entity would account for [40-50]*% to [50-60]*% of the subscribers of customers with an ARPU of EUR 25 per month or less. To the contrary, the merged entity accounts only for [10-20]*% to [20-30]*% of the subscribers with an ARPU of EUR 35 per month or more.
- (295) Based on data provided by all four MNOs, the Commission computed an average ARPU for each MNO in the post-paid residential segment in 2012 (see Table 11 of Annex A). The average ARPUs of the Parties' customers are considerably [...] the ones of Deutsche Telekom's and Vodafone's customers.¹⁷⁶ This [...] between the ARPU of the Parties' customers compared to the ARPU of all other MNOs' customers clearly suggests that the Parties are close competitors.
- (296) Finally, based on the data made available to the Commission, also the pricing of Telefónica's and E-Plus' tariffs suggest that they are close competitors. As shown in Figures 1 and 2 (see recital (378)), over the period from the first quarter of 2011 to the first quarter of 2013 a residential mobile services subscriber with an average usage pattern would have paid [...] on a constant basis irrespective of whether handset subsidies are included or excluded in the comparison. Even the Notifying Party confirms that Deutsche Telekom and Vodafone have higher prices:

"It is uncontested that Deutsche Telekom and Vodafone have a higher price due to (i) higher quality and (ii) lack of competition in the high-value segment."¹⁷⁷

- (297) As regards the differentiation between the MNO brands suggested by the Notifying Party, the Commission notes that the MNOs, MVNOs, Service Providers and Branded Resellers responding to the Phase II Market Investigation regarded the brands set out in the following table as closest competing brands most often:¹⁷⁸

<u>Brand</u>	<u>Closest Competing Brand</u>
Telekom	Vodafone
Aldi	Lidl
Base	O2
Blau	Fonic
Congstar	O.tel.o
Fonic	Blau, Simyo
Lidl	Aldi
O.tel.o	Congstar
O2	Base
Simyo	Fonic
Vodafone	Telekom

- (298) That table shows that in the perception of the market participants that replied to the Phase II Market Investigation, the brands of Deutsche Telekom each have one brand of Vodafone as closest competing brand while each of the brands of Telefónica have

¹⁷⁶ The ARPU of residential post-paid customers of the merging parties in 2012 ranges between EUR [...] per month compared [...] of respective customers of Deutsche Telekom and Vodafone.

¹⁷⁷ See Reply to the Letter of Facts, p. 16.

¹⁷⁸ See Responses to the Questionnaire to Deutsche Telekom and Vodafone dated 20 January 2014, question 18; to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 20; and to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 20.

an E-Plus brand as closest competing brand and vice versa. The Commission notes in particular that:(a) E-Plus' main brand BASE is regarded as the closest competitor of Telefónica's main brand O2 and O2 has been named most often as the closest competing brand of E-Plus; (b) Telefónica's "premium discount" brand FONIC is regarded as closest competitors of the two E-Plus brands Blau and Simyo and vice versa; and (c) Telefónica's Branded Reseller's brand Aldi is regarded as closest competitor of E-Plus' Branded Reseller's brand Lidl and vice versa.¹⁷⁹ These brands have been named by the respondents to the Market Investigation more often as the closest competing brand to each other than to any other brand. In the event that a respondent named two or more brands, these replies have been counted for each of the respective brands. Contrary to what the Notifying Party suggests, a respondent who names two or more brands as the closest competing brand still clearly regards such brands as close competitors. It is therefore misleading to group such responses together with responses that do not name the respective brand at all.

- (299) By way of illustration: The Notifying Party claims that 10 out of 15 respondents indicated that Base is not the closest competing brand of O2 or that it is just one competitor among others.¹⁸⁰ Among these responses, only five did not name Base as the closest competing brand of O2.¹⁸¹ Of the remaining five responses, three named Base together with one other brand as closest competing brands.¹⁸² Of the other responses, one only named Base¹⁸³ and one only named E-Plus¹⁸⁴. Depending on whether the "E-Plus" response will be counted as a "Base" response as well, together with the five responses that did only mention Base as the closest competing brand of O2, a total of 9 or 10 out of 15 responses did in fact regard Base as the closest competing brand of O2. Vodafone has been named by only six respondents and Deutsche Telekom by only four.
- (300) The argument of the Notifying Party that the comparison of brands and the qualification of brands as closest competitors appears artificial and unrealistic¹⁸⁵ contradicts an argument of the Notifying Party in its Reply to the Article 6(1)(c) decision, where the Notifying Party accepted that the information gathered during the Phase I Market Investigation appears to indicate that the Parties are close competitors but submitted that the Market Investigation did not consider that all operators compete by using various brands which are differently positioned on the market.¹⁸⁶
- (301) That finding on the brand positioning during the Phase II Market Investigation is in any way consistent with the data gathered during the Phase I Market Investigation about the overall positioning of the respective companies. The vast majority of respondents to the Phase I Market Investigation (including MVNOs, Service Providers, consumers' association, business customers and distributors) identified Telefónica as the closest competitor of E-Plus on the overall retail mobile telephony market,¹⁸⁷ as well as in every segment thereof, with the exception of the segment of

¹⁷⁹ [...]*.

¹⁸⁰ See Table 8 in the Reply to the Statement of Objections, page 76.

¹⁸¹ [...]*.

¹⁸² [...]*.

¹⁸³ [...]*.

¹⁸⁴ [...]*.

¹⁸⁵ Reply to the Statement of Objections, paragraph 230.

¹⁸⁶ Reply to the Article 6(1)(c) decision, paragraph 270.

¹⁸⁷ As regards the competitors of E-Plus on the overall retail market and in potential market segments: see the responses to Questionnaire Q1 to MNOs dated 31. October 2013, question 33; to Questionnaire Q2 to MVNOs dated 31. October 2013, question 32; to Questionnaire Q3 to Business Customers dated 31.

business customers and high-value customers, where Deutsche Telekom and Vodafone are regarded as E-Plus' closest competitors (to the extent that E-Plus is active on these segments).

- (302) When asked for the closest competitor of Telefónica, the majority of respondents to the Phase I Market Investigation named E-Plus.¹⁸⁸ The majority of the respondents indicated E-Plus as Telefónica's closest competitor in the overall retail mobile telephony market. E-Plus has also been identified by a majority of the respondents as the closest competitor to Telefónica with regard to each of the pre-paid, residential customer' and low-value customer' segments. Deutsche Telekom has been named as the closest competitor of Telefónica by the majority of respondents only in the segments for business customers, data-only and high-value customers.
- (303) While the Notifying Party is correct when pointing out that a few of these responses name Telefónica among others as closest competitor of E-Plus and vice versa when asked to identify the closest competitor of Telefónica or E-Plus, such respondents obviously still regard Telefónica as a close competitor. As discussed in recitals (278) to (280), the merging firms do not need to be each other's closest competitor in order to raise competition concerns based on their closeness of competition.
- (304) But even when counting the replies in the way suggested by the Notifying Party, which groups replies that mention Telefónica as one of two closest competitors in the same category than replies that did not name Telefónica at all, the Notifying Party states that 19 out of 40¹⁸⁹ respondents did not name Telefónica as the closest competitor of E-Plus or only as one close competitor among others in the overall market¹⁹⁰. This is just another way of saying that 21 out of 40 respondents did name only Telefónica as the closest competitor of E-Plus in the overall market while additional respondents named Telefónica together with others as closest competitor of E-Plus. The same holds true for E-Plus as the closest competitor of Telefónica in the overall market: the wording used by the Notifying Party is just another way of stating that 21 out of 40 respondents did name only E-Plus as the closest competitor of Telefónica while additional respondents named E-Plus together with others. Therefore, the respective arguments of the Notifying Party do not lead the Commission to alter its conclusion on the data gathered during the Market Investigation.
- (305) The prominent position of Telefónica in the responses to the question concerning E-Plus' closest competitor becomes even more obvious if it is taken into account how often other market players have been named. Out of the 39 respondents, 29 identified Telefónica as E-Plus' closest competitor, while 13 respondents named Vodafone and 8 respondents Deutsche Telekom. Put differently, almost three quarters of the respondents regard Telefónica as closest competitor of E-Plus in the overall market,

October 2013, question 25; to Questionnaire Q4 to Resellers dated 31. October 2013, question 23; to Questionnaire Q5 to Consumer Associations dated 31. October 2013, question 19 and to Questionnaire Q7 to Handset Suppliers dated 31. October 2013, question 21.

¹⁸⁸ As regards the competitors of Telefónica on the overall retail market and in potential market segments: see the responses to Questionnaire Q1 to MNOs dated 31. October 2013, question 32; to Questionnaire Q2 to MVNOs dated 31. October 2013, question 31; to Questionnaire Q3 to Business Customers dated 31. October 2013, question 24; to Questionnaire Q4 to Resellers dated 31. October 2013, question 22; to Questionnaire Q5 to Consumer Associations dated 31. October 2013, question 18 and to Questionnaire Q7 to Handset Suppliers dated 31. October 2013, question 20.

¹⁸⁹ The Commission counted only 39 respondents that provided a non-confidential reply to that question. Footnote 191 7 in the Reply to the Statement of Objections lists only 39 respondents as well.

¹⁹⁰ See Table 7 in the Reply to the Statement of Objections, page 74.

far ahead of Vodafone which only one out of three regard as the closest competitor of E-Plus.

- (306) E-Plus in turn has been named by 24 out of 40 responses to the question concerning Telefónica's closest competitor on the overall market compared to 18 responses mentioning Vodafone and 11 responses mentioning Deutsche Telekom.
- (307) Moreover, the Parties often received similar ratings during the Phase I Market Investigation from the respondents when asked to rate the MNOs in relation to their ability to offer "value for money" for the following services: (a) "pre-paid"; (b) "voice"; (c) "post-paid"; and (d) "data".¹⁹¹ In addition, Telefónica and E-Plus are rated similarly low compared to Deutsche Telekom and Vodafone when it comes to network coverage and network quality.
- (308) The Notifying Party's argues that "value for money" could be understood as "cheap" or as "the best product in terms of network quality and customer service for the cheapest price"; it further argues that in the Notifying Party's view, E-Plus is not a "value for money" provider in the latter sense. The Commission, however, notes that an internal document of the Notifying Party that compares the brands O2, Telekom, Vodafone, E-Plus and Base on the basis of an external study in May 2012 comes to the conclusion that, compared to the other MNO brands, [...]*.¹⁹²

Internal documents

- (309) There are a number of internal documents, which confirm the conclusion that the Parties consider each other as close competitors. There are, however, also a number of internal documents, which show that both Telefónica and E-Plus also monitor other market participants, which they also perceive as close competitors.
- (310) As pointed out by the Notifying Party, Telefónica and E-Plus monitor the entire market, including the tariffs of major Service Providers.¹⁹³ However, as all these competitors are active within the same market, monitoring all major players seems rather regular and prudent business practice than a significant indication for an assessment of closeness of competition. This includes cautionary statements such as [...]*.¹⁹⁴
- (311) Such market observation does neither suggest nor exclude closeness of competition. Therefore, the Commission does not base its assessment on each Parties' internal reporting of individual tariff moves of the other Party like, for example a mentioning in E-Plus' internal documents that [...]*.¹⁹⁵
- (312) There are, however, certain internal documents that suggest that the Parties monitor each other particularly closely. According to a presentation prepared by the Notifying Party, a workshop within Telefónica had the task of defining the "key enemies" of the brands of the Notifying Party. The presentation distinguishes

¹⁹¹ See responses to Questionnaire Q1 to MNOs dated 31. October 2013, question 36; to Questionnaire Q2 to MVNOs dated 31. October 2013, question 35; to Questionnaire Q3 to Business Customers dated 31. October 2013, question 28; to Questionnaire Q4 to Resellers dated 31. October 2013, question 26; responses to Questionnaire Q5, Consumer Associations dated 31. October 2013, question 22 and to Questionnaire Q7 to Handset Suppliers dated 31. October 2013, question 22.

¹⁹² [...]*. See [...]*. Document ID 993-2496, p. 13.

¹⁹³ See the Reply to the Article 6(1)(c) decision, paragraph 190 and paragraph 226 as well as Annex 2 to the Reply to the Article 6(1)(c) Decision, paragraph 1.

¹⁹⁴ [...]*. Document ID 263-1624, p. 6 and 7.

¹⁹⁵ [...]*. Dated [...]*. Document ID 263-1619, p. 3.

between strategic and tactical enemies¹⁹⁶ While the presentation names, *inter alia*, [...] as each being the "key enemies" of one brand, [...] is the only MNO that appears as a "key enemy" for [...]: (a) For the brands [...] and [...], the Notifying Party regards [...] as strategic enemy; (b) The strategic enemy of [...] is, according to the presentation, [...], while the tactical enemies are [...] and [...]; (c) For [...], the Notifying Party regards [...] as strategic enemy [...] as tactical enemy; and (d) For [...] the presentation mentions the strategic enemies [...] and [...] and the tactical enemies [...] and [...].

(313) [...] In summary, the presentation mentions a brand of E-Plus [...], a brand of Vodafone [...] and a brand of Deutsche Telekom and 1&1 [...]. This shows that even in the perception of the Notifying Party itself, [...] is regarded as [...] in the target segments of Telefónica's key brands than it would be assumed based on the [...] market size of [...] compared to [...] and [...].

(314) Another presentation by the Notifying Party, discussing the commercial and network strategy of the merged entity post-transaction, further supports the closeness of the brands of the Parties. According to that presentation, the pricing of the brands "[...]" and "[...]" as well as the propositions of the brands "[...]", "[...]" and "[...]" are very close to each other:

"Current pricing of [...] and [...] quite similar which gives limited room for brand differentiation"¹⁹⁷

"[...] and [...] with very similar propositions – [...]"¹⁹⁸

(315) Regarding the perception of E-Plus of its [...], an internal document, showing the main competitors and their position compared to E-Plus' brands, names only [...] as a "direct" ("*direkt*") key competitor of [...]. [...] and [...] are described as [...] key competitors "above" ("*oben*") and [...] as key competitor "below" ("*unten*").¹⁹⁹ A presentation dated 10 June 2013 lists [...] as the only competitor of the brand [...].²⁰⁰ Similarly, the document "Brand segmentation and target portfolio" names [...] as the competitor of [...].²⁰¹ A presentation named "Strategie Meeting Berlin" dated 7 November 2011 names [...] as the most important competitor ("*wichtigster Konkurrent*").²⁰²

(316) Both Parties regard [...] as "[...]". In the case of E-Plus, this is expressed in the document referred to in recital (315) that describes [...] as competitors "above" [...]. The Notifying Party refers to its brand "O2" as a "[...]" itself.²⁰³ Internal documents show [...] between the "[...]", "no frills" brands such as [...], [...] and [...] and "mid-range players" such as [...], [...] and [...].²⁰⁴ According to those documents, Telefónica perceives its brand [...] as neither in [...] on the one hand [...] on the other hand as all these players are depicted in areas different from the one of Telefónica.

¹⁹⁶ [...] See dated [...] Document ID 988-2063, p. 29. [...]

¹⁹⁷ See Presentation [...] dated [...] Document ID 990-4086, p. 26.

¹⁹⁸ See Presentation [...] dated [...] Document ID 990-4086, p. 30

¹⁹⁹ See [...] dated [...] Document ID 264-11335

²⁰⁰ See [...] Document ID 257-5224, p. 23.

²⁰¹ [...] dated [...] Document ID 264-10706, p. 5.

²⁰² [...] dated [...] Document ID 262-5536, p. 4

²⁰³ Reply to the Article 6(1)(c) Decision, paragraph 215.

²⁰⁴ See [...] dated [...] Document ID 990-5108, p. 47.

- (317) There are, however, other Telefónica internal documents cited by the Notifying Party, which discuss in detail the fact that [...] has been actively targeting O2 customers.²⁰⁵
- (318) Similarly, the E-Plus presentation mentioned in recital (315) that names [...] as the competitor of [...]*, names [...] and [...] as the competitors of [...] and [...] as the competitors of [...] and [...] as the competitor of [...]*.²⁰⁶ Another presentation by E-Plus names several "customer needs", their overall importance and their relevance for certain E-Plus' brands and the main competitor for each such need. According to that presentation, regarding the two most important factors, namely "[...]" and "[...]", the main competitor of E-Plus is [...]*. [...] is named the main competitor for "[...]" and "[...]", [...] for "[...]" and "[...]", [...] for "[...]" and [...] for the factors "[...]", "[...]" and "[...]*".²⁰⁷ One of these factors is marked as "recommended future brand benefit". According to that presentation, the recommended future brand benefit of Base is "[...]" for which the main competitor is [...]*, while [...] will compete mainly with [...] for "[...]" and [...] with [...] for "[...]*".
- (319) Based on the findings set out in recitals (309) to (318), the Commission concludes that the review of internal documents provides some indication that the Parties regard each other as a rather close competitor. However, the documents do not provide a univocal picture; some of the evidence indicates that the Parties also regard [...] as a close competitor in some regards.
- (320) Taking all elements of the assessment into account, the Commission finds that Telefónica and E-Plus are close competitors. While the review of the internal documents provides only some indication to that effect, the answers to the Market Investigation support this finding. The same applies to the diversion ratios in the pre-paid segment. Even though the diversion ratios describe customer choices in the pre-paid segment, they indicate an overall closeness of competition between the Parties. As stated in recital (295), both Parties offer, in particular, tariffs that target low- to medium-value customers.²⁰⁸ The vast majority of pre-paid customers have such tariffs but also a large number of post-paid customers. The diversion ratios in the pre-paid segment therefore confirm what Table 24 set out in recital (238) provided by the Notifying Party already suggests: that the Parties are in particular competing for low- and mid-value customers. The Commission therefore concludes that the diversion ratios between the Parties in the pre-paid segment, not only imply that they are close competitors in the pre-paid segment, but also indicate that they are close competitors in the overall mobile retail market.

6.3.1.3. Removal of two important competitive forces

Notifying Party's view

- (321) The Parties consider that in order to satisfy the legal test for the assessment of the importance of the competitive force of one or more of the merging parties as set out in paragraph 37 of the Horizontal Merger Guidelines, the Commission must establish that the competitive behaviour of E-Plus has more of an influence on the competitive process than its position in the market would suggest. Thus, according to the Parties

²⁰⁵ For example, dated [...] Document ID 992-2364, p. 4; [...] dated [...] Document ID 990-5108, p. 49.

²⁰⁶ See [...] Document ID 257-5224, p. 23.

²⁰⁷ [...] dated [...] Document ID 264-10706, p. 4.

²⁰⁸ Also see Table 24.

it is not sufficient to show that E-Plus participates in the competitive process in the same way as all other players. Rather, E-Plus would need to have a disproportionately high impact on the competitive dynamics with its offerings. The Parties further contend that the Commission would have to demonstrate that E-Plus plays a maverick role.

- (322) As regards the competitive position of E-Plus, the Notifying Party submits that the proposed transaction will not eliminate an important competitive force in the German retail market for mobile telecommunications services. The Notifying Party bases this submission on the following arguments: (a) the market shares of E-Plus have stagnated during recent years if the subscribers gained by Branded Resellers are not taken into account; (b) switching ratios do not indicate that E-Plus is an important competitive force; (c) while there is no doubt that E-Plus has introduced innovations to the lower segment of the market, there have been many important innovations by other MNOs and non-MNOs during recent years; (d) the competitive constraints exercised by E-Plus are limited due to its (perceived) lower network quality; and (e) the existing limitations in E-Plus' handset portfolio and notably the fact that E-Plus [...]*.²⁰⁹
- (323) In response to the Commission's concerns as set out in the Statement of Objections and prior to that in the Article 6(1)(c) Decision, the Parties further submit that, while E-Plus' strategy might have been [...] following a strategy shift in [...]*, more recently, E-Plus has been [...] and has even [...]*. It should be noted that in the Reply to the Statement of Objections the Parties submit that [...] started to manifest itself in [...]*, whereas in the Reply to the Article 6(1)(c) Decision the Parties were still of the view that [...] had already started in [...]*. Moreover, the competitive potential of E-Plus at present and in the future is said to be [...] due to the growing importance of data services, where E-Plus is [...]*.
- (324) In support of this claim the Notifying Party submits that, between [...]*, E-Plus, favoured by the market conditions, addressed the low value segment of the market with competitive offers, including cheap on-net propositions [...] to overcome its weak market position and negative image in terms of quality. E-Plus is said to benefit from the image gained by this strategy still today. The Parties, furthermore, submit that, in any event, the historic position of E-Plus is not relevant for the competitive assessment in this Case.
- (325) According to the Notifying Party, the conditions for E-Plus' strategy started to [...] with, among others, the growing importance of data offerings, flat rates and OTT offerings and customers becoming more likely to look for good quality at the best price and a lower retail price level due to more significant price competition from other market participants, including 1&1 and Drillisch. At the same time, E-Plus was lacking behind in [...]*. Thus, the Notifying Party submits that E-Plus has become [...]*, and in some cases it even introduced [...]*, and it did not introduce any innovative offers on both, the post-paid and the pre-paid segment for at least the past two years. Rather, it is claimed that the market today is competitive and that all market players have introduced innovations to the market in recent years, such as the so-called "all-net flat",²¹⁰ and the position of price leader is held by market players other than E-Plus.

²⁰⁹ [...]*

²¹⁰ The Notifying Party explains that an all-net flat includes almost unlimited calls to the German mobile and fixed networks plus a certain volume of high speed data (currently generally 500 MB). According

- (326) The Notifying Party further submits that the offers of E-Plus as described in the Statement of Objections do not support the finding of price aggressiveness on the part of E-Plus.
- (327) In particular, the all-net flat offered under the "yourfone" brand was introduced in reaction to [...]*
- (328) The "high speed for everybody" initiative is said to be a [...]*. This initiative formally includes 4G services [...]*. In addition, maximum data volumes included in the respective tariffs [...]*. Finally, the offer is limited in time until June 2014.
- (329) As regards the EU travel flat option, another E-Plus proposition considered particularly aggressive and innovative by the Commission in its Statement of Objections, the Notifying Party submits that other market players had launched similar offers prior to E-Plus and that at the time of its Reply to the Statement of Objections this offer had not triggered any reactions.
- (330) The Notifying Party furthermore disagrees with the Commission's view that E-Plus' cooperation with WhatsApp, as set out in the letter of facts dated 4 April 2014, constitutes another element showing that E-Plus is an important competitive force on the market. In particular, the Notifying Party submits that the terms of that cooperation agreement are not [...]*, that such cooperation will not alleviate the competitive pressure from OTT players and that the competitive force of this Branded Reseller should not be attributed to E-Plus.
- (331) In relation to the Commission's argument that E-Plus had launched an aggressive and innovative offer of the iPhone 5, the Notifying Party clarified that this offer did not have any appreciable impact on the market and that iPhone users in any event cannot benefit from E-Plus' 4G network, as E-Plus [...]*
- (332) Moreover, in relation to a tariff launched by E-Plus' Branded Reseller [...]*, considered by the Commission to constitute a further example of the important competitive force of E-Plus, the Notifying Party reiterates its view that the competitive force of [...]* market conduct should not be attributed to E-Plus due to the competitive force exercised by [...]* on E-Plus.
- (333) In relation to the development of the market shares of E-Plus in recent years the Notifying Party points out that E-Plus' market share [...]* between 2009 and 2012 do not indicate that E-Plus is an important competitive force. Rather, when looking at the 2013 market share figures for the overall retail market [...]* was the only player who [...]* compared to 2012 while all other players [...]* market shares [...]*. Likewise, [...]* achieved the [...]*, while [...]*. Although E-Plus gained subscribers in 2013 ([...]*) its gains are lower than those of [...]*. In light of this finding, the revenue market share [...]* on the overall market is said to show that E-Plus' business is [...]* profitable. As regards market share developments on the pre-paid segment, the Notifying Party submits that the pre-paid segment only represents [10-20]*% of the whole mobile retail market based on revenues and is, moreover, shrinking. The [...]* of the Parties therefore cannot outweigh their [...]* in the post-

to Telefónica, the first all-net flat was introduced by Deutsche Telekom in 2009 for a monthly fee of EUR 119.95 under the Deutsche Telekom brand and for EUR 89.79 under the Congstar brand. The current price leader for this offer is Drillisch with a monthly fee of EUR 16.95. E-Plus' first all-net flat was offered under its BASE brand in 2012 for a monthly fee of EUR 50, and was thus up to EUR 20 more expensive than the cheapest available offers from 1&1, Freenet and Drillisch). [...]*

paid segment and on the overall market and on the whole cannot lead to [...] as pre-paid customers are mainly low-value customers with a low ARPU.

- (334) In addition, [...] of E-Plus' market share gains in terms of revenues and more than [...] in terms of subscribers between 2009 and the second quarter of 2013 are accounted for by [...], considered to be the driving force behind its offers. Finally, factors, such as E-Plus' shift in the product portfolio from high-end to low-end products may explain a market share [...] which therefore does not indicate price aggressiveness.
- (335) As regards the future role of E-Plus, the Notifying Party submits that the company's competitive potential would be limited in the absence of the proposed transaction due to the growing importance of data and that the Statement of Objections strongly underestimates the relevance of the on-going changes in the market place. It argues that neither the Market Investigation nor the internal documents support the Commission's view that E-Plus would continue to be an important competitive force in the absence of the proposed transaction.
- (336) E-Plus' focus on [...] and [...] in the pre-paid segments and brands that are perceived to be [...] will prevent the company from participating in increasing mobile data revenues and data monetisation. According to the Notifying Party, further growth opportunities are [...] for E-Plus as, on the one hand, [...] and on the other hand, E-Plus, as a mobile-only player, will not be able to serve (and thus risks losing) customers seeking bundled offers for fixed and mobile data.
- (337) In that context, the Parties claim that E-Plus is lagging behind the other German MNOs in terms of 4G roll-out and that its roll-out plans [...]. Relying on its 3G network will not compensate the lack of a 4G network. Telefónica furthermore considers that network sharing between E-Plus and Telefónica or any of the other MNOs would not constitute a realistic alternative, notably because Telefónica would not have any reason to grant access to its 4G network to E-Plus. E-Plus' spectrum assets do not allow for a competitive stand-alone 4G roll-out and network sharing or roaming are not considered viable or, as regards roaming, at least very costly 4G roll-out options. In addition, E-Plus' future role is uncertain due to the fact that the licence for parts of its 1800 MHz spectrum will expire on 31 December 2016 and that, in light of the fact that neither E-Plus nor its parent company KPN are [...], it is uncertain whether E-Plus will be able to re-acquire spectrum in this band.
- (338) With regard to E-Plus' financial situation the Parties submit, more generally, that due to the erosion of E-Plus' historic business model, which was focused on voice and SMS, its revenues are in decline and it achieved negative operating profits of EUR [...] million and was [...] while all the other MNOs and at least the leading non-MNOs were performing better. These financial [...]. As a result, E-Plus' investment capabilities are limited and it is questionable whether it would be able to build a competitive network in a stand-alone scenario in due time.
- (339) E-Plus provided supplementary submissions both in response to the Statement of Objections and the 6(1)(c) Decision in which it describes key internal documents submitted to the Commission that should form a proper basis for a further assessment of E-Plus' current and future competitive role on the market in the absence of the proposed transaction. The Parties conclude that it is highly questionable that, in such a scenario, E-Plus would be able to play the same competitive role in a data-centric environment as it did in a voice-centric environment and that, based on those documents, it is impossible to conclude that in the absence of the proposed transaction E-Plus would be an important competitive force in the future.

- (340) In relation to the internal documents submitted by the Parties during the investigation, the Parties consider that the Commission failed to provide a complete and correct assessment of these internal documents which, in their view clearly show that neither Telefónica nor E-Plus are, and would be in the future, in the absence of the proposed transaction, particularly important competitive forces on the retail market for mobile telecommunications services in Germany. Furthermore, the Parties consider that the Market Investigation also does not support the Commission's conclusions in this regard.
- (341) As regards the present competitive position of Telefónica, the Notifying Party relies on similar considerations as for E-Plus. It submits that the Commission must show that a company needs to have more of an influence on the competitive process than its market shares would suggest for it to be considered an important competitive force. The German retail market for mobile telecommunications services is alleged to be characterised by intense competition, but not all market players can therefore be considered important competitive forces. The offers introduced by Telefónica in recent years, as listed in the Statement of Objections, are therefore not proof that Telefónica is an important competitive force.
- (342) In particular, the cost airbag for the "o2o tariff" is a feature introduced several years ago in a voice-centric world and has similar features as an all-net flat and is thus to be considered in the context of the development of all-net flats in which all market players participated.
- (343) The [...] offer is claimed not to have been particularly successful. In addition, it did not trigger any reaction from competitors.
- (344) Moreover, the Notifying Party submits that it introduced its o2 blue portfolio to [...] .
- (345) Finally, the Notifying Party stresses that offers by [...] should not be attributed to the host MNO and that the competitive force of the Branded Resellers will not be removed by the proposed transaction, as their buying power would uphold attractive wholesale conditions also from the merged entity.
- (346) The Notifying Party considers that the conclusions drawn from the Market Investigation do not support a finding that Telefónica's tariffs are aggressive and innovative. Similarly to its submission in relation to E-Plus, the Notifying Party submits that the responses to the Market Investigation do not provide sufficient answers concerning individual offers, and that overall, Telefónica's tariffs and brands are considered to be only slightly less or even equally price aggressive or innovative than Vodafone's or Deutsche Telekom's tariffs.
- (347) The Notifying Party submits that the rationale of the proposed transaction is [...] . The Notifying Party points out that, in the absence of the proposed transaction, in the opinion of some respondents to the Market Investigation Telefónica might face serious challenges concerning the network quality and rollout in a data-centric world. Certain respondents, such as [...] consider that Telefónica's existing network is of lower quality than Vodafone's or Deutsche Telekom's networks and its competitiveness might decrease without improvements to its network. Similarly, the Notifying Party submits that Telefónica is [...] .

Commission's assessment

- (348) In order to verify whether the merging parties may be considered an important competitive force on the retail market for mobile telecommunications services, the

Commission first assessed whether Telefónica and E-Plus exerted more of an influence on the competitive process than their market share would suggest.

- (349) The Commission then assessed whether, in light of that competitive influence, Telefónica and E-Plus have exerted an important competitive constraint on each other, which would be lost as a result of the merger. The Commission verified whether the removal of this constraint between the Parties would change the competitive dynamics in an anti-competitive manner, by reducing their ability and incentives to compete less vigorously on the retail market for mobile telecommunications services in Germany.
- (350) The Commission has then assessed whether the combination between these two players would reduce competitive pressure on the remaining main competitors on the market, namely Vodafone and Deutsche Telekom. The Commission verified whether this would change competitive dynamics on the overall retail market for mobile telecommunications services in Germany in a significant, anti-competitive manner.
- (351) The Commission has found that the retail market for mobile telecommunications in Germany is characterised by high barriers to entry (see Section 6.6). Further MNO entry in Germany is unlikely if the merger would go ahead unaltered. This fact compounds any negative effects that the proposed transaction may have on the German market, thus underlining the importance of the competitive dynamics that exist when each of Telefónica and E-Plus are stand-alone competitive forces.
- (352) In order to assess Telefónica's and E-Plus's competitive influence, the Commission has applied the general principles set out in paragraph 9 of the Horizontal Merger Guidelines, which states that "the Commission compares the competitive conditions that would result from the notified merger with the conditions that would have prevailed without the merger. In most cases, the competitive conditions existing at the time of the merger constitute the relevant comparison for evaluating the effects of the merger. However, in some circumstances, the Commission may take into account future changes to the market that can reasonably be predicted".
- (353) The Commission considers that the past behaviour of an undertaking is not in itself relevant for the Commission's assessment of its competitive strength. Therefore, contrary to what the Notifying Party submits in its Reply to the Statement of Objections, the Commission did not draw any conclusion on the competitive force of the Parties, notably of E-Plus, merely on the basis of the information submitted by the Notifying Party on E-Plus' past behaviour. The Commission has reviewed such information on the past behaviour together with other evidence from internal documents of the Parties, economic analysis and market investigations related to E-Plus's and Telefónica's current and future position in the market.
- (354) Contrary to the Parties' claims, based on their current role, E-Plus and Telefónica are, and would, in the absence of the proposed transaction likely continue to be, two important competitive forces on the German retail market for mobile telecommunications services in the coming years. In particular, E-Plus, in the absence of the proposed transaction, would be likely to continue to play a "challenger" role in the market in the future. This "challenger" role is reflected in, but not solely limited to, price aggressive and innovative offers.
- (355) The conclusion outlined in recital (354) as to the role played by both E-Plus and Telefónica in the market finds strong evidentiary support in the results of the Market Investigation, the Parties' internal documents and other information either publicly available or submitted by the Parties.

- (356) In this Section, the Commission analyses the role of E-Plus and Telefónica on the German retail market for mobile telecommunications services both today at present and in the future, in the absence of the proposed transaction.

E-Plus' role at present

- (357) As regards E-Plus, based on publicly available information, the data gathered during the Market Investigation, information provided by the Parties, and a review of the Parties' internal documents, the Commission considers that E-Plus currently is an important competitive force on the German retail market for mobile telecommunications services. In particular, it has continued to be an important competitive force even in the recent past.
- (358) First, as set out in recitals (323) to (334), the Parties submitted that while E-Plus might have been more competitive in the past, its competitiveness has declined in recent years. As clearly acknowledged by each of the Parties in their Reply to the Statement of Objections and in the Reply to the Article 6(1)(c) Decision, as set out in recital (324) of this Decision, there is no doubt that E-Plus was aggressively competing, with a focus on price, between 2005/2006 and 2010 and possibly even after 2010. During that period, E-Plus positioned itself as [...]*. It acknowledges that it [...]*.²¹¹ E-Plus considers that the "[...]* include [...]*, being a [...]*, and having [...]*²¹² Also, a document called [...]* describes the self-image of E-Plus, as an organisation of "[...]* that, according to its nature as [...]*²¹³ Likewise, Telefónica, in an internal document titled [...]* explains that in [...]* E-Plus was [...]* and that in [...]*, in [...]*, in [...]* and in [...]*. From [...]* until [...]*. Telefónica concludes that [...]*.²¹⁴
- (359) As further explained by the Notifying Party in its Reply to the Article 6(1)(c) Decision, the challenger model was E-Plus' reaction to a weakened market position. Contrary to Deutsche Telekom and Vodafone, both established operators with a large customer base, significant revenues and a significant market share, E-Plus, the third entrant on the German retail market for mobile telecommunications services differentiated itself through segmentation and low value offers to grow market shares, whether directly or through Branded Resellers.²¹⁵ By way of example, one respondent to the Phase I Market Investigation summarises E-Plus' competitive behaviour since 2005 as follows: "Since the end of 2005, E-Plus has made the difference in the German mobile market. Before that year, prices were (very) high and stable [...]. E-Plus has drastically reduced prices [...]."²¹⁶ The respondent also submits the following:

"Before the launch of the E-Plus challenger strategy in 2005, the German mobile market was one of the most uncompetitive and static markets for

²¹¹ Presentation to [...]*, dated [...]*Document ID 266-15755, p. 1.

²¹² Annex 4 of the Reply to the Article 6(1)(c) Decision, p. 4Presentation of [...]*Document ID 1200-89, p. 3.

²¹³ [...]*, Document ID 264-11464, p. 6.

²¹⁴ Presentation [...]*dated [...]*Document ID 1179, p. 2 to 10.

²¹⁵ Presentation [...]* [...]*dated [...]*Document ID 1179, p. 2 to 10.

²¹⁶ Response of [...]* to Questionnaire Q2 to MVNOs dated 31 October 2013, Document ID 794, question 36. Despite the fact that [...]*, in response to the Phase II Market Investigation explained that it does not keep sufficient track of tariffs offered on the German market, the Commission considers that statement reliable as no detailed insight into single tariffs is required to make such a statement on E-Plus overall strategy and the broader development of the German retail market for mobile telecommunications services.

mobile telephony in Europe. E-Plus strategy at that time dramatically changed the market and turned it into one of the most dynamic in Europe."²¹⁷

- (360) The Commission's view that E-Plus was aggressively competing in the past is also shared by the German Monopolkommission in its assessment of the proposed transaction.²¹⁸
- (361) Second, the Commission considers that E-Plus continues to be an important competitive force, in particular in terms of pricing as well as in terms of the innovative nature of its offers also after 2010 and up to the present time.
- (362) E-Plus was the first operator on the retail market for mobile telecommunications services in Germany to introduce a so-called "all-net flat" tariff at a price point below EUR 20 and thus significantly cheaper than its competitors in April 2012. While the Parties consider that the launch of this tariff was the last price innovation by E-Plus to date, the Commission considers that it constitutes one of numerous examples of the enduring innovativeness and challenger role that E-Plus played even after 2010 on the German retail market for mobile telecommunications services.
- (363) In April 2012, E-Plus launched its "yourfone" brand with an all-net flat plus data-flat for EUR 19.90 per month whereas other all-net flat tariffs available on the market prior to that date were at least 25% more expensive.²¹⁹ The Commission acknowledges that the launch of this tariff was a commercial decision designed to [...]*. Nevertheless, this tariff and in particular its price point are an example of the important competitive force of E-Plus for the reasons set out in recital (364).
- (364) The outcome of the Phase II Market Investigation shows that E-Plus' offer was considered an aggressive and innovative move to follow. A large number of respondents listed the yourfone all-net flat as one of the five most price aggressive and innovative tariffs introduced by an MNO under its core or secondary brands during the last three years.²²⁰ The tariff is referred to as the "pioneer"²²¹ tariff or the "revolution"²²². Even the Notifying Party acknowledges at paragraph 491 of its Reply to the Statement of Objections that the yourfone all-net flat was "the most price aggressive" all-net flat offer at that time. Also, although some operators offered all-net flat tariffs before April 2012, E-Plus' EUR 19.90 price point prompted many operators, including MNOs to either decrease their prices for existing all-net flat

²¹⁷ Response of [...] to Questionnaire Q2 to MVNOs and Service Providers, dated 21. January 2014, Document ID 1487, question 30.

²¹⁸ See the opinion of the Monopolkommission "Stellungnahme der Monopolkommission zu COMP/M.7018 – Telefónica/E-Plus", Document ID 1685, p. 3.

²¹⁹ [...] RFI 8, Document ID 1524, question 8.

²²⁰ Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, questions 23 and 24; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 23 and 24; and responses to Questionnaire to MNOs dated 20 January 2014, question 23. Likewise, respondents to the Phase I Market Investigation named the yourfone all-net flat as an example for the price aggressiveness of E-Plus (see, for example, the response of [...] to Questionnaire Q1, MNOs dated 31 October 2013, Document ID 790, question 37 and the responses to questionnaire Q2 to MVNOs dated 31 October 2013, question 36).

²²¹ Response of [...] to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, Document ID 1372, question 24.

²²² Response of [...] to Questionnaire Q3 to Branded Resellers dated 21 January 2014, Document ID 1375, question 24.

offerings or to introduce such tariffs shortly after E-Plus did.²²³ Most importantly, also 1&1 subsequently adhered to this price point²²⁴ which shows that even under circumstances where E-Plus is losing customers to 1&1 it is in a position to distinguish itself from its competitors, which clearly demonstrates that it is an important competitive force on the German retail market for mobile telecommunications services.

- (365) The observation that competing MNOs are [...] is recorded in an E-Plus internal document that states: [...]*
- (366) At a later date, at the end of November 2013, E-Plus introduced its "high-speed for everybody" initiative. The Commission considers that this initiative is [...] but another example for E-Plus' important competitive force, not only because it includes 4G services irrespective of the tariff chosen but more generally for the reasons set out in recital (367).
- (367) Usually, operators active on the retail market do not offer their highest available download speed across brands and across tariffs. Instead, in order to obtain higher download speeds and sometimes also access to 4G, customers would have to choose special (usually post-paid) tariffs and/or purchase an add-on to their tariff to obtain maximum download speeds.²²⁶ At the present time, the highest available download speed of all MNOs is only made available through the respective primary brands.²²⁷ According to E-Plus' innovative initiative, however, every customer of E-Plus is able to make use of the highest available download speed, regardless of its tariff (including all pre-paid tariffs), and the brand under which the tariff is offered. According to the information available on E-Plus' website, this is up to 42 MBit/s.²²⁸ Since 5 March 2014, the initiative also includes 4G services. The offer is initially limited in time until mid-2014 and will thus run for a period of at least seven months.²²⁹ In light of the fast-moving nature of the German market for mobile telecommunications services as emphasised by the Parties throughout their submissions, the Commission considers this period to be sufficiently long to sustainably establish a new and innovative offer on the market through which pressure on competitors is exercised. Finally, the Commission does not see any immediate correlation between higher download speeds and data consumption and thus does not agree with the Parties' argument that these higher download speeds would result in consumers purchasing further data volumes. Any increase in data

²²³ Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, question 22; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 22; and responses to Questionnaire to MNOs dated 20 January 2014, question 22.

²²⁴ Reply to the Article 6(1)(c) Decision, paragraph 304.

²²⁵ [...] *Document ID 1200-153, p. 4.

²²⁶ See for instance, Deutsche Telekom's post-paid "mobile data eco S/M/L" tariffs with maximum download speeds of 7.2/21.6/150 MBits/s respectively (<http://www.t-mobile.de/datentarife/0,17526,18519-,00.html?WT.svl=100>); customers subscribed for Deutsche Telekom's post-paid "complete comfort S/M/L/XL" can purchase a "Speed Option LTE" for EUR 9.95 per month to obtain higher download speeds. Likewise, Vodafone offers different maximum download speeds for its "Red XS/S/M/L/Premium" tariffs which are 14.4/21.6/42.2/100/100 MBits/s respectively (<http://www.vodafone.de/privat/tarife/smartphone-tarife.html>).

²²⁷ For instance, the maximum download speed for the tariffs of Deutsche Telekom's secondary brand Congstar is 7.2 MBits/s (see for instance Congstar's "surf flat" tariffs, Document ID 4151). Likewise, the maximum download speed for the tariffs of Vodafone's secondary brand o.tel.o is 7.2 MBits/s, Document ID 4174. See also recitals (588) *et seq.*

²²⁸ Document IDs 4156, 4157.

²²⁹ See Document IDs 4156, 4157.

consumption would first of all be a result of changes in surfing behaviour which would, if at all, only indirectly be related to higher download speeds and which would only happen gradually.

- (368) The Commission also notes that contrary to what the Parties' submission in relation to the high-speed for everybody initiative seems to suggest, E-Plus is not only using its 4G network to increase overall network capacities. Instead, E-Plus is also making its 4G network available as a stand-alone proposition. On 2 April 2014, E-Plus announced that, in cooperation with the public transport provider in Berlin, Berliner Verkehrsbetriebe ("BVG"), the telecommunications systems and equipment provider ZTE, and the Berlin based radio technology specialist NC Plan, it has started offering 4G services with maximum download speeds of 70 Mbits/s on the Berlin metro.
- (369) Moreover, in January 2014, E-Plus announced a new tariff option allowing the subscribers of certain E-Plus tariffs to benefit from the same prices for roaming within the European Union as they pay for domestic mobile services. This "EU travel flat" option is priced at EUR 3 per month and was launched on 10 February 2014.²³⁰ The Commission acknowledges that other operators, including Vodafone, introduced EU roaming propositions already in 2013. However, the "EU travel flat" option offered by E-Plus significantly distinguishes itself from those other propositions in terms of price. While E-Plus customers choosing that option pay EUR 3 per month and benefit from the terms of their domestic tariff, Vodafone customers opting for Vodafone's "travel package" ("Reise Paket") have to pay EUR 3 per day and have a ceiling on voice, SMS and data services covered by that fee.
- (370) Furthermore, in its reply to the Commission's RFI ("RFI") [...]*, E-Plus explained that on 15 December 2013 E-Plus and WhatsApp Inc. ("WhatsApp") entered into a "marketing and cooperation agreement" covering Germany. According to E-Plus, WhatsApp will act as [...]*.²³¹ [...]*On 7 April 2014 E-Plus launched its WhatsApp offer. The tariff is pre-paid and allows for free use of the WhatsApp services even after the customer has no credit left.²³²
- (371) A Branded Reseller cooperation between an MNO and a so-called over-the-top ("OTT") messaging service such as WhatsApp is unique to the German market. The Commission, therefore, considers entering into a partnership with an OTT player an innovative move. It shows that E-Plus is successfully adapting to new competitive dynamics by entering into direct competition with the services offered by other OTT players [...]*.²³³ [...]*
- (372) Also, when asked to name the most aggressive offers introduced to the German retail market for mobile telecommunications services in 2012 and 2013, the Notifying Party listed, among others, two initiatives by E-Plus. The first initiative concerns the yourfone all-net flat as further described in recital (362), prompting, among others, Telefónica, Vodafone, Drillisch Freenet and ultimately also 1&1 to react with similar offers. The second initiative concerns the introduction of Aldi's all-net flat including SMS flat and 600 MB data for EUR 19.99 in September 2013 which prompted a

²³⁰ See Document ID 4177.

²³¹ See response to RFI No. 10 dated 20 March 2014, Document ID 2457, p. 1.

²³² Document IDs 4178 and 4158.

²³³ As set out in recital (255) the Commission takes the view that, for the purposes of its assessment in this Decision, the activities of Branded Resellers on the retail mobile market in Germany should be attributed to E-Plus.

reaction from Fonic.²³⁴ As further set out in recital (254), the Commission considers that, for the purposes of its assessment in this Decision, Aldi's activities on the retail market for mobile telecommunications services in Germany should be attributed to E-Plus.

- (373) The data gathered during the Market Investigation support the Commission's view also in relation to other E-Plus tariffs launched during the last three years.²³⁵ When asked to list the top five most price aggressive tariffs introduced by MNOs during the last three years, market participants named tariffs offered by E-Plus' core and secondary brands more often than tariffs offered by the other MNOs, that is to say, of all tariffs mentioned by all responding market participants, these tariffs are named more often than those of other MNOs.²³⁶ Likewise, market participants named tariffs offered by E-Plus' core and secondary brands more often than tariffs offered by the other MNOs when asked to list the top five most innovative tariffs introduced by MNOs during the course of the last three years.²³⁷ In addition, the majority of market participants named the ALDI TALK tariffs as respectively one of the five most aggressive and one of the five most innovative tariffs introduced by MVNOs, Service Providers or Branded Resellers.²³⁸ The Commission notes the criticism made by the Notifying Party that certain respondents only indicated brand names rather than specific tariffs offered under these brands and that certain respondents incorrectly attributed tariffs and/or brands of MNOs to non-MNOs and vice-versa. While the Commission did not take into account wrongly listed tariffs and did not count responses only listing brands in reaching its conclusions on the aggressiveness of E-Plus' tariffs, it nevertheless notes that even such a response would allow it to draw the conclusion that the respondents concerned consider at least one of the tariffs offered under the brand named to be among the five most aggressive and/or innovative tariffs introduced by the respective operators.

²³⁴ See Telefónica's response to RFI 8, Document ID 1524, question 8.

²³⁵ The Notifying Party submits that the Market Investigation is inconclusive as a significant number of respondents provided insufficient and/or incomplete information and that options to respond were limited. With regard to those remarks, the Commission notes, first, that a market investigation is not an exact scientific exercise. It is an investigative tool designed to inform the Commission about the views of the market on one or more aspects of a given proposed transaction and constitutes, together with the information provided by the Notifying Party (including internal documents) and the economic analysis, one element on which the Commission bases its assessment. Against this background and as further set out in recital (373), the Commission considers that the responses received from different categories of market participants, even if they lack information or are incomplete, provide for a sufficiently coherent picture of the market's view on the role of E-Plus on the German retail market for mobile telecommunications services. Second, the market test questionnaires give respondents sufficient opportunity to make known their views beyond sometimes limited options for response in multiple choice questions.

²³⁶ Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, question 23; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 23; and responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 23.

²³⁷ Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, question 24; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 24; and responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 24.

²³⁸ Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, question 25, 26; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, questions 25 and 26; and responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, questions 25 and 26.

- (374) The Commission acknowledges that Deutsche Telekom and Vodafone also introduced competitive offers to the market. Nevertheless, the Commission notes that the majority of those offers were introduced in reaction to the launch of an aggressive and/or innovative tariff of E-Plus (and/or, as further set out in recitals (428) and (430), by Telefónica). For instance, Deutsche Telekom only reacted in May 2013 to the EUR 19.90 yourfone all-net flat of April 2012 with the introduction of the "Complete Comfort M" all-net flat for EUR 39.96 per month which is still almost EUR 20 more expensive than the yourfone all-net flat.²³⁹ Vodafone also followed E-Plus innovative offer, however already in May 2012.²⁴⁰
- (375) In the KPN and E-Plus Reply to the Statement of Objections and during the oral hearing, E-Plus argued that the Commission should have carried out a tariff comparison.²⁴¹ Indeed, given that price is an important parameter of competition, a comparison of tariffs offered by the four MNOs in the way explained in recitals (377) and (378) allows the Commission to further assess the Parties' position on the market. Therefore and in view of the Parties' submission, the Commission has compared the tariffs of Germany's four MNOs (Deutsche Telekom, Vodafone, Telefónica and E-Plus) to determine whether E-Plus is currently constraining Telefónica and the other mobile network operators by offering attractive prices in the overall German retail market for mobile telecommunications services (excluding tariffs specifically offered to business customers). The Commission also assessed whether Telefónica offers attractive prices in the overall German retail mobile communication market (excluding tariffs specifically offered to business customers). The Commission presented these findings to the Notifying Party in its Letter of Facts.
- (376) The Notifying Party considers that the Commission's findings in relation to the tariff comparison are not convincing because (a) the comparison as carried out by the Commission is a comparison of hypothetical bill sizes based on the assumption that all users had the same usage profile; (b) activation fees, which are typically higher for post-paid tariffs where Deutsche Telekom and Vodafone have their focus have been taken into account although they are one-off fees and easily exceed a typical ARPU; (c) the comparison is based on a single (median) usage profile which is likely to be very low; and (d) the comparison ignores price differentiation at the brand level and does not take into account MVNOs and/or Service Providers.
- (377) The tariff comparison carried out by the Commission as presented in Figures 1 and 2 is based on data from the four German MNOs, as described Section 4.1 of Annex A to this Decision. The Commission limits itself to the data from those four MNOs as most of the competition on the German retail market for mobile telecommunications services takes place between them. As regards the methodology used, the Commission compared what a residential subscriber with an average usage pattern (that is to say given amounts of minutes, SMS and MB of data, the amount of which corresponds to the average minute, SMS and data usage in the German private mobile segment during the period 2010 to 2013) would pay per month with each of the four MNOs. In other words, the Commission calculated the implied monthly bill for an average user rather than a median usage profile, thus basing itself on higher usage than the Notifying Party assumes. The underlying average usage pattern is based on the observed usage patterns of all residential customers of the four MNOs.

²³⁹ Response to Questionnaire to [...]*, dated 20 January 2014, Document ID 1696, question 22.

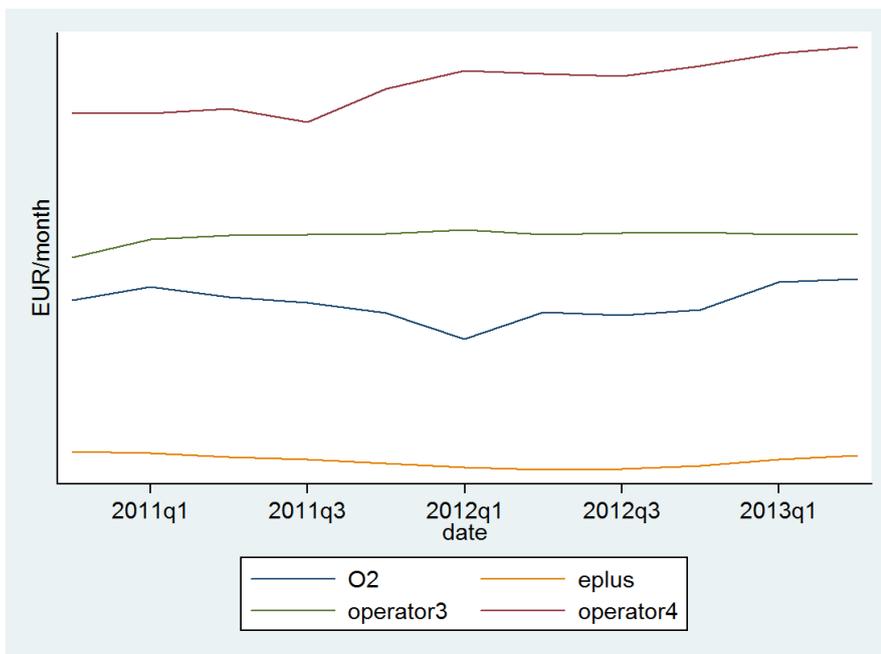
²⁴⁰ Telefónica's response to RFI 8, Document ID 1524, question 8.

²⁴¹ KPN and E-Plus Reply to the Statement of Objections, paragraph 2.25.

No distinction is made between primary and secondary brands in the graphs set out in figures 1 and 2. But this does not imply that the price differentiation between primary and secondary brands is not taken into account. The reported price series are the weighted average bills of each MNO's tariffs where the weights are proportional to the average number of subscribers of the component tariffs. Therefore, brand price differentiation does affect the resulting price series, even more so when the given MNO differentiates within its brand portfolio more strongly. This approach is applied in a uniform manner for all four MNOs in order to obtain comparable results. In a manner consistent with its approach throughout the assessment of the proposed transaction, the Commission also attributed Aldi's sales to E-Plus. In addition, the calculations take into account the fact that different tariffs may have different add-on options, such as the possibility to purchase extra data for a specific amount. In calculating the implied monthly bill for a given tariff these add-ons were used when they led to a cheaper bill than would have been the case if no add-ons were used. Regarding the Notifying Party's criticism related to the activation fees, the Commission notes that these are taken into account to compare the prices that an average new subscriber faces. Activation fees are an important factor of competition (among other factors, such as monthly fees, usage based fees, and add-ons) between German mobile operators. Different operators use this factor in different ways, that is to say, they may charge high or low activation fees and combine it with low or high other price components. Therefore, all factors must be taken into account in order to assess the price comparison that an average new subscriber is faced with when choosing an operator.

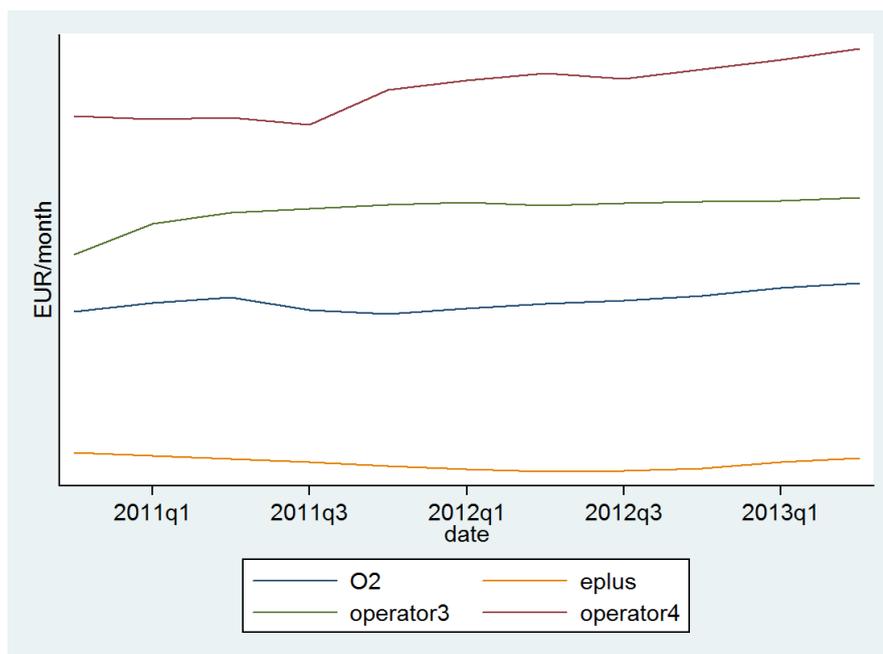
- (378) Moreover, the Commission carried out the tariff comparison referred to in recital (377) in two variants. In the first variant (see Figure 1), handset subsidies are taken into account. This was done by converting the total handset subsidy to a monthly subsidy. This amount was then subtracted from the implied monthly bill. In the second variant (see Figure 2), handset subsidies are not taken into account.

Figure 1: Implied average monthly bill net of handset subsidies



Source: Telefónica, E-Plus and other operators. Commission calculations.

Figure 2: Implied average monthly bill (handset subsidies not taken into account)



Source: Telefónica, E-Plus and other operators. Commission calculations.

- (379) The tariff comparison shows that during the period from the first quarter 2011 to the first quarter 2013, a residential mobile services subscriber with an average usage pattern would have paid the least with [...] on a constant basis. This finding holds true regardless of whether handset subsidies are included or excluded in the comparison. In other words, in the period from the first quarter 2011 to the first quarter 2013, [...] was constantly the cheapest MNO from the perspective of a residential customer with an average usage profile.
- (380) The outcome of the Market Investigation also generally supports the Commission's view that E-Plus has been an important competitive force during the period from 2010 to date.²⁴²
- (381) The majority of the respondents to the Market Investigation identified E-Plus as the MNO with the most price aggressive brands, followed by Telefónica. In light of the aggressive and innovative tariffs launched by E-Plus and, as further set out in recitals (425) to (435), the role played by E-Plus in recent years and given the ranking of the four MNOs in terms of price aggressiveness, the description provided by one Service Provider in an answer to the questionnaire, describing E-Plus as a "price-challenger", Telefónica as a "fast follower" and Deutsche Telekom and Vodafone as "slow followers"²⁴³ appears to be accurate. The responses of market participants further show that even when analysing the price aggressiveness in the pre-paid and the post-paid segments of a comprehensive selection of 28 brands covering the four MNO's primary and secondary brands, the brands of their main Branded Resellers as well as major brands of MVNOs and Service Providers, E-Plus' brands, including those of its Branded Resellers are typically viewed as price aggressive by the vast majority of respondents. In relation to the brands of Deutsche Telekom and Vodafone, E-Plus'

²⁴² In light of the Notifying Party's comment regarding the way in which the questions in the Phase I Market Investigation were phrased, the Commission refined its questions for the Phase II Market Investigation as further described in recital (381).

²⁴³ Answer to question 38.1 of Questionnaire 2, dated 31 October 2013, by [...]*, Document ID 633.

brands are considered to be more price aggressive. In relation to Telefónica, as well as in relation to MVNOs and Service Providers, E-Plus' brands are considered to be at least as aggressive as these operators' brands.²⁴⁴

- (382) Also, in its assessment of the proposed transaction, the Monopolkommission considers that E-Plus currently is a driving force on the German retail market for mobile telecommunications services.²⁴⁵
- (383) In addition, a review of the internal documents provided by E-Plus and Telefónica supports the Commission's view that E-Plus continues to be an important competitive force on the German retail market for mobile telecommunications services to date. Contrary to the interpretation given by the Parties, the Commission considers that these internal documents give a coherent picture suggesting that, over the course of the last two to three years, E-Plus has successfully adapted its commercial strategy to the changing market circumstances, while maintaining its challenger role in the market. In particular, the submissions referred to in recital (339) and the internal documents described therein contradict the Parties' view that E-Plus' role as "challenger" has been gradually eroded, and now merely exists 'on paper', and that E-Plus' difficulties have become more pressing due to a shift to a so-called "data-centric" world.
- (384) The Commission assessed the internal documents referred to in recital (383) against not only the specific context of their preparation and use, but also the more general picture of the German retail market for mobile telecommunications services at the time when the documents were drawn up. In particular, the Commission assessed the internal documents relating to the important competitive force of E-Plus and Telefónica (for Telefónica see recitals (434), (435), (441) and (442)) against the background of a shift towards a greater importance of mobile data, while seeking to understand the two companies' response to a change in their market environment.
- (385) The Commission also notes that the impact of a merger between Telefónica and E-Plus was already discussed in internal documents in 2012 when Telefónica contemplated acquiring control over E-Plus. In its assessment the Commission considers these internal documents, as well as more recent internal documents from the Parties dating from 2013. As both sets of internal documents support the same conclusion, the Commission rightly refers to all of them.
- (386) A report on the [...] prepared for [...] notes that [...].²⁴⁶ Looking forward, that report notes that the German market is [...] and it describes E-Plus' strategy in response to this as follows: [...].²⁴⁷ [...] A document named [...] prepared for

²⁴⁴ Responses to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 21; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 21; and responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 19.

²⁴⁵ See the opinion of the Monopolkommission "Stellungnahme der Monopolkommission zu COMP/M.7018 – Telefónica/E-Plus", Document ID 1685, p. 3.

²⁴⁶ Annex 4 to the Reply to the Article 6(1)(c) Decision, p. 5; Presentation for [...] dated [...], Document ID 1200-148, p. 46

²⁴⁷ Annex 4 to the Reply to the Article 6(1)(c) Decision, p. 5; Presentation for [...] That document is chosen as one example of E-Plus acknowledging [...]. The Commission notes that the case file contains numerous similar internal documents from E-Plus containing essentially the same considerations. While the Commission will refer to some of those in this Decision it will not list each of them.

²⁴⁸ Presentation for [...] dated [...], Document ID 1200-102, p. 10.

[...]* reiterates the plan to position E-Plus as a [...]* and sets out the goals of achieving a [...]*.²⁴⁹

- (387) In its submission in response to the Statement of Objections E-Plus referred to an internal document dated [...]*, called [...]*²⁵⁰ which is claimed to show the difficulties that E-Plus is facing [...]*.²⁵¹ Indeed, that internal document notes that [...]*. The internal document specifically refers to the [...]*, as [...]*.²⁵² According to E-Plus, the internal document [...]*.²⁵³ The Commission considers that the conclusions that the Parties seem to draw from that internal document are not supported by its content. Instead, the internal document is another pertinent example of E-Plus' on-going adaptation to changing market circumstances. First, the document states that E-Plus is already [...]* and [...]*.²⁵⁴ Second, it acknowledges that [...]*.²⁵⁵
- (388) It appears that E-Plus has been successful in implementing the strategy referred to in recital (387): in the course of [...]* E-Plus began to improve its network quality.²⁵⁶ E-Plus acknowledges that [...]*²⁵⁷ and, indeed, the development of the [...]*, that is to say, the development of [...]* given as a reason by customers for switching from E-Plus to a different provider, from the period from [...]* to [...]* as provided by Telefónica shows that E-Plus [...]*in [...]* than in [...]*. Deutsche Telekom and Vodafone, on the other hand, lost relatively more customers for this reason in 2013 as compared to 2012.²⁵⁸ This improvement in network quality is also acknowledged in network tests which KPN acknowledges and refers to in its 2013 annual report as follows: "The strong improvements to E-Plus' data network quality have been confirmed by leading network tests in Germany (CHIP, ComputerBild), resulting in a number three network position in the German mobile market. In terms of HSPA+ data speeds and network reliability E-Plus is now on par with the number two".²⁵⁹ In addition, the results of the test performed by the specialised magazine CHIP, that were made publicly available in May 2014, confirm that E-Plus 2G and 3G networks performed better than all the other MNO's networks (including Vodafone and Telefónica). Moreover, as regards 4G services in urban areas, it seems that E-Plus is able to offer better speed for its 4G services than Telefónica, Vodafone and Deutsche Telekom.²⁶⁰
- (389) Finally, in a presentation to KPN's Supervisory Board [...]* dated [...]*, E-Plus notes in relation to the results of the first quarter of 2013 that it [...]*.²⁶¹

²⁴⁹ Presentation for [...]*: [...]*Document ID 1200-129, p. 17.

²⁵⁰ Document ID 1200-127.

²⁵¹ Annex 1 to the Reply to the Statement of Objections, Document ID 2253, paragraph 3.33.

²⁵² Document ID 1200-127, p. 3.

²⁵³ Annex 1 to the Reply to the Statement of Objections, Document ID 2253, paragraph 3.34.

²⁵⁴ Document ID 1200-127, p. 1.

²⁵⁵ Document ID 1200-127, p. 1.

²⁵⁶ Annex 4 to the Reply to the Article 6(1)(c) Decision, pp. 7 and 8; Presentation by [...]*dated [...]*Document ID 1200-87, p. 2; Presentation [...]*Document ID 1200-89, p. 8.

²⁵⁷ Annex 4 to the Reply to the Article 6(1)(c) Decision, pp. 7 and 8; Presentation [...]*dated [...]*Document ID 1200-87, p. 2.

²⁵⁸ See Telefónica's response to RFI 8, question 15 and Annex 1 thereto. Contrary to E-Plus' view expressed [...]*.

²⁵⁹ 2013 annual report of KPN, Document ID 4165, p. 58.

²⁶⁰ See results of the test performed by CHIP Magazine published in May 2014, Document IDs 4141 to 4148.

²⁶¹ Presentation [...]*dated [...]*Document ID 258-6211, p. 2.

- (390) In early 2013, E-Plus had plans to deploy a "[...]* in relation to [...]* and to [...]*".²⁶² The [...]* strategy internally discussed within E-Plus in [...]* further shows that E-Plus planned to adapt its aggressive strategy to the market circumstances: [...]*.²⁶³ In an internal [...]* document regarding the [...]* strategy, dated [...]*, E-Plus sets out a set of goals to be achieved in the period between [...]* and [...]* (with some goals to be achieved already by [...]*), which include, among others [...]*, as well as a transformation to a [...]* so as to achieve [...]*.²⁶⁴ As indicated in recital (388), the successful network upgrade is acknowledged in KPN's 2013 annual report. That annual report furthermore acknowledges that, in 2013, E-Plus managed to become a "data-centric challenger" which is further described as follows: "In 2013, E-Plus successfully pursued a comprehensive growth and network upgrade initiative. We invested substantially in customer acquisition, adding more than 1.5 million new customers throughout the year. The focus on postpaid customers paid off with the addition of 936 thousand new contracts. E-Plus also confirmed its strong position in the prepaid segment with a net addition of 610 thousand customers. Moreover, we achieved our strategic objective to significantly grow our mobile data business. We expanded distribution through our own and partner shops, online distribution and exclusive wholesale channels. Further support was given to our Yourfone, Blau and Simyo propositions, addressing customer demand for increased mobile data usage. We also introduced further competitive offerings by Alditalk".²⁶⁵
- (391) Finally, also Telefónica considered in the context of discussions of a merger with E-Plus in 2012 that the benefit of such a merger would be the [...]*.²⁶⁶ In another strategy presentation [...]* dated [...]* Telefónica expected E-Plus to pursue an [...]* in a stand-alone scenario.²⁶⁷ In [...]*, Telefónica still took the view that E-Plus had continued to compete aggressively:
- [...]*.²⁶⁸
- (392) In relation to the development of E-Plus' market shares during the period between 2009 and 2013 the Commission reiterates, first, that, as explained in recital (254), the Commission considers that Branded Resellers, including Aldi, should be attributed to the relevant MNOs.
- (393) E-Plus' market share based on revenues has grown by [...]*percentage points in recent years, from [10-20]*% in 2009 to [10-20]*% in 2013²⁶⁹ while, at the same time, its market shares based on subscribers has increased by [...]*percentage points, from [10-20]*% to [10-20]*%.²⁷⁰ In the period between 2009 and 2013, E-Plus was the only MNO that was able to increase its market shares based on revenues (Deutsche Telekom lost [0-10]*%, Vodafone lost [0-10]*% and Telefónica lost [0-10]*%)²⁷¹ and it was the MNO with the highest increase in market share based on

²⁶² Annex 4 to the Reply to the Article 6(1)(c) Decision, p. 27; Presentation[...]*Document ID 1200-149, p. 16.

²⁶³ Annex 4 to the Reply to the Article 6(1)(c) Decision, p. 27; Presentation [...]* dated [...]*Document ID 1200-151, p. 3.

²⁶⁴ Annex 4 of the Reply to the Article 6(1)(c) Decision, p. 30; Presentation ...]*dated [...]*Document ID 1200-157, p. 6.

²⁶⁵ [...]*Document ID 4165, (emphasis added).

²⁶⁶ Presentation [...]* dated [...]*Document ID 991-17261, p. 1.[...]*Document ID 991-12761).

²⁶⁷ Document ID 991-17286, slide 4.

²⁶⁸ Presentation [...]* dated [...]*Document ID 989-2419, p. 2.

²⁶⁹ Table 18, Form CO, p. 160.

²⁷⁰ Table 18, Form CO, p. 162.

²⁷¹ Table 18, Form CO, p. 160.

subscribers (Deutsche Telekom lost [0-10]*%, Vodafone lost [0-10]*% and Telefónica gained [0-10]*%)²⁷².

- (394) E-Plus' [...] market shares based on subscribers is [...] than [...] market shares based on revenues. In the Commission's view, these figures strongly suggest that E-Plus has been an important competitive force on the market, in particular because, according to KPN's 2013 annual report, almost two thirds of E-Plus' new customers are post-paid customers,²⁷³ a segment in which E-Plus claims to be less competitive than the other MNOs.

E-Plus' role in the absence of the proposed transaction

- (395) As regards the future role of E-Plus in the absence of the proposed transaction, the Commission considers, based on the responses to the Market Investigation and the internal documents submitted by the Parties, that E-Plus would continue to be an important competitive force on the market. In particular, the Commission considers that the available evidence supports the conclusion that E-Plus would be able to play the same competitive role in a so-called data-centric environment as it did in a so-called voice-centric environment, and that it would continue to be an important competitive force in the market in the future.
- (396) As set out in further detail in recitals (130) to (138), the Commission acknowledges the trend towards higher demand for data services by all customers. MNOs will have to adapt their networks to the increase in data consumption by extending capacity for data and by improving network quality. Network speed and network quality will be a relevant factor for all customers. However, despite that factor and despite an increase in smartphone penetration in Germany (see recitals (129) and (130)), the change towards a so-called data centric world is taking place more gradually than the Parties submit. In particular, as set out in recitals (134) to (138), mobile customers contribute to varying degrees to the trend to greater mobile data consumption and value the quality and speed of mobile data transmission differently. According to the VATM study, around 70% of all post-paid customers use mobile data services for less than 250 MB per month. While the Commission does not dispute the Notifying Party's submission that the share of pre-paid customers making use of mobile data services might have increased, the average data consumption of pre-paid customers, who are more price sensitive and appear to be valuing data services less than post-paid customers, is considered to be even lower than that of post-paid customers. In addition, revenues generated with mobile voice services, although complementary to data services, will continue to play an important role within the next three to five years.²⁷⁴
- (397) Given that more than [...] of E-Plus' customers (including [...] customers [...]²⁷⁵) are [...], as well as in light of the fact that the average data consumption of [...] is considered to be [...], revenues generated with mobile voice services will, next to data revenues, [...].
- (398) In any event, the Commission considers, based on the responses to the Market Investigation and based on a review of internal documents submitted by the Parties, that E-Plus would be able to offer a competitive network to its customers and to

²⁷² Table 18, Form CO, p. 161.

²⁷³ Document ID 4165, p. 58.

²⁷⁴ See recital (132).

²⁷⁵ [...].

successfully handle an increase in data consumption even in the absence of the proposed transaction.

- (399) First, the Commission notes that E-Plus is no longer a voice-centric operator. Instead, as set out in recitals (361) to (394), it has successfully transformed itself into a [...] offerings catering to the [...] needs of its customers both in terms of included data volume (which is generally greater than the [...] per month referred to in recital (396), even for the discount ALDI TALK tariffs) and in terms of download speed (42 Mbit/s under the "high-speed for everybody" initiative). As explained in greater detail in recitals (400) to (423), there are no indications that E-Plus would cease being a [...] in the future.
- (400) Second, while E-Plus currently lags behind the other MNOs in terms of 4G roll-out, the Commission considers that the on-going investments in E-Plus' 3G and 4G networks show that E-Plus would continue to be an important competitive force in the absence of the proposed transaction.
- (401) In the absence of the proposed transaction, E-Plus would continue to own a 2G and 3G mobile network, which lags only slightly behind the networks of Deutsche Telekom and Vodafone but ranks before Telefónica in terms of population coverage. While Deutsche Telekom's and Vodafone's 3G networks have a population coverage of, respectively, 90 and 91%, E-Plus' 3G network currently reaches a population coverage of [...]%. However, as indicated in recitals (388) and (390), E-Plus is currently successfully upgrading and extending its 3G network in order to achieve outdoor population coverage of [...]s% in [...].²⁷⁶ The network upgrade has resulted so far in an improved perception of network quality which is also reflected in positive results in network tests carried out by CHIP²⁷⁷ and ComputerBild²⁷⁸ (also see recital (388)).
- (402) As regards the roll-out of E-Plus' 4G network, the Parties submit that, according to internal documents E-Plus [...], that its 4G roll-out plans are [...] and that network sharing in this particular context [...]. In relation to network sharing, the Commission found evidence that E-Plus [...] and, that it [...]. Moreover and as explained in further detail in recital (173), E-Plus has already started its 4G roll-out and, at the end of 2013, [...]. While it is true that by the end of [...] E-Plus maintained its target to [...] by the end of [...]²⁷⁹ and also maintained the launch date set for its 4G services: as set out in recital (367), 4G was commercially launched in March 2014 and is currently available in three German cities, namely in Berlin, Nürnberg and Leipzig, with a total population of 4.5 million people. In the absence of the proposed transaction, E-Plus plans to roll out [...] network elements for its 4G network by the end of [...] and to achieve [80-90] outdoor population coverage with its 4G network by then.²⁸⁰ Outdoor population coverage is intended to amount to [40-50] at the end of [...], [50-60] at the end of [...] band [70-80] at the end of [...].²⁸¹

²⁷⁶ Presentation [...] dated [...] Document ID 258-6960, p. 2, 3.

²⁷⁷ Document IDs 4141 to 4148.

²⁷⁸ Document ID 4150.

²⁷⁹ [...].

²⁸⁰ See E-Plus' response to the Commission's RFI No 5 dated 24 January 2014, Document ID 1529, question 12; and response to the Commission's RFI No 6 dated 6 February 2014, Document ID 1689, question 2.

²⁸¹ Response to the Commission's RFI No 6 dated 6 February 2014, Document ID 1689, question 2.

- (403) The fact that E-Plus will continue to [...] in the absence of the proposed transaction is further confirmed by the terms of the wholesale agreement dated [...] between E-Plus and [...]. That agreement, in clause [...], provides that E-Plus will [...]. The preamble of the wholesale agreement furthermore envisages, [...] that E-Plus' would have [...] by [...].²⁸²
- (404) As regards the Parties' argument that E-Plus will lose most of its 1 800 MHz spectrum on which its 4G roll-out is almost entirely based in 2016 and that due to its financial constraints there is uncertainty if it will be able to reacquire spectrum in that band, the Commission notes that E-Plus is the only MNO in Germany (other than Deutsche Telekom) which will retain spectrum in the 1 800 MHz after the spectrum auctions referred to in recital (150). Furthermore, as set out in further detail in recitals (411) to (422), the financial situation of E-Plus and KPN is [...] submitted by the Parties. There is therefore no indication that E-Plus will be less able than any other operator to acquire even more 1 800 MHz spectrum or spectrum in the 900 MHz band in the upcoming auction referred to in recital (150). Moreover, E-Plus will also retain 2x10 MHz in the 2 600 MHz band until the end of 2025, which can serve as a complementary capacity band for 4G in urban areas.
- (405) Thus, in the absence of the proposed transaction, E-Plus would continue to be an MNO with an independent network based on 2G, 3G and 4G technologies.
- (406) Third, the majority of market participants responding to the Phase II Market Investigation consider that an increasing demand for mobile data would not necessarily have a negative impact on the competitiveness of E-Plus.²⁸³ [...], for instance, considers that an increase of data demand would lead to an increase in the competitiveness of E-Plus, if E-Plus were to invest in further network capacity²⁸⁴, which, the Commission notes, E-Plus is currently doing. [...] takes the view that the network capacity of E-Plus, like the network capacity of the other three MNOs is sufficient to cope with an increase in data demand without there being an impact on the quality of voice and SMS services.²⁸⁵ A number of respondents consider that E-Plus would continue to differentiate itself based on aggressive pricing, which would compensate for possibly lower network quality.²⁸⁶ On the other hand, among others, [...] expects E-Plus to lose competitiveness because of, among others, low network quality, no, or nearly no 4G spectrum, a low number of customers on the network, the lack of a fixed network and the high debt level of KPN which renders investment

²⁸² [...].

²⁸³ Responses to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 29; and responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 29. In the Reply to the Statement of Objections, the Notifying Party submitted that it cannot be concluded from the outcome of the Phase II Market Investigation that E-Plus' competitive force will not be impeded by the rapid change to a data-centric world and its lack of a competitive 4G network. The Commission notes that contrary to what the Notifying Party submits, the question put to the market participants did not go this far. Rather, market participants were merely asked to comment on the impact of an increasing customer demand for mobile data on the competitiveness of each of the four MNOs. Therefore, the only conclusion drawn by the Commission as set out in recital (406) is that such an increase in data demand would not necessarily negatively impact E-Plus' competitiveness.

²⁸⁴ Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1379, question 29. As further explained in recital (409), E-Plus is indeed currently investing in further network capacity and would, in the absence of the merger, continue to do so.

²⁸⁵ Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1372, question 29.

²⁸⁶ Responses to Questionnaire Q2 – MVNOs and Service providers – dated 21 January 2014, question 29; responses to Questionnaire Q3 – Branded Resellers – dated 21 January 2014, question 29.

impossible.²⁸⁷ The Commission notes, however, that E-Plus' network quality is improving (see recital (388)) and E-Plus has, and will continue to have spectrum for 4G roll-out even after 2016. As will be further explained in recitals (411) to (422), the Commission also disagrees with [...] statement on KPN's alleged inability to finance further investments for E-Plus (see recital (420)).

- (407) Fourth, a review of the internal documents provided by the Parties also supports the Commission's view that E-Plus would continue to be an important competitive force on the market in the absence of the proposed transaction. Again, the submissions referred to in recital (339) and the internal documents described therein contradict the Parties' view that E-Plus would not be an important competitive force in the future.
- (408) The Commission notes that E-Plus' internal documents, from [...]*, including documents referred to by E-Plus in Annex I to the Reply to the Statement of Objections show E-Plus' awareness of [...]*. To that effect, KPN and E-Plus were studying [...]*, including common measures such as [...]*. However, as already indicated in recitals (386) to (391), these documents also support the Commission's view that the strategy chosen by KPN and E-Plus, namely to transform E-Plus into a [...]* was successfully implemented. The internal documents do not contain any indication that this new challenger role is likely to be jeopardized in the next three to five years.
- (409) As set out in recital (390), no later than [...]* E-Plus started to pursue its [...]* strategy [...]*, one major aspect of which was [...]*, internally also referred to as [...]*.²⁸⁸ On the basis of its [...]* strategy E-Plus considered in [...]* that its [...]*.²⁸⁹ KPN, in its 2013 annual report acknowledges the successful transformation of E-Plus into a "data-centric challenger" and thus the success of its strategy.²⁹⁰ E-Plus is furthermore actively rolling out its 4G network. 4G was commercially launched in March 2014 in the framework of the "high-speed for everybody" initiative described in recital (362).²⁹¹ The aim of this strategy is to maintain the "role as challenger" (*die Rolle des Angreifers*) which shows that in the absence of the proposed transaction E-Plus would continue to be an important competitive force also in relation to its data offerings.²⁹²
- (410) Telefónica itself also acknowledges that E-Plus would remain an aggressive player in the market in the absence of the proposed transaction, notably also in relation to 4G offers. In a presentation dated [...]* and containing an assessment of [...]*, Telefónica compares [...]* and concludes that [...]* and that [...]*.²⁹³ Telefónica maintained this view also in [...]*: in a strategy document dated [...]*, Telefónica states in relation to its 4G roll-out and commercialisation strategy that it will [...]*.²⁹⁴ Telefónica, nevertheless, expected that in a stand-alone scenario E-Plus would enter

²⁸⁷ Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1366, question 29

²⁸⁸ [...]*.

²⁸⁹ [...]*

²⁹⁰ 2013 annual report of KPN, Document ID 4165, p. 58.

²⁹¹ Document ID 257-5562, p. 2 and 4; response to the Commission's RFI No. 6 dated 6 February 2014, Document ID 1689, question 3.

²⁹² Doc ID 4157. E-Plus and KPN refer to E-Plus as a "challenger" or even a "data-centric challenger" not only in the press but also in more formal documents such as KPN's 2013 annual report - 2013 annual report of KPN, Document ID 4165, p. 58.

²⁹³ [...]*

²⁹⁴ [...]*

the 4G competition by mid to end 2014 [...]*. In other words, Telefónica expected that E-Plus would [...]*.²⁹⁵ Although, as pointed out, the Notifying Party was not in a position to predict whether E-Plus would launch a low-price 4G product or whether it would pursue what Telefónica refers to as a 4G [...]*,²⁹⁶ it would appear that Telefónica considered the [...]* as the more likely scenario. The Notifying Party itself submitted in the Reply to the Statement of Objections that [...]*.²⁹⁷

- (411) Finally, the Commission considers that the financial situation of both E-Plus and KPN is such that it allows E-Plus to continue to be an important competitive force on the market.
- (412) The international accounting firm, [...] valued E-Plus on a stand-alone scenario as of [...]*. [...] based that valuation on [...]*.²⁹⁸ According to that valuation, the value on [...]* of E-Plus' future earning amounted to [...]*.²⁹⁹ This value is in line with [...]* which comprised also [...]*.
- (413) According to financial data published by KPN, the operating profit of E-Plus in 2013 was minus EUR [...] million. The current business plans of E-Plus, as well as the valuation of [...]*, foresee [...] in [...]*.
- (414) According to KPN, the [...] in [...] was mainly caused by [...] due to the implementation of European Union legislation, becoming effective on 1 December 2012, as well as by [...]*, such as [...]*. As set out in recital (390), E-Plus gained more than 1.5 million customers in 2013, of which more than 900 000 are post-paid customers.
- (415) E-Plus submitted its most recent stand-alone business plan to the Commission on 14 March 2014. That business plan, which is [...] to the forecast considered by [...]*,³⁰⁰ shows that E-Plus's revenues are expected to [...] and that its Free Cash Flow ("FCF"), which typically is a good performance indicator for the profitability of a business, is expected to [...]*.³⁰¹ Overall, these figures suggest that whilst E-Plus's profitability is [...]*, the company expects to [...]*.
- (416) The findings referred to in recitals (411) to (415) are confirmed by the reports of financial analysts which the Commission gathered in the course of its investigation through addressing formal requests for information to a number of financial analysts³⁰². Such reports confirm generally a decline in revenues for all the players active in the German mobile market mainly due to MTR reductions³⁰³.
- (417) As regards E-Plus, some of the reports referred to in recital (416) also acknowledge that 2013 was a very difficult year for KPN business (E-Plus) in Germany. However, the projections contained in the financial analysts' reports confirm that E-Plus, as explained in recitals (411) to (415), is sustainably recovering (in terms of its customer base, service revenue and profitability growth) and will continue to be a viable business in the future³⁰⁴.

295

[...]*

296 Reply to the Statement of Objections, paragraph 369.

297 Reply to the Statement of Objections, paragraph 369.

298 [...]*

299 [...]*.

300 [...]*.

301 [...]*.

302 See Replies to the Commission's RFI dated 20 March 2014.

303 [...]*.

304 [...]*.

- (418) In its Reply to the Letter of Facts, the Notifying Party has underlined the negative opinions expressed by a number of financial analysts, including those consulted by the Commission, on E-Plus's and KPN's financial conditions. However, those opinions were mainly based on E-Plus's negative performance in the last quarter of 2012 and in the first quarter of 2013. On the basis of the financial data submitted by E-Plus and of the opinions of many other financial analysts³⁰⁵, it seems however that the negative results of 2013 (and in particular) of the first quarter of 2013 constituted the tipping point. As regards the following quarters, E-Plus performance improved significantly and E-Plus' achieved a positive service revenues growth in the first quarter of 2014.³⁰⁶
- (419) Finally, as regards KPN, the financial reports consider that the KPN group is currently facing difficulties on the Dutch market (namely an unsuccessful management strategy, market entry, and unsatisfied shareholders) and that the sale of E-Plus to Telefónica could improve KPN's group overall financial situation. This is in line with the views of the credit rating agencies quoted by the Notifying Party in its Reply to the Letter of Facts. However, the Commission notes that the FCF of KPN was negative at the end of 2013, but that, [...]*, it will be again positive as of 2014 and will further increase in 2015.³⁰⁷
- (420) As regards KPN's alleged inability to carry out the necessary investments to enable E-Plus to effectively compete in the future, the Commission considers that the evaluation of such reports should be carefully interpreted. Whilst the reports indicate the need for KPN to undertake these investments, and in particular to secure the necessary spectrum for the roll out of LTE by E-Plus, and highlight KPN's financial constraints, there is no general consensus on KPN's inability to carry out such investments. In addition, it seems that the German market is an important driver of growth for KPN, as it is demonstrated by the positive results of the first quarter of 2014 realised by E-Plus in Germany³⁰⁸. Therefore, it seems reasonable that KPN would decide to further invest in this market.
- (421) In addition, the Commission notes that the 2013 earnings before interest, taxes, depreciation and amortization ("EBITDA") margin of KPN of 33.2%³⁰⁹ is even higher than the most recent publicly available EBITDA margins of Deutsche Telekom³¹⁰ and Vodafone³¹¹ respectively. In the Commission's view, this constitutes a further element supporting the conclusion that E-Plus has the necessary resources to competitively operate in the market.
- (422) Finally, on 25 April 2014 KPN published its financial results for the first quarter of 2014. E-Plus' revenue trends further improved. While its service revenue growth in the fourth quarter of 2014 was negative (-2.9%), it amounted to 2.4% in the first quarter of 2014.³¹²

³⁰⁵ [...]*

³⁰⁶ In particular, see the Presentation of the 1st quarter of 2014 results by KPN group dated 25 April 2014, page 23-24, Document ID 4164.

³⁰⁷ See Reply to the Letter of Facts, page 9.

³⁰⁸ See the Presentation [...] dated [...] Document ID 4164.

³⁰⁹ See [...] Document ID 4166.

³¹⁰ According to the Annual Report 2012, the EBITDA margin (adjusted for special factors) of Deutsche Telekom Group amounted to 30.9% for 2012, Document ID 4152.

³¹¹ According to the Annual Report 2013, Document ID 4185, the EBITDA margin of the Vodafone Group Plc amounted to 29.9% for 2013.

³¹² [...]*

- (423) In light of the matters referred to in recitals (357) to (422), the Commission considers that E-Plus is an important competitive force on the market and would continue to play this important role in the absence of the proposed transaction.

Telefónica's role today

- (424) Based on the results of the Market Investigation, a review of the internal documents submitted by the Parties, as well as based on the information provided by Telefónica in relation to its current and future commercial strategy, the Commission considers that Telefónica currently is an important competitive force on the market.
- (425) As indicated in recital (381), in the Phase I Market Investigation, one Service Provider described E-Plus as a "price-challenger", Telefónica as a "fast follower" and Deutsche Telekom and Vodafone as "slow followers".³¹³
- (426) Based on the outcome of the Market Investigation the Commission considers the description referred to in recital (425) to be an appropriate description of Telefónica's current role on the German retail market.³¹⁴
- (427) Telefónica has been identified as the number two MNO in terms of the price aggressiveness of its brands by a majority of respondents. The responses of the market participants further show that when analysing the price aggressiveness in the pre-paid and the post-paid segments of a comprehensive selection of 28 brands covering the four MNO's primary and secondary brands, the brands of their main Branded Resellers as well as major brands of MVNOs and Service Providers, Telefónica's brands, including those of its Branded Resellers are typically viewed as price aggressive. In relation to the brands of Deutsche Telekom and Vodafone, Telefónica's brands, such as those of E-Plus, are considered to be more price aggressive. In relation to E-Plus, Telefónica's brands are generally considered to be comparably or slightly less price aggressive, whereas Deutsche Telekom and Vodafone consider that Telefónica's brands are more aggressive on the post-paid segment. In relation to MVNOs and Service Providers, Telefónica's brands are considered to be at least as aggressive as these operators' brands.³¹⁵
- (428) Similarly to E-Plus, Telefónica also introduced a number of aggressive and innovative tariffs to the German retail market for mobile telecommunications services in recent years. In May 2009, and thus at a time when not even E-Plus had launched an all-net flat proposition at the "revolutionary" price point referred to in recitals (362) to (364), Telefónica was the first operator on the German market to introduce the so-called "cost airbag" for its "O2 o" tariff, which capped costs for voice calls and SMS at EUR 60. For voice calls and SMS exceeding the amount of EUR 60 the customer no longer had to pay.³¹⁶ In June 2011, Telefónica introduced "Germany's first-ever advertising-supported mobile phone tariff" under its secondary brand Netzclub (presently available under the name "Sponsored Surf").³¹⁷ In the first quarter of 2013, Telefónica launched the "O2 blue all-in" "S" tariff for EUR 19.99,

³¹³ Answer to question 38.1 of questionnaire 2 by [...]*, Document ID 1372.

³¹⁴ For the Notifying Party's general criticism as regards the insufficiency and incompleteness of a number of responses see footnote 235.

³¹⁵ Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, question 21; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 21; responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 19.

³¹⁶ Press release "O2 o: The first tariff with cost airbag", by Telefónica, Document ID 4183.

³¹⁷ Document ID 4181.

the "M" tariff for EUR 26.99, the "L" tariff for EUR 35.99 and the "XL" tariff for EUR 44.99 respectively, which include a voice and SMS flat as well as a data flat with different maximum download speeds depending on the tariff.³¹⁸

- (429) In its Reply to the Statement of Objections, the Notifying Party explained that the tariffs "O2 on" "S" for EUR 19, "M" for EUR 29, "L" for EUR 39 and "XL" for EUR 59 per month respectively,³¹⁹ as listed by the Commission in its Statement of Objections, are business tariffs and should not be considered as an [...] of Telefónica but rather as Telefónica's [...]*. The Commission considers, however, in light of the other examples of innovative and aggressive offers that Telefónica introduced in the market, that, even if the "O2 on" tariffs were not to be taken into account, Telefónica should still be regarded as an important competitive force.
- (430) The data gathered during the Market Investigation indicate that the tariffs introduced by Telefónica during recent years were aggressive or innovative. When asked to list the top five most price aggressive tariffs introduced by MNOs during the last three years, the market participants regularly named tariffs offered by Telefónica's core and secondary brands.³²⁰ Moreover, the market participants often named tariffs offered by Telefónica's core and secondary brands when asked to list the top five most innovative tariffs introduced by MNOs during the last three years.³²¹ In addition, a significant number of market participants named certain tariffs Lidl Mobil and Tchibo Mobil, as respectively part of the five most aggressive and part of the five most innovative tariffs introduced by MVNOs, Service Providers or Branded Resellers.³²² In line with its reasoning in recital (372), the Commission considers that, for the purposes of its assessment in this Case, the activities of these Branded Resellers on the retail market for mobile telecommunications services in Germany should be attributed to Telefónica. In relation to the Notifying Party's criticism that some respondents only indicated brand names rather than specific tariffs offered under these brands the Commission reiterates that it did not count responses only listing brands in reaching its conclusions on the above, it nevertheless notes that even such responses would allow it to draw the conclusion that the respondents concerned consider at least one of the tariffs offered under the brand named to be among the five most aggressive and/or innovative tariffs introduced by the respective operators (see also recital (373)).
- (431) As set out in recital (374), the Commission acknowledges that also Deutsche Telekom and Vodafone introduced aggressive and innovative offers. Nevertheless, the majority of competitive offers introduced by Deutsche Telekom and Vodafone

³¹⁸ Telefónica's response to the Commission's RFI No 8 dated 24 January 2014, Document ID 1524, question 8; Document ID 4183.

³¹⁹ Telefónica's response to the Commission's RFI No 8 dated 24 January 2014, Document ID 1524, question 8.

³²⁰ Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, question 23; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 23; and responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 23.

³²¹ Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, question 24; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 24; and responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 24.

³²² Responses to Questionnaire Q2 to MVNOs and Service providers dated 21 January 2014, question 25, 26; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 25, 26; and responses to the Questionnaire to Deutsche Telekom, Document ID 1696, and Vodafone, Document ID 1866, dated 20 January 2014, question 25, 26.

were introduced in reaction to the launch of an aggressive and/or innovative tariff of Telefónica and/or E-Plus. For instance, in March 2013 Vodafone introduced its "Smartphone Allnet" in reaction to Telefónica's launch of the O2 blue all-in tariffs in the first quarter of 2013.³²³

- (432) Also third parties publicly characterise Telefónica as an important competitive force. Vodafone publicly acknowledges that the aggressive price war in 2013 was mainly driven by Telefónica (O2) and E-Plus.³²⁴
- (433) In addition, the Monopolkommission in its assessment of the proposed transaction considers that, like E-Plus, Telefónica currently is a driving force on the retail market for mobile telecommunications services in Germany.³²⁵
- (434) Also the internal documents submitted by the Parties support the Commission's view that Telefónica currently is an important competitive force.
- (435) In early 2010, E-Plus, in an internal presentation expected [...] and that Telefónica would take [...] When considering its performance in 2012, Telefónica took the view that they were the best in terms of [...] on the German market.³²⁷ In August 2013, Telefónica considers, in light of the fact that the "German market has become more competitive" that it will [...] In particular, in relation to 4G but also in relation to 3G offers, Telefónica plans to [...] with its O2 blue portfolio³²⁹ and to pursue a [...] so as to [...] on the one hand and to [...] on the other hand.³³⁰ Given that, as set out in recital (431), Vodafone in fact reacted to the launch of the O2 blue portfolio with the launch of its "Smartphone Allnet" proposition, the Commission does not share the Notifying Party's interpretation of the latter document, that is to say, the Commission does not consider that the launch of the O2 blue portfolio was merely a [...].

Telefónica's role in the absence of the proposed transaction

- (436) The Commission considers, based on the responses to the Market Investigation and the internal documents submitted by the Parties that Telefónica would continue to be an important competitive force on the market in the absence of the proposed transaction.
- (437) First, Telefónica owns a mobile network based on 2G and 3G technology, which, albeit of a lower quality than the networks of Deutsche Telekom and Vodafone and offering a slightly lower population coverage than E-Plus' network, is currently able to cover at least [70-80]% of the population.³³¹

³²³ Telefónica's response to RFI 8, Document ID 1524, question 8.

³²⁴ "Der aggressive Preiskampf des vergangenen Jahres, getrieben vor allem von O2 und E-Plus [...]". Manager Magazin 2/2014, p. 18, non-official translation: "The aggressive price war of last year, led in particular by O2 and E-Plus [...]".

³²⁵ See the opinion of the Monopolkommission "Stellungnahme der Monopolkommission zu COMP/M.7018 – Telefónica/E-Plus", Document ID 1685, p. 3.

³²⁶ [...].

³²⁷ Presentation by Telefónica: [...] dated [...] Document ID 988-2639, p. 8.

³²⁸ [...].

³²⁹ This tariff (O2 Blue All-in S/M/L/XL) was introduced [...] See Presentation [...] dated [...] Document ID 988-2639, p. 10. [...].

³³⁰ See Presentation [...] dated [...] Document ID 988-2639, p. 7; Presentation [...] dated [...] Document ID 991-10868, p. 20.

³³¹ The fact that Telefónica is lagging behind Deutsche Telekom and Vodafone in terms of network quality is also acknowledged by respondents to the Market Investigation such as for example [...] (see the

- (438) Moreover, as explained in further detail in recital (172), Telefónica has already started its 4G roll out. By the end of 2013, Telefónica operated around [...] 4G sites reaching approximately [...] of the population.³³² On a stand-alone basis, Telefónica aims at achieving [...] outdoor population coverage by the end of [...] and at rolling out [...] 4G network by [...].³³³
- (439) Thus, in the absence of the proposed transaction, Telefónica would continue to be an MNO with an independent network based on 2G, 3G and 4G technologies.
- (440) Second, and in line with the current status of Telefónica's network and its future network roll-out plans in a stand-alone scenario, the majority of market participants responding to the Market Investigation consider that an increasing demand for mobile data would not necessarily have a negative impact on the competitiveness of Telefónica.³³⁴ A number of these respondents stress, however, that in order to stay competitive, Telefónica needs to invest further in its network.³³⁵ [...], on the other hand, takes the view that [...].³³⁶ Likewise, [...], considers that an increase of data demand would lead to an increase of competitiveness of Telefónica due to increased revenues.³³⁷
- (441) Third, a review of the internal documents provided by E-Plus and Telefónica supports the Commission's view that Telefónica would continue to be an important competitive force on the market.
- (442) When presenting its strategy in the absence of the proposed transaction in the annual meeting in May 2013, Telefónica stressed the need to [...].³³⁸ As set out in recitals (425) and (428), Telefónica is in the process of rolling out 4G and, as it acknowledges in this document, in [...] it introduced a tariff portfolio, "O2 blue All-in"³³⁹ that is designed to target customers across segments with a [...] data, voice and SMS proposition. In a presentation of its business plan for 2014 to 2016 in the absence of the proposed transaction in [...], Telefónica furthermore formulated the goal to [...] the market, notably through [...].³⁴⁰
- (443) Finally, based on recent financial publications by the Notifying Party, the Commission considers that Telefónica is able to invest and compete in the German retail market for mobile telecommunications services in the absence of the proposed transaction. According to the most recent public financials, the conversion of

response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1453, question 29).

332

See Form CO, paragraph 418.

333

[...].

334

Responses to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 29; responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 29.

335

See for instance the responses of [...] Document ID 1375, [...] Document ID 1336, [...] Document ID 1303, to Questionnaire Q3 to Branded Resellers dated 21 January 2014.

336

Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1372, question 29.

337

Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1379, question 29. As further explained in recital (438), Telefónica is indeed currently investing in further network capacity and would, in the absence of the merger, continue to do so.

338

[...].

339

Presentation [...] dated [...], Document ID 988-2639, p. 10.

340

[...].

operating results to free cash flow³⁴¹ "remains strong" with the result that the free cash flow of the first three quarters of 2013 is "already supporting the current shareholder remuneration policy".³⁴² A valuation report prepared by [...] valued the stand-alone business of Telefónica at [...] as of [...] based on the value of [...] at that date.³⁴³

- (444) The Notifying Party submitted in its Reply to the Letter of Facts, a number of reports by financial analysts which confirm that Telefónica's revenues, earnings and FCF are likely to decline in the coming years mainly due to the increased competition from Deutsche Telekom and Vodafone³⁴⁴. In addition, those reports underline that future growth will be limited. However, the Commission notes, first, that some of those reports consider that the situation will stabilise as of 2015.³⁴⁵ In addition, even if the profitability of Telefónica were to decrease in the future, there is no evidence, in particular having regard at the latest financial results published by Telefónica for the year 2013, that such possible decreases could cause Telefónica to cease to be a financially sound business in the future³⁴⁶ and impact its ability to be an important competitive force in the German retail market for mobile telecommunications services.
- (445) In light of the matters referred to in recitals (424) to (444), the Commission considers that, like E-Plus, Telefónica is an aggressive competitor and an important competitive force on the market and would continue to play this important role in the absence of the proposed transaction.

6.3.1.4. Change to the incentives of the merged entity to compete

Notifying Party's view

- (446) According to the Notifying Party, the merged entity will aim to become a competitive force in the [...] and remain a competitive force [...]. The Notifying Party claims that competing against Deutsche Telekom and Vodafone will even be a necessity for the merged entity since these MNOs are investing higher amounts into their networks and because of their strategic advantage resulting from the ownership of fixed networks. Furthermore, the Notifying Party argues that Branded Resellers and in particular [...] will provide incentives for the merged entity to continue to compete on the retail market.
- (447) In its Reply to the Article 6(1)(c) Decision and to the Statement of Objections, the Notifying Party reiterated and further clarified its arguments.
- (448) First, it submits that no price increases will be possible and/or intended post-transaction. The remaining three MNOs will compete more strongly than before on low-value offers. Apart from non-MNOs, not only Telefónica and E-Plus, but also Deutsche Telekom and Vodafone have invested in brands specifically targeting low-value customers, a segment characterised by fierce competition from MNOs but more importantly from non-MNOs. Additional pressure emanates from the decline of the pre-paid segment and the resulting need to protect market share. In the event that

³⁴¹ Telefónica defines free cash flow as operating cash flow minus working capital minus interest payments and tax expenses minus other changes, see "Interim Group Report January 1 to September 30, 2013" of Telefónica, p. 26, Document ID 4179.

³⁴² "Interim Group Report January 1 to September 30, 2013" of Telefónica, p. 26, Document ID 4179.

³⁴³ [...] dated 11 [...] Document ID 1807, paragraph 361.

³⁴⁴ See Reply to the Letter of Facts pages 21 and 22.

³⁴⁵ See JP Morgan report "Telefónica Deutschland", dated 4 March 2014, Document ID 2438, p. 7.

³⁴⁶ See Telefónica's Financial Report for the year 2013, page 45.

the merged entity were to decrease its efforts in the low value segment, Deutsche Telekom and Vodafone would have an incentive to gain additional market shares. Increased competition in the high-value segment would also lead to additional competitive pressure in the low-value segment given that both segments form part of the same relevant product market. In relation to the high-value segment, the Notifying Party submits that competition will increase, as the main rationale of the proposed transaction is [...]*. This will, in its view, increase competition and lead to lower prices.

- (449) In any event, upward pricing pressure is claimed to be taken into account by the Statement of Objections as a self-standing effect of the proposed transaction and cannot, therefore, also be considered as an element reducing the Parties' incentives to compete post-transaction.
- (450) Second, the Notifying Party submits that the merged entity will continue to compete aggressively despite its increased customer base as competition takes place in relation to all contestable customers. In this context, the Notifying Party also submits that it does not intend to stabilise its existing customer base, and that it will not adopt a strategy aimed at [...]*. In particular, the merged entity would not pursue a [...]* as stated in an internal document of Telefónica from [...]*.³⁴⁷ Instead, the Notifying Party submits that the Statement of Objections fails to take into account the competitive effects stemming from the better network quality that the merged entity would be able to offer its customers. It claims that the merged entity would be able to [...]*.
- (451) In addition, the Notifying Party argues that the Commission's considerations about reduced incentives to compete in the case of an increased customer base lack any reference to a published economic theory. Obvious evidence for this is that Vodafone and Deutsche Telekom, despite their large customer bases, are competing very aggressively through their second brands o.tel.o and Congstar, as well as their respective core brands".
- (452) Third, the Notifying Party argues that the merged entity will face [...]* expenses for rolling out 4G, to integrate two businesses into one and to upgrade capacity and that it will be faced with significant costs due to the upcoming spectrum auction. Under these circumstances, it argues that the merged entity would, according to the Commission's reasoning in case M.3916 be considered to have particularly strong incentives to compete aggressively.³⁴⁸
- (453) Fourth, the Notifying Party claims that the merged entity would continue to compete aggressively despite high expenses for 4G roll-out. The proposed transaction would lead to a larger number of synergies than any other option considered by the Parties over the past years. In the absence of the proposed transaction each of the Parties

³⁴⁷ [...]*

³⁴⁸ Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria/Tele.ring*, recital 76: "*The initial incentive for network operators is therefore to exploit their capacity to the full by having as large a customer base as possible. This is particularly true of network operators that first have to build up their customer base in order to be able to recoup the network investment costs and cover the network operating costs. It is therefore vitally important for such network operators to attract new customers by adopting an aggressive pricing policy, as they do not have a secure and adequate customer base. This explains the actions of tele.ring and H3G, which first had to build up their customer base and must continue to do so. In the period from 2002 to 2005, tele.ring not only considerably increased its customer numbers but, despite tariff reductions, also significantly boosted its turnover and improved its profitability.*"

would have to invest more into its network and into 4G roll-out. Therefore, the proposed transaction makes it more likely that the merged entity would continue to compete on prices.

- (454) Fifth, in the context of a growing role of converged offers (that is to say offers combining different communication services such as fixed line telephony, fixed line Internet access, mobile communication services and television services) and the strategic advantage of Deutsche Telekom and Vodafone to market converged offers based on their own infrastructure, the merged entity will have a strong incentive to compete [...]*
- (455) Finally, the Notifying Party contests the conclusions drawn by the Commission from the responses to the Market Investigation as well as from the internal documents of the Parties.

Commission's assessment

- (456) Contrary to the Notifying Party's view, the Commission considers that the merged entity would have lower incentives to compete on the market in comparison to Telefónica's and E-Plus' incentives on a stand-alone basis pre-merger.
- (457) The Horizontal Merger Guidelines state in paragraph 24 that "[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. [...] Non-merging firms in the same market can also benefit from the reduction of competitive pressure resulting 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".
- (458) As identified in the Statement of Objections, the Commission considers that the proposed transaction will lead to two effects: the main effect, which is the elimination of competition between the Parties and a secondary effect which is the fact that the merged entity will have a larger customer base that will lead to lower incentives to grow and compete.
- (459) First, the main effect of any horizontal merger is the elimination of competition between the merging parties. This loss of competition provides the merged entity with the incentive to raise prices because some of the customers who would have been lost pre-merger will be captured post-merger.
- (460) As set out in Sections 6.3.1.2 and 6.3.1.3, the Commission considers that Telefónica and E-Plus are close competitors and that they are both important competitive forces on the mobile retail telecommunications market in Germany.
- (461) In addition, Section 6.3.1.7 sets out the quantitative assessment of the consequences of the proposed transaction and shows that the merged entity is likely to have substantial incentives to increase its prices.
- (462) Second, in this Case, the Commission considers that the increase in size in terms of revenues and customer base is likely to negatively affect the merged entity's incentives to compete aggressively on the market. Following the merger, the important competitive forces that both Telefónica and E-Plus currently represent will be transformed into a more established player focusing on customer retention.

- (463) The merged entity will significantly increase its customer base as a result of the proposed transaction. Post transaction, the merged entity would have a market share of [20-30]*% (revenues) and [30-40]*% (subscribers) on the overall retail mobile market in Germany and would become the market leader slightly ahead of Deutsche Telekom with a share of [20-30]*% (revenues) and [20-30]*% (subscribers) and Vodafone with a share of [20-30]*% (revenues) and [20-30]*% (subscribers). Even in terms of revenues, the merged entity would thus have a larger market share than the other MNOs.
- (464) The incentives for an operator to attract new customers by offering aggressive prices depend on the size of the customer base as the Commission noted in its Decisions in the Cases COMP/M.6497 - *Hutchison 3G Austria / Orange Austria* and COMP/M.3916 – *T-Mobile / Tele.ring*.³⁴⁹ 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.³⁵⁰
- (465) The Commission found in the Decision in case COMP/M.3916 – T-Mobile / Tele.ring, 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".³⁵¹
- (466) 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".³⁵²
- (467) This same reasoning is applicable in this Case given that the pricing strategy of the MNO is a balancing exercise between lowering prices in order to attract new customers and/ or to reduce a churn of the existing customer base, and keeping current prices or increasing prices in order to improve the profitability of the current customer base. In the case of a limited customer base and of spare capacity of the mobile network, an MNO will have a strong incentive to offer low prices and will be in a position to offer attractive terms to new customers. On the other hand, MNOs with a large subscriber base would be unlikely to risk threatening their established customer base and source of profitability by lowering their prices too much.

³⁴⁹ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recital 256; Commission Decision of 26 April 2006 in Case No COMP/ M.3916 – *T-Mobile Austria / Tele.ring*, recitals 74 *et seq.*

³⁵⁰ The finding of significant switching costs in the mobile industry and as a result of consumer inertia, has been described and measured in Kim (2012) "Dynamic switching decisions of consumers in the cellular service industry", Document ID 4163. The author finds a significant tendency for customers to remain with their incumbent provider even if it would be beneficial to switch providers.

³⁵¹ Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria/Tele.ring*, recital 77.

³⁵² Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria/Tele.ring*, recital 77.

- (468) 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.³⁵³ 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.
- (469) Therefore, as set out in recital (466), 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 lower incentives to offer lower prices in the medium term as compared to each of the Parties' incentives on a stand-alone basis.
- (470) Moreover, while the Commission agrees that competition takes place for all contestable customers, it considers that the effects of the proposed transaction on contestable customers are captured in the static quantitative analysis provided in Section 6.3.1.7. The dynamic consideration set out in recitals (462) to (469) considers the effects of the proposed transaction on a medium-term time horizon and constitutes an additional effect on competition and additional evidence of the low incentives of the merged entity to compete in the future.
- (471) It is also noted that, for the reasons set forth in recitals (666) to (676), the Commission does not agree with the Notifying Party when it claims that Branded Resellers "incentivise" the merged entity to continue competing.
- (472) Moreover, the Notifying Party argues that the main rationale of the proposed transaction is to [...]*. In addition, the Notifying Party claims that, more generally, an improvement in network quality would increase competitive pressure in all segments. As regards the low value segment, according to the Notifying Party, the merged entity's ability to offer higher network quality will force Vodafone and Deutsche Telekom to compete more aggressively on price through their secondary brands, thereby stimulating competition. The Notifying Party submits that since customers will still perceive the merged entity's network as inferior, it will be forced to compensate a network quality differential with lower prices.
- (473) To the extent that the Notifying Party is essentially submitting that the potential quality improvement resulting from the merger would lead to pro-competitive effects able to counteract the negative effects on competition and in particular consumer

³⁵³ In Section 6.3.1.7, the Commission considers that at every given point in time MNOs compete for new and retained subscribers. Therefore, the Commission conducts its quantitative analysis on the basis of the new and retained subscribers. However, the Commission considers that predicted price increases would, over time, affect the entire subscriber base since every customer will become contestable at some point in time as contract terms expire and customers change tariffs or upgrade handsets.

harm, this claim is analysed, in line with the Horizontal Merger Guidelines, by applying the three cumulative criteria for efficiencies (see Section 6.9.1). In that Section, the Commission concludes that the Notifying Party has not demonstrated that these alleged improvements in network quality and the resulting quality re-positioning of the Parties are verifiable, merger-specific and would sufficiently benefit consumers.

- (474) In so far as the Notifying Party claims that the proposed transaction will enhance competition in the market as a result of the merged entity's improved network quality, the Commission notes that: (a) the allegedly verified network quality improvements are likely to be limited; and (b) the value of network quality to consumers is difficult to measure and is likely to be small (see Section 6.9.1 and in particular recital (1011)). In addition, on balance, even when taking this limited quality improvement and its value to consumers into account, the Commission considers that the evidence in this Case as set out in Sections 6.3.1.2, 6.3.1.3 and the present Section, taken together, indicates that the merged entity is likely to have fewer incentives to compete than each of the Parties on a stand-alone basis.
- (475) The Commission also notes that if, in the absence of the proposed transaction, the Parties were to engage in network sharing (which, as discussed in recitals (1097) to (1099), is a realistic and attainable alternative to the proposed transaction), they could achieve the claimed network improvements while remaining independent competitors.
- (476) Finally, insofar as the Notifying Party claims that the proposed transaction gives rise to pro-competitive effects because an improved quality of service would enable the merged entity to compete more effectively and aggressively with Deutsche Telekom and Vodafone for large business customers, the Commission considers that even if the ability of the merged entity to compete on quality were to increase, the Notifying Party has not demonstrated that after the merger, it would in fact target large business customers. These findings are also in line with the Commission's conclusions in relation to the efficiencies claims submitted by the Notifying Party, which are analysed in Section 6.9.4. The Notifying Party only advanced claims related to additional business opportunities for [...]*, and never referred to such additional opportunities for [...].
- (477) Similarly, internal documents from the Parties show that post transaction the merged entity would [...]*.³⁵⁴ Moreover, in its Statement of Objections the Commission mentioned that, according to Telefonica's internal documents, the merged entity would be more likely to aim at [...]*.³⁵⁵ In its Reply to the Statement of Objections the Notifying Party did not provide sufficient evidence that the merged entity's strategy would be [...]*. In addition, for the reasons set out in Section 6.3.1.5, the evidence gathered does not show that, following the proposed transaction, Vodafone and Deutsche Telekom would have incentives to compete more aggressively with the merged entity.
- (478) Finally, the Commission disagrees with the Notifying Party's argument that according to its reasoning in the Decision in case M.3916 the merged entity would have incentives to compete particularly aggressively due to the costs it would face from integrating the two businesses and from investing in its network. First, the Commission notes that in that Decision, the Commission's reasoning concerned a

³⁵⁴ Indeed, in a presentation [...]*.see Presentation [...]*. Document ID 990-4086, p. 6.
³⁵⁵ Presentation [...]*. Document ID 9940-4086, p. 6, 37.

scenario in which the subject matter were "network operators that first have to build up their customer base in order to be able to recoup the network investment costs and cover the network operating costs".³⁵⁶ In this Case, on the other hand, the merged entity will not have to build a customer base in the first place as it has already done so. Second, the other two MNOs are facing the same investments. However, as further set out in Section 6.3.1.5, their incentives to compete will also not increase as a result of the proposed transaction.

- (479) The conclusions set out in recitals (462) to (478) are supported by the data gathered during the Market Investigation and by the review of the internal documents provided by the Parties.
- (480) The Notifying Party claims that the Commission did not interpret the views expressed by non-MNOs in the context of their respective commercial relationships with MNOs and that it limited itself to quoting only six respondents, while omitting to refer to submissions of respondents that expect the merged entity's incentives to compete to increase.
- (481) In relation to the arguments referred to in recital (480), the Commission notes that the responses of MVNOs and Service Providers on the one hand, and Branded Resellers on the other hand, gave a coherent and reliable picture as regards the incentives of the merged entity to compete despite considerable differences in the commercial relationships between MNOs and both types of operators. Furthermore, as set out in recitals (482) to (488), even if not all respondents are quoted by the Commission in this Decision, the Commission has taken all replies into account in its assessment of the results of the Market Investigation.
- (482) A number of respondents to the Phase I Market Investigation voiced concerns that the merged entity would have less incentive to compete after the proposed transaction. One respondent argues that the merged entity will have "no serious incentive left" to compete.³⁵⁷ A Service Provider explains why the merged entity will have less incentive to compete as follows:
- "First, prices of Vodafone and Deutsche Telekom seem to be 25-40% higher in average in comparison to Telefónica/O2 and E-Plus average prices. [...], it is expected that, due to increase in network quality and coverage, a combined entity will increase prices."³⁵⁸
- (483) The Notifying Party submits that those statements are contradicted by the rationale of the proposed transaction [...]*. However, as noted in recitals (472) to (477) and as further set out in the assessment of the internal documents in recitals (489) to (495), the Commission considers that the merged entity will not [...]*.³⁵⁹

³⁵⁶ Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria/Tele.ring*, recital 76.

³⁵⁷ Response of [...]*to Questionnaire Q2, MVNOs dated 31 October 2013, Document ID 794, question 39. The Notifying Party submits that that statement as well as [...]* submission in response to question 31 of the RFI dated 21 January 2014 is based on the incorrect assumption that Deutsche Telekom and Vodafone would be prevented from price competition due to their respective network investments and that [...]* would ignore the competitive pressure exerted by non-MNOs. However, as set out in Sections 6.3.1.5 and 6.3.1.6, the Commission considers that the other MNOs are not likely to have a strong incentive to compete aggressively on price after the proposed transaction and that the competitive pressure exercised by non-MNOs is very limited.

³⁵⁸ Response of [...]*to Questionnaire Q2 to MVNOs dated 31 October 2013, Document ID 1453, question 40.

³⁵⁹ Presentation [...]*dated [...]* Document ID 994-1342, p. 5, 8.

- (484) The majority of market participants which responded to the Market Investigation were of the view that the incentives of the merged entity to compete would decrease post-transaction.³⁶⁰ In particular, a large majority, 18 out of 27 of the respondents answered "yes" to the question whether they believe that, post-transaction, the merged entity will have less incentives to compete than each of Telefónica and E-Plus on a stand-alone basis.³⁶¹
- (485) Similarly, 18 out of 28 respondents consider that a larger customer base will reduce the incentives of an MNO to compete on prices. One respondent considered that its larger customer base would reduce the incentives of the merged entity to compete as "each price decrease impacts aggregate margin by a greater amount".³⁶² Another respondent considers that a continuation of an aggressive price policy would be to the detriment of the revenues coming from the installed customer base.³⁶³ In the same vein, one respondent notes that "ARPU/AMPU protection [is more important] from pricing strategy perspective".³⁶⁴ [...] submits the following:
- "MNOs with large customer base tend to sell products to their own customer base. High level of competition with other operators for few new customers is not [as] necessary, as it is for operators with a smaller customer base. Furthermore operators with a big customer base tend to be less active in gaining new customers and therefore tend to slow down competition towards other operators."³⁶⁵
- (486) The comment provided by [...] confirms this view:
- "A larger customer base, especially when roughly equal to that of the closest competitor(s) will reduce the incentive to compete on price, as it [...] becomes less important to win new customers to compete on the cost base. Every price reduction of an MNO will have a positive effect of winning new customers, but will also reduce revenue from the existing customer base. The larger the customer base, the smaller the chance to win enough top line revenue and margin to compensate for reduced revenue from the existing customer base."³⁶⁶
- (487) Another respondent submits that the merged entity will not have any incentives to compete as "the combined entity is unlike[ly] to face any strong retail price competition from DT or Vodafone, both of whom are investing heavily in a costly rollout and integration of their fixed and mobile networks".³⁶⁷ A further respondent submits the following:

³⁶⁰ Responses to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 31; and responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 31.

³⁶¹ Responses to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 31; and responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 31.

³⁶² Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1415, question 31.

³⁶³ Response of [...] to Questionnaire Q3 to Branded Resellers dated 21 January 2014, Document ID 1442, question 31.

³⁶⁴ Response of [...] Communications to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1616, question 30.

³⁶⁵ Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1379, question 30.

³⁶⁶ Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1487, question 30.

³⁶⁷ Response of [...] to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1487, question 31.

"Currently, Telefónica and E-Plus are trying to close the gap to the competing MNOs Deutsche Telekom and Vodafone. They compete with Deutsche Telekom and Vodafone on price due to lower network quality and small customer base (late entry). The notified transaction will allow Telefónica and E-Plus to consolidate their networks in order to improve network quality and cost basis [...]. This consolidation will reduce the need to compete on price."³⁶⁸

(488) [...] *considers that

"[t]he merged entity likely will decrease their price competition efforts in the retail market" and adds that "the common distinction between the merging entities and the other MNOs justifying the latter's higher prices is vanishing. In this situation, no price competition efforts from the merged entity are necessary to draw customers from the other MNOs. The merged entity may seek to [align itself] with the main offers from these [...] MNOs, which would imply price increases".³⁶⁹

(489) The internal documents submitted by the Parties also show that competition on price, as well as innovation would be reduced post-merger.³⁷⁰ In particular, as indicated in recital (477), the internal documents show that the merged entity would be unlikely to attack Deutsche Telekom's and Vodafone's leading role in the high-value segment in the way it submitted at several occasions in the course of the investigation.

(490) The Commission bases its assessment on internal documents of the Parties dating from [...] *. As set out in recital (385), the impact of a merger between Telefónica and E-Plus was already discussed in internal documents in [...] *, when Telefónica contemplated acquiring control over E-Plus. As both sets of internal documents support the same conclusion, the Commission rightly refers to all of them.

(491) For instance, an internal strategy document of Telefónica considering the synergies of a merger with E-Plus considered a [...] * as one of such synergies. Also, the merger would lead to [...] * and resulting [...] *.³⁷¹

(492) Other internal documents show that Telefónica and E-Plus envisaged a [...] *.³⁷² Contrary to the Notifying Party's claim, any such strategy shift [...] * does not appear to simply be based on reducing churn. Rather, as noted by Telefónica in another

³⁶⁸ Response of [...] * to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1366, question 31.

³⁶⁹ Response of [...] * to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, Document ID 1619, question 31. The Notifying Party refers to that statement as an example to further substantiate its argument that it is highly questionable whether the predictions given by respondents as regards the merged entity's future incentives to compete have a reliable basis. As set out in footnote 235, a market investigation is not an exact scientific exercise. Instead, it is an investigative tool designed to inform the Commission about the views of the market on one or more aspects of a given proposed transaction and constitutes, next to the information provided by the Notifying Party (including internal documents) and the economic analysis, one element on which the Commission bases its assessment. Against this background, and as further set out in recitals (479) to (488), the Commission considers that the responses received provide for a sufficiently coherent picture of the market's view on the merged entity's incentives to compete on the German retail market for mobile telecommunications services.

³⁷⁰ See recitals (123) to (125) for the Commission's assessment of the internal documents in this Case in general.

³⁷¹ Presentation [...] * dated [...] * Document ID 991-16676, p. 5. [...] *

³⁷² Presentation [...] * dated [...] * Document ID 991-16676 [...] * Presentation attached to Document ID 266-6985.

internal strategy document, it appears to be premised on [...] in the market.³⁷³ The Notifying Party submits that the formulation [...] in this context was included to show that Telefónica was trying to [...]. However, in the Commission's view, the document clearly shows that [...] in this particular context was being considered by Telefónica as a result of [...] in Germany and that there was [...] then offered in the United Kingdom.

- (493) The assumption of a balanced market with more rational pricing is underpinned by another internal document from Telefónica on the proposed transaction, dated August 2013, in which the undertaking considers it necessary [...].³⁷⁴ The Notifying Party submits that that statement relates to the need to achieve a [...]. The Commission disagrees with this interpretation. On the slide concerned, Telefónica analyses the "implications from new Market Structure", states its intention to [...] and considers the avoidance of triggering [...] a result of the acquisition of E-Plus, [...].
- (494) Moreover, the fact that the merged entity does not intend to compete aggressively with Deutsche Telekom and Vodafone post-transaction is expressed in the [...] internal discussion document of Telefónica dated [...], which discusses [...] strategy of the merged entity, and where Telefónica, in relation to its [...] strategy, clearly states its intention to [...].³⁷⁵ The Notifying Party submits that the statements as regards the merged entity's network strategy are outdated as they were drawn up prior to the announcements of Deutsche Telekom and Vodafone regarding their plans to heavily invest in network roll-out. However, as the Notifying Party continuously submitted to the Commission in the course of its investigation, both Telefónica and E-Plus were already lagging behind in terms of network investments prior to 2013. Thus, in particular, in the case of an increase in network investments of Deutsche Telekom and Vodafone, a commercial strategy whereby the merged entity would [...].
- (495) As regards the Notifying Party's argument that the merged entity will be incentivised to compete [...], the Commission firstly notes that, while respondents to the Market Investigation foresee a certain trend towards convergence, the dimensions of this trend cannot yet be clearly depicted. By way of example, [...] and [...] do not appear to foresee a drastic change in the demand for mobile services due to a trend towards convergence. [...] explains that "[i]n the next years [it] expect[s] a slow increase in the number of multiple play offerings."³⁷⁶ Similarly [...] explains that "[s]o far, there is no demand in Germany for multi-play offerings including a mobile element. This may change during the next years depending on the actions of other market players which might trigger new market trends that are not yet foreseeable."³⁷⁷ Furthermore, if the trend towards convergence was as significant as the Notifying Party submits, it could have already started to market multiple play offerings including a mobile component. In fact, Telefónica operates its own fixed network and through cooperation with Deutsche Telekom, it achieves fixed network coverage of [...].³⁷⁸ For this reason, Telefónica [...] in order to [...].

³⁷³ Presentation [...] dated [...] Document ID 991-12163, p. 8 [...]

³⁷⁴ Presentation [...] dated [...] Document ID 990-4086, p. 12. [...]

³⁷⁵ [...].

³⁷⁶ See [...].

³⁷⁷ See [...].

³⁷⁸ [...].

- (496) Finally, as indicated in recital (467), the Commission does not consider that the aggregated spectrum holdings as such (see Section 6.2.3.1) would increase the merged entity's incentives to compete in this Case (if anything, the merged entity's increased spectrum holding should be considered as part of the Notifying Party's claim that the proposed transaction would allow the merged entity to improve the quality of its network, which is already discussed at recitals (472) to (477). Based on the data gathered during the Market Investigation and based on the internal documents as described in recitals (479) to (495), the Commission considers that the focus of the merged entity is likely to be the protection of its margins rather than risking cannibalisation of them for the sake of filling spare capacity on its network.
- (497) In light of all the elements referred to in recitals (456) to (496), the Commission concludes that the merged entity's incentives to compete aggressively is likely to be significantly weaker than those of Telefónica and E-Plus pre-transaction.

6.3.1.5. The likely reaction of competing MNOs

Notifying Party's view

- (498) In the Form CO, the Notifying Party claims that the other MNOs will continue to compete on the retail market after the proposed transaction. According to the Notifying Party, Vodafone is only able to justify the purchase of Kabel Deutschland if Kabel Deutschland's customers can be converted into Vodafone customers. The Notifying Party further argues that Deutsche Telekom will have an incentive to compensate decreasing fixed line revenues by offering bundles comprising mobile and fixed line services.
- (499) With regard to effects of the aggregated spectrum of the merged entity on other MNOs, the Notifying Party argues that it will not be able to use the combined spectrum until the two networks are integrated. As the Notifying party estimates that the networks [...]*, it argues that the spectrum needs of the other MNOs for their respective networks will not be affected by the proposed transaction.
- (500) In its Replies to the Article 6(1)(c) Decision and the Statement of Objections, the Notifying Party specifically comments on Deutsche Telekom's and Vodafone's claims not to be able to compete with the merged entity given the asymmetry of spectrum resulting from the proposed transaction. It submits that the CEO of Deutsche Telekom publicly declared that Deutsche Telekom did not perceive the merged entity as a threat. As regards Vodafone, the Notifying Party acknowledges that Vodafone currently may not hold sufficient spectrum in the 1800 MHz band to achieve its goal of 40% market share and 40% margin. However, as spectrum in the 1800 MHz band will be included in the 2016 spectrum auction, Vodafone would be able to acquire the desired frequencies at that point in time. Furthermore, the Notifying Party underlines that the proposed transaction does not affect the spectrum holdings of its competitors. In the Notifying Party's view, any alleged anti-competitive effects could only consist of a reduced ability of the other MNOs to keep up with the merged entity due to their more limited spectrum holdings compared to those of the merged entity. It underlines that the asymmetry that will exist after the proposed transaction will only last for a very limited period in time because of the expiry of the current spectrum authorisations.
- (501) Furthermore, the Notifying Party insists that Deutsche Telekom and Vodafone will continue having a strong incentive to compete post-transaction. As regards the high value segment of the market, the Notifying Party explains that the merged entity's [...]*. Hence, they would be forced to respond with better offers in order not to lose market share. As regards the low value segment of the market, the merged entity

submits that Deutsche Telekom and Vodafone would have an incentive to increase their activities in this part of the market, if the merged entity were to raise prices for low value offers. Moreover, the Notifying Party points out that Deutsche Telekom and Vodafone have already started competing in the lower end of the market through their no-frills brands such as Congstar and O.tel.o.

Commission's assessment

Ability to compete

- (502) The post-transaction spectrum holdings of the merged entity, Deutsche Telekom and Vodafone are summarised at recitals (146) to (153). Post-transaction, there will be an asymmetry, at least for some time, between the merged entity's spectrum holdings and those of the other two MNOs. Tables 34, 35 and 36 provide overviews of the merged entity's spectrum holdings compared to those of its competitors immediately after the transaction, after the expiry of the 2G licences on 31 December 2016, and after the expiry of the 3G licences on 31 December 2020. As at the present time, the unpaired spectrum essentially remains unused in Germany,³⁷⁹ the overviews provided in those Tables only reflect paired spectrum.

Table 34: Frequency holdings of the remaining German MNOs post-transaction (in paired MHz)

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	10.0	12.4	20.0	10.0	20.0	0.0
Vodafone	10.0	12.4	5.0	15.0	20.0	0.0
Merged entity	10.0	10.0	44.8	35.0	30.0	42.0

Source: BNetzA

Table 35: Frequency holdings of the remaining German MNOs after 31 December 2016 (in paired MHz)

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	10.0		15.0	10.0	20.0	0.0
Vodafone	10.0			15.0	20.0	0.0
Merged entity	10.0		10.0	35.0	30.0	42.0

Source: Commission based on information provided by BNetzA

Table 36: Frequency holdings of the remaining German MNOs after 31 December 2020 (in paired MHz)

	800 MHz	900 MHz	1800 MHz	2000 MHz	2600 MHz	3500 MHz
Deutsche Telekom	10.0		15.0	0.0	20.0	0.0
Vodafone	10.0			5.0	20.0	0.0
Merged entity	10.0		10.0	15.0	30.0	42.0

Source: Commission based on information provided by BNetzA

³⁷⁹

As mobile telecommunication is essentially two-way communication, it requires the transmission of electromagnetic signals in two ways. In Germany, the so-called frequency division duplex (FDD) technique is used for two-way communications, which requires two distinct and equal frequency bands, one assigned to "downlink" from the base station to mobile devices, and the other to "uplink" from the mobile device to the base station. Hence, the use of FDD requires paired spectrum. In contrast, unpaired spectrum provides a single band used for both downlink and uplink. A technique called time division duplex (TDD) can be used for two-way communication on unpaired spectrum. However, TDD is commercially not used in Germany.

- (503) When replying to the Phase I Market Investigation, [...] * that they would lack the ability to compete if the merged entity made use of the combined spectrum of the Parties. [...] * answered that the aggregation of frequency usage rights obtained by the merged entity will have an impact on their businesses.³⁸⁰ [...] * further explains:
- "[t]he merged entity would hold a total of 387 MHz in bandwidth, which is 61% of the overall mobile spectrum in the German market and more than twice the spectrum assigned to Vodafone and Deutsche Telekom (155 MHz each). [...] It would offer [...] * in the short and medium term on the German mobile market."³⁸¹
- (504) Similarly, [...] * complains:
- "[t]he average data rate experienced by the customer is directly proportional to the combined amount of spectrum used for LTE in the 800 MHz and 1.8 GHz bands per customer, as these are the only bands used for LTE outside hotspots in the urban areas. [...] If the merged entity uses the spectrum efficiently, this will lead to a more than [...] times higher average data rate for their customers compared to what [...] * customers would experience. This impact would represent [...] *, as the actual average data rate will be [...] * in the future."³⁸²
- (505) In an additional submission, [...] * voices the concern that such higher speed of mobile communications will "in essence allow Telefónica/E-Plus to charge higher prices for mobile data services".³⁸³
- (506) [...] * further submits that the combined spectrum holding would not only constitute a competitive advantage for the 4G network of the merged entity, but also for the 3G network.³⁸⁴ Using national roaming, and before the Parties' networks are fully integrated, the merged entity would at the same time be able to extend their coverage and capacity extensively.³⁸⁵
- (507) [...] *,³⁸⁶ [...] *.³⁸⁷ [...] *,³⁸⁸ [...] *.³⁸⁹
- (508) As regards the merged entity's 4G network, [...] * explained that the merged entity would have the same amount of spectrum in the 800 MHz band as its competitors in order to ensure coverage, while benefitting from an excessive amount of spectrum in the 1800 MHz spectrum. In this frequency band, the merged entity would be able to deploy 30 MHz of paired spectrum as capacity band for its 4G network, while [...] * could only deploy [...] * of paired 1800 MHz spectrum for its 4G network and [...] *. Therefore, the merged entity would be in a position to offer LTE services of the

³⁸⁰ [...] *.

³⁸¹ Response of [...] * to Questionnaire Q1 to MNOs dated 31 October 2013, Document ID 790, question 73.

³⁸² Response of [...] * to Questionnaire Q1 to MNOs dated 31 October 2013, Document ID 1570, question 70.

³⁸³ [...] * Response to the European Commission's Call for Comments in Respect of the Phase 1 Assessment of the Proposed Acquisition by Telefónica Deutschland Holding AG of E-Plus Mobilfunk GmbH & Co. KG. (M.7018), Document ID 1059, p. 2.

³⁸⁴ Response of [...] * to Questionnaire Q1, MNOs dated 31 October 2013, Document ID 1570, question 73.

³⁸⁵ Response of [...] * to Questionnaire Q1, MNOs dated 31 October 2013, Document ID 1570, question 75.

³⁸⁶ [...] *.

³⁸⁷ [...] *.

³⁸⁸ [...] *.

³⁸⁹ See responses to Q 2 to German MNOs dated 11 April 2014.

highest speed and excellent coverage, which could [...] by its competitors. In [...] view, this entails the risk that the merged entity could unilaterally set excessive retail prices for its data services, as it would not be constraint by the remaining competitors.

- (509) As regards the merged entity's 3G network, [...] submits that the merged entity would be able to shift its 2G traffic entirely from the 900 MHz band to the 1800 MHz band and thereby freeing up 10 MHz of paired spectrum in the 900 MHz band. This spectrum together with the merged entity's 35 MHz paired spectrum in the 2100 MHz band would create a great competitive advantage. Firstly, the merged entity would be able to use the 900 MHz band for coverage of its 3G network, while its competitors would need the 900 MHz band for their GSM traffic. Secondly, the merged entity would hold 35 MHz paired spectrum in the 2100 MHz band, while [...] only hold 10 MHz and 15 MHz respectively of paired spectrum in this band. For this reason, the merged entity would be able to realise an [...] also regarding its 3G network.
- (510) Furthermore, [...] submits that, in order to match the merged entity's network capacity, it would have to [...] the number of its existing sites. While this calculation would show the great cost advantage of the merged entity compared to its competitors, [...] the number of sites would not be possible in practice for [...], given that it would be impossible to receive the respective administrative authorisations. [...] further claims that the merged entity would be able to consolidate its networks in around one and a half years by using the new Single RAN Technology ("S-RAN"). While in the past it was necessary to install different boxes for 2G, 3G and 4G on the radio masts, according to [...], the S-RAN technology would allow the installation of one single box for all technologies and for it to be configured via software for the exact use. Hence, the merged entity would be able to fully reap the competitive advantages offered by its enlarged spectrum holding for at least one year before the spectrum situation could be corrected to a certain extent at the end of 2016. This would constitute a significant time span in the mobile communication industry.
- (511) The Commission considers that it is necessary to distinguish between the different frequency bands when assessing the competitive impact of the spectrum aggregation resulting from the proposed transaction. As the different frequency bands have different physical characteristics and in particular differ in terms of propagation, they are differently suited for the different transmission technologies as regards the coverage and capacity of a mobile network.
- (512) Generally speaking, the frequency bands below 1GHz are better suited to achieve coverage of a mobile network, since the radio waves in the frequency bands below 1GHz propagate further than those in frequency bands above 1GHz. Hence, in order to cover a large area with a mobile network, less antenna masts are needed compared to the number of masts that would be needed to cover the same area based on a frequency band above 1GHz. The frequencies above 1GHz have inferior propagation characteristics and are therefore often used as for a complementary capacity layer by MNOs when their network faces heavy traffic of data exchanges. They are then used to increase the capacity of a mobile network as an extra layer on top of the low frequency bands. The capacity of a mobile site is proportional to the total amount of spectrum that it uses. The total capacity of a mobile network is a factor of the number of sites and of the used spectrum. Accordingly, trade-off can be considered in order to achieve a certain level of capacity between the amount of spectrum and the number of sites.

- (513) Before discussing the individual frequency bands, the Commission notes, however, that it deems anti-competitive effects resulting from the spectrum allocation of the merged entity unlikely for several general reasons referred to in recitals (514) to (516).
- (514) First, The Commission observes that the proposed transaction does not have any impact on the other MNOs' spectrum holdings in absolute terms. Deutsche Telekom and Vodafone will keep their current spectrum, which enables them to offer what currently is perceived in the market as Germany's best mobile network (Deutsche Telekom) and second best mobile network (Vodafone).
- (515) Second, the merged entity will have to maintain both its existing networks, that is to say the Telefónica network and the former E-Plus network, until the networks have been consolidated and therefore will need more spectrum than the competing MNOs that only operate one network. This argument is addressed in more detail in recitals (517) to (523) when discussing the individual spectrum bands.
- (516) Third, the Commission considers that a spectrum asymmetry as such does not necessarily lead to competition concerns, but may actually stimulate competition among MNOs with differently sized spectrum holdings. [...] * itself claims that the alleged "anti-competitive" effects stemming from the spectrum asymmetry resulting from the proposed transaction would be a consequence of the merged entity's significantly improved network, which would allow it to offer higher speeds and better quality at a lower cost and therefore a lower price than [...] *. Even assuming that the proposed transaction would result in the merged entity having this significantly improved network, which, as explained in section 6.9.1, the Commission only considers to be verifiable to a limited extent, a foreclosure or marginalisation of [...] * from the market is unlikely. If the merged entity would thus be able to increase network quality compared to its competitors, the Commission considers it highly unlikely that any potential increase in network quality will allow the merged entity to [...] *. In other words, any potential anti-competitive effects resulting from the proposed transaction will not derive from a lack of the other MNO's ability to compete with the merged entity because of its spectrum holdings, but rather from the elimination of E-Plus as a strong competitor and the likely lack of other MNOs' incentive to compete with the merged entity.
- (517) As regards the 800 MHz band, which is well suited as a coverage band for 4G technology, the Commission firstly observes that the proposed transaction would not lead to any spectrum increment in the hands of the merged entity (since E-Plus does not hold any 800 MHz spectrum) and/or to any spectrum asymmetry, as the merged entity and its competitors would each hold the same amount of spectrum. Secondly [...] *.
- (518) As regards the 900 MHz band, which is currently used for 2G traffic, but which can also be used for 3G traffic, the Commission observes that the proposed transaction does not lead to any spectrum asymmetry to the benefit of the merged entity, as the latter would actually hold less spectrum in this band than each of Deutsche Telekom and Vodafone.
- (519) As regards [...] * claim that the merged entity could shift its 2G traffic entirely from the 900 MHz band to the 1800 MHz band, in order to use the 900 MHz band as coverage band for its 3G network, the Commission firstly notes that the frequency usage concept submitted by the Notifying Party does not foresee such a shift. In fact, Telefónica submits that the target network of the merged entity includes a 2G network based on 1800 MHz in urban areas and on 900 MHz in rural areas. Secondly, the Commission considers that the shift suggested by [...] * would only be

feasible by either changing the 2G boxes into 3G boxes on the respective masts or by using the S-RAN technology. However, Telefónica submitted that it currently only uses 2G boxes for the 900 MHz spectrum and no S-RAN boxes.³⁹⁰ E-Plus submitted that while S-RAN solutions are gaining traction in the market, they have not been deployed to any extent in the E-Plus network due to the large installed base of legacy equipment.³⁹¹ Hence, the merged entity would actually have to switch the radio access network ("RAN") equipment on its respective masts in order to use its 900 MHz spectrum holding for 3G traffic, which does not seem feasible in a short period of time, such as a year's time. Also taking into account the fact that the licences in the 900 MHz band will expire on 31 December 2016, it appears unlikely that the merged entity will undertake the necessary investments to use the 900 MHz spectrum for 3G instead of 2G traffic before knowing whether it will be able to reacquire spectrum in the 900 MHz band in the next spectrum award procedure organised by BNetzA. For this reason, the Commission considers [...] complaint regarding the 900 MHz band to be unfounded.

- (520) As regards, the 1800 MHz band, which is used for 2G traffic, but also 4G networks, the Commission observes that, up until 31 December 2016, the merged entity will hold more than double the amount of spectrum compared to its competitors. In fact, the merged entity would hold 2x44.8 MHz compared to 2x20 MHz held by Deutsche Telekom and 2x5 MHz held by Vodafone. However, as shown in Table 4 in recital (148), the licence for 2x34.8 MHz of the 2x44.8 MHz spectrum holding of the merged entity in the 1800 MHz band will expire on 31 December 2016. This will leave the merged entity with 2x10 MHz in the 1800 MHz band and Deutsche Telekom and Vodafone with respectively 2x15 MHz and 0 MHz in this band. Therefore, the spectrum asymmetry resulting from the proposed transaction in the 1800 MHz band is limited to the period until 31 December 2016. According to the frequency usage concept submitted by Telefónica, up until that date, [...]*. Given that Telefónica and E-Plus have historically based their 2G networks on 1800 MHz, the Commission considers it plausible that the merged entity will not be in a position to immediately deploy its entire 1800 MHz spectrum to [...]* traffic, but only those parts which are currently not used for 2G traffic. This essentially concerns the parts of E-Plus' 1800 MHz spectrum which are dedicated to E-Plus 4G network roll-out [...]*.³⁹² As of [...]*, the frequency usage concept anticipates a future need of spectrum in the [...]* MHz band of [...]* the merged entity's spectrum holding immediately after the proposed transaction. Against this background, the Commission considers that immediately after closing the proposed transaction, the merged entity will only be in a position to use around [...]* in the [...]* MHz band as a 4G capacity band. This amount will increase over time, as the 2G network consolidation progresses. Taking the other two MNOs' spectrum holdings in the 1800 and 2600 MHz bands into account, the Commission does not consider that the merged entity will benefit from an unmatched spectrum advantage, which would make it impossible for Deutsche Telekom and Vodafone to offer competitive 4G data services. Deutsche Telekom holds 2x20 MHz in the 1800 MHz band, which will allow it to continue its roll-out of a 4G capacity band based on the 1800 MHz band. While Vodafone only holds 2x5 MHz in the 1800 MHz band, it holds 2x20 MHz in the 2600 MHz band, which can serve as an additional capacity band for 4G services

³⁹⁰ Telefónica's response to the Commission's RFI No.9 dated 24 January 2014, question 19.

³⁹¹ E-Plus' response to the Commission's RFI No.5 dated 24 January 2014, question 8.

³⁹² See E-Plus' response to the Commission's RFI No.12 dated 25 April 2014, page 5.

in hotspots. Furthermore, both competing MNOs are far more advanced with its 4G roll-out than Telefónica and E-Plus today.

- (521) As regards the 2000 MHz band, which is dedicated to 3G networks, the Commission observes that the merged entity would hold significantly more paired spectrum than its competitors. The merged entity will hold a total amount of 2x35 MHz (with a significant increment between Telefónica's 2x15 MHz and E-Plus' 2x20 MHz in this band), while Deutsche Telekom and Vodafone will hold respectively 2x10 MHz and 2x15 MHz. More than half of the merged entity's holding in the 2000 MHz spectrum band will expire on 31 December 2020. Nevertheless, a spectrum asymmetry will persist from 2021 onwards to the benefit of the merged entity, which will continue holding 2x15 MHz as opposed to Deutsche Telekom and Vodafone with respectively 0 and 2x5 MHz. According to the spectrum usage concept for the merged entity submitted by the Notifying Party, Telefónica's and E-Plus 3G networks will [...] until [...]. During this time, the merged entity would need [...]. As of [...], which shall be completed by the end of [...]. The Notifying Party estimates that after the completion of [...], the spectrum need of the merged entity will amount to around [...] MHz, which means that the merged entity would have around [...] MHz [...] once the network consolidation is completed. However, the Commission does not consider that this excess in spectrum would allow the merged entity to offer 3G services that cannot be matched by its competitors. The maximum speed for data services via 3G technology is currently 42 Mbit/s (HSDPA+),³⁹³ while the maximum speed for data services via 4G technology is between 50 to 150 Mbit/s. Even if the merged entity would be in a position to offer better 3G data services than Deutsche Telekom and Vodafone, it would still not be in a position to match Deutsche Telekom's and Vodafone's more advanced 4G services within the next years as regards coverage and speed. [...].
- (522) As regards the 2600 MHz band, which can be used for LTE capacity, in particular for hotspots, the Commission observes that the proposed transaction will result in the merged entity holding 2x10 MHz more spectrum than Vodafone and Deutsche Telekom, which both hold 2x10 MHz in this frequency band. However, as the 2600 MHz band is merely used as a supplementary band for 4G capacity in particular for hotspots, an asymmetry in this band does not in itself appear to limit the other two MNOs' ability to compete with the merged entity.
- (523) As regards the 3500 MHz band, which can be used for the backhauling of small cell infrastructure and for 4G capacity in hotspots, the Commission observes that the merged entity will hold all of the currently existing frequency usage rights. However, this is due to the fact that E-Plus today is the only MNO to hold spectrum in the 3500 MHz band. For this reason, the asymmetry in this band is not a result of the proposed transaction that is to say it is not merger specific.
- (524) To summarise, the Commission considers that the spectrum aggregation obtained by the merged entity will not significantly impede Deutsche Telekom's and Vodafone's ability to compete on the retail market for mobile telecommunications services.
- (525) Moreover, the Commission takes note of BNetzA's parallel investigation of the aggregation of spectrum obtained by the merged entity under the TKG. While BNetzA does not assess the competitive impact of the spectrum aggregation obtained by the merged entity, which falls under the exclusive jurisdiction of the Commission

³⁹³ HSDPA+ (High speed downlink packet access+) is the technology for the currently fastest transmission of mobile data on the 3G standard.

according to Article 21 of the Merger Regulation, BNetzA assesses whether the spectrum asymmetry resulting from the aggregation obtained by the merged entity impedes upon the efficient use of frequencies and whether it constitutes a discrimination, as the aggregation of spectrum does not stem from a non-discriminatory, objective and transparent award procedure. In September 2013, BNetzA published the framework for its assessment of the spectrum aggregation resulting from the proposed transaction.³⁹⁴ In October 2013, BNetzA conducted a first public consultation in order to investigate factual and legal aspects of the spectrum aggregation resulting from the spectrum aggregation brought about the proposed concentration.³⁹⁵ In light of the responses received during that initial public consultation, the BNetzA initiated a second public consultation in December 2013.³⁹⁶ The BNetzA subsequently published in March 2014 a so-called cornerstone paper (Eckpunktepapier)³⁹⁷ in preparation for a decision on the telecommunication-law related aspects of the proposed merger and invited interested parties to provide the BNetzA with comments on that paper. An oral hearing in that matter took place on 5 May 2014.

- (526) According to the cornerstone paper of March 2014 (reference BK1-13/002) referred to in recital (525), the BNetzA identified a need for short term actions with regard to the 900/ 1800 MHz bands to ensure non-discriminatory spectrum packages for high speed telecommunication networks. To address those needs, the BNetzA envisages conducting an auction of spectrum licences in the 900 and 1800 MHz bands possibly together with other frequencies immediately after the approval of the proposed merger. That auction should include 900 and 1800 MHz spectrum licences held by the Parties that are due to expire on 31 December 2016. In the event that undertakings other than the merged entity would acquire licenses to spectrum currently held by Telefónica or E-Plus, the merged entity would be obliged to cease using the respective spectrum licences prior to their expiration date in 2016 while, at the same time, the acquirer would be entitled to make use of such spectrum before that date. The BNetzA plans to initiate the auction in 2014. As regards the other frequencies, the BNetzA sees no need for short-term actions.
- (527) The Commission takes note that the BNetzA plans to address the spectrum aggregation by an early auction that would include 900/ 1800 MHz spectrum of the merged entity. Even though, as explained in recital (524), the Commission does not consider the spectrum aggregation of the merged entity to significantly impede the ability of Deutsche Telekom and Vodafone to compete on the retail market for mobile telecommunications services, the Commission further notes that such an early auction, which, based on currently available information, is likely to take place, will address the claimed spectrum asymmetry and allow Deutsche Telekom and Vodafone to bid for more spectrum in the 900 and 1800 MHz band than they currently hold.

Incentives to compete

- (528) In its response to the Statement of Objections, the Notifying Party submits that Deutsche Telekom and Vodafone will have an incentive to compete with the merged entity given that [...]*. This will force Deutsche Telekom and Vodafone to compete

³⁹⁴ Document ID 4383.

³⁹⁵ Document ID 4381.

³⁹⁶ Document ID 4382.

³⁹⁷ Document ID 4159.

by lowering prices and further repositioning. Moreover, non-MNOs will continue to offer and even intensify their aggressive offers and, thus, will exert additional competitive pressure on MNOs which in turn will provide an incentive for all MNOs to compete.

- (529) As regards the behaviour of competitors of the merged entity, paragraph 24 of the Horizontal Merger Guidelines states that "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". Paragraph 25 of the Horizontal Merger Guidelines also states that "mergers in oligopolistic market 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 competition". This is also referred to in recital 25 of the Merger regulation, where it states that "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, [...], result in significant impediment to effective competition".
- (530) Recital 367 of the Commission Decision on the Hutchison 3G Austria / Orange Case,³⁹⁸ states 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".
- (531) In the present case, the merged entity is likely to determine prices by balancing the loss of revenue from the customers who would switch to rival MNOs against the higher revenue from the customers who remain. Therefore, 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.³⁹⁹ The Commission notes that strategic complementarity of pricing decisions is a general characteristic in standard models of oligopolistic competition.
- (532) For the following reasons, the Commission considers that the arguments of the Notifying Party are not founded and that to the contrary, Deutsche Telekom and Vodafone will not have the incentive to compete aggressively on the relevant market post-transaction. In this context, the Commission also refers to the results of the quantitative analysis in section 6.3.1.7, where the upward price pressure ("UPP")

³⁹⁸ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – HUTCHISON 3G AUSTRIA. / ORANGE AUSTRIA.

³⁹⁹ See also recital (369) of Commission Decision of 12 December 2012 in Case No COMP/M.6497 – HUTCHISON 3G AUSTRIA. / ORANGE AUSTRIA..

framework extends the standard UPP assessment by taking into account rivals' reactions.⁴⁰⁰

(533) As a result, their reaction will likely not be such to defeat a possible price increase from the merged entity. This conclusion is supported by the results of the Market Investigation and by the review of the internal documents provided by the Parties.

(534) **Market Investigation.** As regards incentives to compete, responses to the Phase I Market Investigation pointed to a risk that the other MNOs may not have a strong incentive to compete aggressively on prices after the proposed transaction.

(535) When asked how the remaining two MNOs would react to a possible price increase by the merged entity, a majority of the responding MVNOs, Service Providers and Branded Resellers deemed a price increase by Deutsche Telekom and Vodafone likely. For example, one Service Provider argued:

"[d]ue to the large difference between Deutsche Telekom's and Vodafone's pricing today on one hand, and Telefónica/O2's and E-Plus' pricing today on the other hand, it cannot be expected that Deutsche Telekom and Vodafone need to compete on price with a merged company in the foreseeable future."⁴⁰¹

(536) Another Service Provider noted that it:

"[c]onsiders Telekom and Vodafone as operators focused on post-paid and business customers. In the past, both decreased prices if necessary due to competitive pressure (to avoid the difference between E-plus to Vodafone/Telekom pricing becoming too large), but are not known for their aggressive pricing.

Therefore [...] believes that Telekom and Vodafone will keep prices stable or slightly in-crease prices in the pre/post-paid and business segment."⁴⁰²

(537) One respondent argued that the competitors Deutsche Telekom and Vodafone are already investing in the costly roll-out (of 4G) and in the integration of their fixed and mobile networks⁴⁰³ and that, post-transaction "[t]he three MNOs will have similar shares in a saturated market and will not compete on price as aggressively as before".⁴⁰⁴

(538) As in the course of the Phase I Market Investigation, the vast majority of MVNOs and Service Providers who responded to the Commission's Phase II Market Investigation questionnaire were of the view that the incentives to compete of Deutsche Telekom and Vodafone would decrease post-transaction.⁴⁰⁵

(539) Explanations were similar to those in the Phase I Market Investigation responses. For example one respondent explains: "If a merged entity of the formerly most price aggressive MNOs stops aggressive price competition, the remaining two MNOs will most probably welcome such a decrease of competition on price with relief, given

⁴⁰⁰ See in particular Table 39.

⁴⁰¹ Response of [...] to Questionnaire Q2, MVNOs dated 31 October 2013, Document ID 1453, question 40.

⁴⁰² Response of [...] to Questionnaire Q2, MVNOs dated 31 October 2013, Document ID 768, question 40.

⁴⁰³ Response of [...] to Questionnaire Q2, MVNOs dated 31 October 2013, Document ID 794, question 39.

⁴⁰⁴ See [...] response to Questionnaire Q2, MVNOs dated 31 October 2013, Document ID 794, question 111.2.

⁴⁰⁵ Responses to Q2 to MVNOs and Branded Resellers dated 21 January 2014, question 32.

current pressure on their financial results."⁴⁰⁶ Another respondent claims: "The intention to compete in the retail market for mobile telecommunications services is already pretty limited for Deutsche Telekom and Vodafone today. Both try to retain high end customer prices through limiting access for alternative operator to preliminary mobile services. Therefore we do not see the intention of the remaining two other MNOs to increase price competition in a post-merger phase."⁴⁰⁷ Yet another respondent explains that post-merger "[t]here is no need to react on price aggressive steps of the smaller challengers. No challenging MNO exists."⁴⁰⁸ Yet another respondent explains that "[e]ach MNO will have only 2 direct competitors instead of 3. That could be expected to significantly reduce the need to compete, as consumer choice is significantly restricted."⁴⁰⁹

(540) Similarly, the majority of Branded Resellers who responded to the Commission's Phase II Market Investigation were of the view that the incentives of Deutsche Telekom and Vodafone to compete would remain the same or decrease post-transaction.⁴¹⁰

(541) Contrary to the views of the majority of the respondents to the Market Investigation, few respondents, including [...] and [...] believe that their incentive to compete will increase post-transaction.⁴¹¹ The Commission considers that these responses need to be seen in the context of [...] and [...] essentially not raising any concerns about the proposed transaction other than concerns related to the spectrum aggregation. Taking into account Deutsche Telekom's and Vodafone's support for in-country consolidation in the European mobile telecommunications industry, which appears to be based on the expectation of higher revenues, these positions are actually not surprising. In fact, in a recent interview, former Deutsche Telekom CEO René Obermann explained: "The political attempt to keep the market highly fragmented, to keep almost a ruinous competition in place, to intervene directly when consumers don't like certain price elements or parts of the proposition of the service providers—all of that is a politically understandable reflex, but it's dead wrong. [Question:] So if you were gatekeeper, what would you do? [Answer:] First and foremost, allow for consolidation within countries. In some of the smaller European countries, for instance, we still have four mobile operators, even though the network built out there is extremely expensive. So regulators should keep their hands out of it, because there is huge and heavy competition already established. And they should allow for intramarket consolidation and cross-European consolidation. In Europe, we have hundreds of competitors, whereas in the U.S., you have only a few big providers."⁴¹² In a conference call with investors, Nick Read, Chief Financial Officer of Vodafone, praises the impact of market consolidation on prices in the Indian market: "our average base was up 3%, quarter-over-quarter, and we are capturing more of the minutes on our primary SIM, as the smaller players exit the market. So

⁴⁰⁶ See Response of [...] to Q2 to MVNOs and Branded Resellers dated 21 January 2014, Document ID 1487, question 32.

⁴⁰⁷ See Response by [...] to Q2 to MVNOs and Branded Resellers dated 21 January 2014, Document ID 1379, question 32.

⁴⁰⁸ See [...] response to Q2 to MVNOs and Branded Resellers dated 21 January 2014, Document ID 1372, question 32.

⁴⁰⁹ See [...] response to Q2 to MVNOs and Branded Resellers dated 21 January 2014, Document ID 1415, question 32.

⁴¹⁰ See responses to Questionnaire Q3 to Branded Resellers dated 21 January 2014, question 32.

⁴¹¹ [...].

⁴¹² See "René Obermaier's Industry Outlook 2014" dated 14 November 2013 in Bloomberg Business Week.

you are effectively getting consolidation. It has allowed us to harden pricing, so pricing is up 6% quarter-over-quarter. And, of course, we have got the data revenue growth at just under 50%, so structurally, you look at India, it looks very favourable." Against that background the Commission considers that Deutsche Telekom's and Vodafone's responses on their incentives to compete post-transaction are likely biased. In this context, the Notifying Party submits that not only MNOs but also non-MNOs pursue a certain agenda in the context of these merger control proceedings in that they intend to achieve wholesale access conditions which are far above market standard. Therefore, there would not be any reason to consider the statements of Deutsche Telekom and Vodafone as less reliable than those of other operators. While respondents to the Commission's Market Investigation questionnaires certainly provide answers from their specific business perspective, the Commission is unaware of any public statements by non-MNO, which would compel the Commission to consider their responses likely to be biased as well.

- (542) **Internal documents.** The Commission observes that a number of internal documents from the Parties clearly support the conclusion that, as a result of the proposed transaction, competition will be significantly reduced in the German mobile retail market. Indeed, in internal documents, the Notifying Party takes the view that the competitive pressure will decrease following a merger between Telefónica and E-Plus.
- (543) In spring/summer 2012, Telefónica already contemplated [...]*. While the [...]* was abandoned at the time [...]*,⁴¹³ several internal assessments of the benefits of [...]* were undertaken. One of the recurrent themes in those assessments consists in the expected [...]* resulting from the reduction of four to three MNOs in Germany and the [...]*. Telefónica expected this [...]* to lead to a [...]* in the German retail mobile communication markets and a [...]* against the trend of [...]*, which characterised the German mobile communication sector during recent years.
- (544) In a presentation dated 26 April 2012, which was prepared for a kick-off meeting on that day between representatives of the management of Telefónica and [...]*,⁴¹⁴ the Notifying Party takes the view that a [...]*.⁴¹⁵ In the same presentation, a comparison is drawn between, on the one hand, [...]* and, on the other hand, [...]*. Interestingly, the Notifying Party takes the view that [...]*.⁴¹⁶
- (545) Following the kick-off meeting on [...]*, sent a word document that [...]* during the kick-off meeting to [...]*.⁴¹⁷ Under the heading [...]*, the document includes inter alia: [...]*.⁴¹⁸ For that reason, it appears that the issue of [...]* resulting from a merger between E-Plus and Telefónica was part of the substantial discussions during the kick-off meeting on [...]* and that participants had a common view on this [...]*.
- (546) In a presentation dated [...]* which was prepared by Telefónica's Strategy department probably for a follow-up work-shop to the initial kick-off meeting of [...]*,⁴¹⁹ Telefónica repeats the statements referred to in recitals (544) to (546) of this

⁴¹³ See Telefónica's response to the Commission's RFI No 9 dated 24 January 2014, Document ID 1581 question 3.

⁴¹⁴ [...]*

⁴¹⁵ [...]*

⁴¹⁶ See [...]*presentation dated[...]*Document ID 991-16379, slide 3.

⁴¹⁷ [...]*

⁴¹⁸ [...]*

⁴¹⁹ [...]*

Decision.⁴²⁰ Furthermore, under the heading [...]*, Telefónica takes the view that post-merger, the [...]*, which is further explained as follows: [...]*.⁴²¹

- (547) In another presentation dated 5 June 2012 [...]*, which was possibly prepared for a [...]*, scheduled to be held on [...]*,⁴²² the Notifying Party repeats that a merger with E-Plus will lead to the [...]*.⁴²³
- (548) In its response to the Statement of Objections, the Notifying Party essentially submits that the documents referred to in recitals (544) to (547) which relate to Project Dylan and Project Flower stem from spring/summer 2012 and are at present approximately two years old. Therefore, they do not reflect the most recent market developments in 2013, including the shift towards a data centric world, and the fact that E-Plus competitive strength has significantly faded away during the past two years. While E-Plus' yourfone tariff constituted the most aggressive offer in spring 2012, other operators offered lower tariffs later on. Hence, any statements contained in Telefónica documents of 2012 are to be considered outdated and do not reflect Telefónica's view of the likely impact of the proposed transaction on the German retail market for mobile telecommunications services. As regards that argumentation, the Commission firstly refers to its finding that E-Plus currently must continue to be considered as an important competitive force and will remain so in the future (see recital (320)). Therefore, the Commission considers that it is not possible to disregard the statements made in those documents relating to Project Dylan and Project Flower on the basis that E-Plus' role in the German market has considerably changed since 2012. This view is supported by the fact that even in an internal document of [...]*, Telefónica still considered E-Plus to be [...]*, see recital (391).
- (549) The theme of [...]* can also be found in more recent Telefónica documents.
- (550) An internal document of [...]* reflects Telefónica's conviction that in the case of [...]*, a [...]*. In an update prepared for the [...]* of the Telefónica group⁴²⁴ held in [...]*, Telefónica states: [...]*.⁴²⁵ However, in the same document, Telefónica foresees [...]* of this strategy [...]*.⁴²⁶ As regards that document, Telefónica submits that it has revised its view on E-Plus' role with respect to 4G services in the meantime and puts forward that due to the fact that E-Plus had a negative cash flow in 2013, it is heavily constrained in pursuing any "challenger" role in the data centric world. Again, the Commission does not share Telefónica's view on E-Plus role in the "data centric world." However, the Commission notes that Telefónica's argumentation implies that the proposed transaction would lead to "market repair", if E-Plus were still to be considered as a challenger today. This corresponds to the Commission's interpretation of Telefónica's internal documents given that the Commission considers that E-Plus is, and is likely to likely remain an important competitive force on the German retail market for mobile telecommunications services.
- (551) Furthermore, the incentives of the rivals to increase prices after the merger are also illustrated in the quantitative analysis in Section 6.3.1.7, where the UPP framework

⁴²⁰ See Presentation [...]*, dated [...]*, Document ID 991-12163, p. 3 and 6.

⁴²¹ See Presentation [...]*, dated [...]*, Document ID 991-12163, p. 8.

⁴²² [...]*

⁴²³ See presentation " dated [...]*, Document ID 991-17261, slide 1.

⁴²⁴ [...]*, Telefónica's response (part II) to the Commission's RFI dated 12 August 2013, question 1.

⁴²⁵ [...]*

⁴²⁶ [...]*

extends the standard UPP assessment by taking into account rivals' reactions in accordance with the Horizontal Merger Guidelines, in particular paragraph 24 of those Guidelines.

- (552) The Commission considers that both Deutsche Telekom and Vodafone would benefit from the fact that E-Plus, the most price aggressive player in the retail mobile communication market will be eliminated post-transaction and the current four-player market will be reduced to a three-player market. Therefore, in an environment with less competitive pressure, it is likely that Deutsche Telekom's and Vodafone's incentive to compete aggressively will also be reduced.⁴²⁷ The Commission therefore considers that it is likely that the merged entity and the rivals would have less incentive to compete after the merger.
- (553) In addition, the Commission considers that both Deutsche Telekom and Vodafone have very extensive and well established customer bases, which provide the vast majority of their revenues. Accordingly, these operators are more likely to be focussed on customer retention rather than on customer acquisition. When assessing whether it is more profitable to decrease prices in order to acquire new customers from the merged entity, these undertakings are likely to also take into account the risk of reducing overall profits through the extension of lower tariffs, offered to new customers, to their established customer base. In this context, the Notifying Party submits that the Commission's view that operators with a large customer base are more likely to focus on retention of these customers than on acquisition of new customers is not supported by economic theory.⁴²⁸ The Commission disagrees with the Notifying Party as set out in recitals (462) to (469).
- (554) A report prepared by the Boston Consulting Group for the European Telecommunications Network Operators' Association (whose members include, among others, Deutsche Telekom, Telefónica and KPN) points out that mergers in the mobile telecommunication sector might result in short-term price increases. In the case of a hypothetical four to three merger taking place in a typical four-player mobile communication market within Europe with one MNO holding a market share of 40%, the second MNO holding a market share of 30%, and the two smaller MNOs holding market shares of respectively 20 and 10%, the report predicts a price increase of 6% post-transaction.⁴²⁹
- (555) In that regard, it is not surprising that neither [...] nor [...] have opposed the proposed transaction as such. On the contrary, [...] warned that it "must be feared that the EU-Commission's repeated negative assessment of an in-country merger will delay, if not even prevent a faster broadband infrastructure roll-out throughout

⁴²⁷ It is unlikely that non-merging parties have the necessary incentives to offset the price increases after the merger (see Case No COMP/M.6570 – *UPS / TNT Express*, Case No COMP/M.6471 – *Outokumpu/INOXUM*, Case No COMP/M.6576 – *Munskjö/Ahlstrom*).

⁴²⁸ A similar view is expressed by [...], which submits that the dynamic effect theory is based on two incompatible assumptions, namely the presence of switching costs and the absence of price discrimination (Document ID 3838). The Commission disagrees with this argument. As it is mentioned in recital (468), there are significant switching costs for the existing subscribers (due to the existence of minimum contract duration for example), at least in the short term. The presence of these switching costs is compatible with the ability by customers to switch to new and cheaper tariffs available in the market, over a medium term timescale.

⁴²⁹ See "Reforming Europe's Telecoms Regulation to enable the Digital Single Market" published in July 2013 by European Telecommunications Network Operators' Association with permission of The Boston Consulting Group, Inc., p. 44 and 45, Document ID 4138.

Europe".⁴³⁰ Rather, these players have argued [...] against remedies concerning wholesale access conditions.⁴³¹

- (556) In the Response to the Statement of Objections, the Notifying Party also submitted a price concentration study to explore the relationship between concentration and prices for mobile services.⁴³² Based on the results of the price concentration study, the Notifying Party argues that there is no robust indication that higher concentration would lead to higher prices. The Notifying Party argues that there might even be a negative relationship between concentration and prices. In this context, the Commission considers that the study on price concentration submitted by the Notifying Party contains certain methodological shortcomings.
- (557) The study referred to in recital (556) uses econometric analysis of cross-country panel data to assess whether the number of MNOs competing in a national retail market for mobile telecommunications services influences prices (measured by the ARPU and also by price per minute). The Notifying Party emphasises that price-concentration studies need to be undertaken with extreme care, especially in the telecom industry, as data sources differ regarding essential inputs, such as the proxy for prices, lack of measures for essential control variable (that is to say, the usage, quality, regulations etc.). The Notifying Party argues that its best effort however, to overcome those difficulties enables to conclude that "overall, our results strongly suggest that there is no robust indication for a positive relationship between concentration and prices. To the contrary, our results weakly suggest that there may even be a negative relationship between concentration and prices."
- (558) In the Commission's view, a price concentration analysis across several different markets generally, in itself, is not sufficient to make a firm conclusion on the effect of consolidation in a specific market. This is because the analysis does not directly address the actual question of interest (that is to say, the competitive effects of the actual merger) and it may indicate only the correlation but not necessarily causation between prices and market structure. Indeed, such studies are criticised due to the fact that, although there may be a link between market structure and prices (that is a correlation), this link is not causal if other relevant factors (for example, demand, costs) affecting market structure and prices are not properly taken into account in the econometric model.⁴³³ In this particular case the analysis conflates the effect of pieces of entries and of mergers. The implicit assumption that the effect of a small scale entry is similar to the effect of a merger reducing the number of players in a market from four to three is questionable. Moreover, the Commission considers that

⁴³⁰ Comments of [...] on the Commitments offered by Telefónica Deutschland, Document ID 3184, p. 4.
⁴³¹ See for example Comments of [...] on the Commitments offered by Telefónica Deutschland, Document ID 3184, [...] Response to the Telefónica Remedies in Case No COMP/ M.7018 Telefónica Deutschland/ E-Plus dated 23 April 2014, Document ID 3350, [...] Comments on the Statement of Objections, Document ID 3459.

⁴³² Document ID2256, "Price-concentration study on the European mobile telecommunication markets," 11 March 2014.

⁴³³ For example, a high (respectively low) demand will result in high (respectively low) prices and also in a large (respectively small) number of active firms. In this Case, there will be a positive link (that is to say, a positive correlation) between prices and the number of firms, but this positive correlation is due to a variation of demands across markets. That is to say, a market with a high demand will be characterised by high prices and a high number of firms, and a market with a low demand will be characterised by low prices and a low number of firms. However, this does not imply that a lower number of firms causes lower prices, since the correlation (that is to say, the link) is driven by demand factors. Therefore, the correlation between prices and number of firms cannot be interpreted as a causal link that a higher (respectively lower) number of firms leads to higher (respectively lower) prices.

the Notifying Party results are at best inconclusive and with small modifications can be reversed.⁴³⁴ Similar considerations would also apply to the studies on the correlation of price and concentration quoted in the Statement of Objections. Therefore, the Commission considers it to be appropriate not to rely on any of those studies, including the study submitted by the Notifying Party.

- (559) The Commission disagrees with the Notifying Party's argument that the merged entity will increase competition in the [...] segment of the market and hence Deutsche Telekom and Vodafone will have an incentive to compete aggressively in this segment and further reposition their offerings into the [...] segment of the market. As set out in recitals (489) to (494) of this Decision, the internal documents of the Notifying party do not support the alleged strategy to [...]*. Moreover, as set out in section 6.3.1.6, non-MNOs, which are dependent on wholesale conditions granted by MNOs, will lack the ability to compete aggressively and thereby motivate Deutsche Telekom and Vodafone to counter possible price increases.
- (560) In light of the reasons referred to in recitals (559) to (529), the Commission considers that the other MNOs are not likely to have a strong incentive to compete aggressively on price after the proposed transaction. On the contrary, it is likely that these MNOs will increase prices as a reaction to price increases of the merged entity.

6.3.1.6. Likely reaction of competing MVNOs, Service Providers and Branded Resellers

- (561) As already set out in Section 6.2.4, market players other than the four MNOs offer mobile telecommunications services to their customers. While MVNOs and Service Providers offer these services in their own name, Branded Resellers sell tariffs under their own brand but in the name of the respective MNO. As will be shown in recitals (562) to (676), neither MVNOs and Service Providers nor Branded Resellers are at present, or will be after the proposed transaction, able to compete with MNOs in the retail market for mobile telecommunications services in the same way as an MNO. As a result, the competitive constraint exercised by these players post the proposed transaction will not be such to compensate for the loss of competition due to the elimination of each of the Parties.

⁴³⁴

In particular, the Commission considers that the price concentration study submitted by E.CA contains from the following shortcomings. First, although the study uses several different data sources the results significantly differ from one dataset to another. Second, the price concentration study uses the number of MNOs with a market share above 1%. There is no clear justification why only these MNOs should be considered as new MNO-entrant could significantly impact the market prices even before reaching a 1% market share. Using the actual MNO numbers significantly changes the results and indicates a stronger negative correlation between MNO numbers and price levels. Third, in the simplest specification even the Notifying Party' study finds a significant negative correlation (that is to say lower number of MNO's or higher HHI indices are correlated with significantly higher prices). It is only when a linear time trend and a variable that controls for the mean capital expenditure ("CAPEX") are added, that the relationship becomes insignificant. There is no clear justification why a linear time trend should be used instead of a more flexible specification (for example time dummies). Moreover, the CAPEX variable used is likely to be correlated with the number of networks in each country and therefore with the number of MNO. Therefore, these individual parameters of multicollinear variables are likely to be biased and cannot be interpreted separately. Fourth, the study does not differentiate between mergers and small scale entry and therefore it is likely to underestimate the effect of the change in market structure. Fifth, endogeneity could generally bias the results. The entry and merger events, minute of use per user, fix broadband penetration and the mobile broadband share are likely to be endogenous variables (for example entry occurs in places where it is the most profitable, usage is higher in countries with lower relative prices, etc.) which could bias the results. In summary, the Commission does not consider the price concentration study submitted as being sufficiently robust to be reliable.

MVNOs and Service Providers

Notifying Party's view

- (562) In the Form CO, the Notifying Party claims that all MVNOs and Service Providers will have a strong incentive to compete post-transaction. It argues that many of these players have the strategy to compete on prices. Furthermore, according to the Notifying Party, the shrinking pre-paid market will strongly motivate MVNOs and Service Providers to fiercely compete in the pre-paid segment.
- (563) In its Reply to the Article 6(1)(c) Decision, the Notifying Party further argues that MNOs are obliged to grant access to Service Providers on several legal grounds. Therefore, the potential termination of the Service Provider Obligation would not affect the ability of Service Providers to compete.⁴³⁵ Moreover, taking the market shares in the wholesale market into account, the Notifying Party states that the Parties do not, in any way, play a decisive role in the wholesale market and that the respective complaints of the Service Providers are simply aimed at using the proposed transaction as a means to get access to the 4G network of the Parties. With regard to Service Providers, the Notifying Party concludes that the merged entity will continue to have incentives to grant competitive wholesale conditions and that the Notifying Party already currently grants wholesale access to its 2G network without being subject to a Service Provider Obligation. According to the Notifying Party's reply to the part of the Article 6(1)(c) Decision dealing with the wholesale market, the merged entity will have the incentive to monetize its enhanced network quality as well as to exploit the newly gained economies of scale, while the incentives of Deutsche Telekom and Vodafone will not be affected by the proposed transaction.⁴³⁶
- (564) Concerning the incentive to compete, the Notifying Party underlines that MVNOs and Service Providers will have the incentive to continue to compete aggressively. Even if MNOs were to restrict access to 4G services, this would only give an incentive to these players to compete more aggressively on 2G/3G services.
- (565) In the Reply to the Statement of Objections, the Notifying Party generally points out that the German retail market for mobile telecommunications services is characterised by the highest share of MVNOs/ Service Providers/ Branded Resellers in Europe, that the market share of non-MNO is growing and that the leading Service Providers achieve better financial results than the Parties. In order to demonstrate that Service Providers are able to switch customers to other MNOs, the Notifying Party argues that Drillisch was able to switch [...] customers from Deutsche Telekom to Telefónica between Q4/2011 and Q2/2012. The Notifying Party further refers to statements of MVNOs and Service Providers during the Market Investigation and to the minutes of meetings of the Commission with Freenet and 1&1 to argue that these market players are able to compete with MNOs.
- (566) Moreover, the Notifying Party raises counter-arguments to the reasoning of the Commission in the Statement of Objections that will be addressed in the the assessment set fourth in recitals (567) to (632). As regards access to LTE, the Notifying Party mentions that Drillisch is offering its customers the possibility to surf with up to 100Mbit/s under the brand PremiumSIM.

⁴³⁵ See recitals (197) to (205) for a description of these legal grounds.

⁴³⁶ Paragraphs 454 and 457 of the Reply to the Article 6(1)(c) Decision.

Commission's assessment

- (567) The Commission does not consider that MVNOs and Service Providers are able to exercise the same degree of competitive pressure as that which is exercised by MNOs mainly because of their dependency on wholesale conditions. They are, therefore, unable to effectively constrain the competitive behaviour of MNOs on the retail market at present and would be unlikely to be able to do so in the future should the proposed transaction take place. As explained in more detail in recitals (627) to (629). The Commission considers that the proposed transaction will make it even more difficult for non-MNOs to compete on the German retail market for mobile telecommunications services and therefore their ability to compete with MNOs will be even more limited. These concerns are compounded by the uncertain future of the Service Provider Obligation in Germany.
- (568) Moreover, the Commission considers that MVNOs and Service Providers have fewer incentives to compete than MNOs. MVNOs, Service Providers and Branded Resellers have very low fixed costs in contrast with MNOs. This ensues from the fact that, as opposed to MNOs, they have very limited (if any) network investment costs and the main cost of their operations is the cost of network access, which is typically variable in nature. This, in turn, means that these operators have fewer incentives to aggressively compete for new customers than an MNO that has to recover its higher fixed cost. For the same reason, non-MNOs have a much weaker commitment to stay in the market, as they do not have to recoup any significant investments and could therefore exit the market and/ or stop their operations quite easily.

Inability of non-MNOs to compete based on current market conditions

- (569) The Commission's finding concerning the limited ability of non-MNOs to effectively compete with MNOs based on today's market conditions is supported by the data gathered during the Market Investigation and by the Parties' internal documents.
- (570) The main reason for this finding is the dependency on wholesale conditions. As MVNOs and Service Providers do not own and operate the necessary network infrastructure to produce retail mobile communication services, they are dependent on wholesale access and the respective conditions granted by MNOs.
- (571) In the Phase I Market Investigation, as well as in the Phase II Market Investigation, several MVNOs and Service Providers replied that they are not able to exercise the same competitive pressure as an MNO due to their dependency on wholesale conditions or MNOs in general.⁴³⁷
- (572) [...]*, gave the following answer as to the question concerning the extent to which Service Providers are able to compete with MNOs:

"We believe that none of these are full-fledged competitors of the German MNO as all of them are strongly depending on MNO services and terms & conditions. They are only able to compete as long as there are MNO with aggressive wholesale strategies.

⁴³⁷ See responses to Questionnaire Q2 to MVNOs dated 31. October 2013, question 50 and to Questionnaire Q2 to MVNOs dated 20. January 2014, questions 33.1 to 33.3.

The main competitive pressure of service providers results from their catalyst function. Service providers are amplifying the effects of the competitive pressure created by Telefónica and E-Plus."⁴³⁸

(573) [...] explained:

"Service provider have a very limited power to compete with MNOs. They purchase their preliminary services on a retail minus basis from their MNO. That's why their pricing power is very low as long as they won't sell their services below wholesale prices."⁴³⁹

(574) During meetings with large MVNOs/ Service Providers, these market players indicated to the Commission that their ability to compete with MNOs largely depend on the wholesale conditions granted to them.⁴⁴⁰

(575) Other MVNOs/ Service Providers also indicated this constraint in their replies to the Market Investigation. [...]*, for example, states that

"MVNOs and Service Providers can only compete with MNOs to the extent the MNOs allow them to compete". [...] As the MNOs determine the cost for wholesale access they indirectly set the price range within which MVNOs and Service Providers can compete – amongst themselves but also with the MNO's brands downstream on the retail market."⁴⁴¹

(576) Similarly, [...] argues that:

"The market is ultimately ruled by the MNOs. MNOs support Service Providers and MVNOs only to the extent necessary for them to compete against other MNOs, but not in segments where the MNO itself feels strong enough. If there is less incentive for the MNOs to compete under current regulation they will be able to reduce also the (already weak) competitive pressure from MVNOs and Service Providers."⁴⁴²

(577) [...] explains that:

"MVNOs and Service Providers have limited ability to exert pressure on MVNOs because wholesale pricing and network features (e.g. services) are controlled by the MNOs themselves. Competing on price is difficult because all MVNO needs to make a margin on the wholesale price that the MNO sells the service at. Competing on services is very difficult, as networks decide when features will become available."⁴⁴³

(578) In particular regarding MVNOs' ability to compete, [...] lists a number of restrictions that can be implied upon an MVNO by an MNO:

- "Restrictions in the technologies offered (e.g., only 2G and no 3G or 4G)

⁴³⁸ See [...] response to Questionnaire Q2 to MVNOs dated 31. October 2013, Document ID 1453, question 46.2.

⁴³⁹ See [...] response to Questionnaire Q2 to MVNOs dated 31. October 2013, Document ID 1457, question 46.2.

⁴⁴⁰ See minutes of the meeting with [...] on 15 January 2014; see slide 19 of the presentation attached to the minutes of the meeting with Freenet on 14 January 2014.

⁴⁴¹ See [...] response to Questionnaire Q2 to MVNOs dated 20 January 2014, question 33.1.

⁴⁴² See [...] response to Questionnaire Q2 to MVNOs dated 20 January 2014, Document ID 1487, question 33.1.

⁴⁴³ See [...] response to Questionnaire Q2 to MVNOs dated 20 January 2014, Document ID 1415, question 33.1.

- Restrictions and limitations on the segments the MVNO can market its services (in case of OnePhone these segments are limited to business customers only that want an FMX solution.)
- Restriction on the retail tariff plans that the MVNO can offer (usually imposed via the wholesale prices, volume commitments or technical restrictions);
- Price squeeze practices (wholesale price higher than the retail rates of the network operator, free minutes offered by the network operator while the MVNO has to pay every minute);
- Long delays in adjusting wholesale prices to market pricedowns;
- Volume commitments to prevent the MVNO from using or moving to another network operator;
- Exclusivity provisions preventing the MVNO from using several network operators at once;
- Long lead-times to connect the MVNO or make technical changes required by the MVNO;
- Financial guarantees demanded from the MVNO;
- Operational and technical restrictions are often used during the term of an MVNO agreement to restrict or discipline an MVNO that becomes too successful or aggressive.⁴⁴⁴

(579) [...] also states that "in markets with declining prices, the MNO is in the position to hold back price reductions or structure price reductions in a way that limits effectively the MVNO in competing with an MNO".

(580) In light of these statements made in the course of the Market Investigation, the Commission considers that the MVNOs' and Service Providers' dependency on wholesale conditions essentially relates to (i) wholesale pricing, (ii) the type of services and technologies (2G/3G/4G), including speed classes for the transmission of mobile data to which wholesale access is granted, as well as the (iii) the design of retail offers that MVNOs and Service Providers can offer under their wholesale agreements.

(581) As to the wholesale pricing, the Commission considers that, regardless of the way to determine the wholesale prices (for example, retail-minus, revenue-sharing or price-per-unit), the retail pricing of MVNOs and Service Providers on the retail supply side largely depends on the wholesale pricing with MVNOs and Service Providers on the demand side.

(582) The dependency is the strongest in the case of a retail-minus price arrangement, which is the most widespread access model in Germany. According to this model, the Service Provider purchases wholesale access for prices, which are set on the basis of the retail prices of an MNO tariff for end-customers minus a fixed percentage. If wholesale prices are calculated by a percentage reduction of the MNO's own retail prices, the price aggressiveness of an MNO will have an immediate impact on the ability of Service Providers to compete with (other) MNOs. Furthermore, the MNO also controls the percentage reduction amount. As Service Providers agree on the

⁴⁴⁴ See [...] response to Questionnaire Q2 to MVNOs dated 20 January 2014, Document ID 1487, question 34.

applicable percentage amount for each new tariff, an MNO will be able to further decrease the competitive pressure of any Service Provider by reducing the wholesale discount compared to its own retail price for new tariffs over a certain period of time. The Notifying Party seems to agree that under the retail-minus pricing model the ability to compete depends on the wholesale conditions.⁴⁴⁵

- (583) But under revenue-sharing or price-per-unit wholesale agreements, MNOs would also be able to influence the competitive pressure exercised by MVNOs and Service Providers in several ways. First, MNOs could simply "freeze" the current price level by not renegotiating prices. If such reductions are denied or considerably delayed, the competitive pressure of MVNOs and Service Providers will be reduced. Second, MNOs would be able to influence the competitive behaviour of MVNOs and Service Providers under a price-per-minute or revenue-sharing model by the setting of certain bonus payments. [...] Third, at the end of the term of wholesale agreements with non-MNOs that are currently in force, MNOs can in any case raise the demanded wholesale prices.
- (584) As to the type of services and technologies (2G/3G/4G) including different speed classes for mobile data transmission, the Commission found that MNOs are able to exercise control over the competitive pressure of MVNOs and Service Providers by controlling the services and technologies they grant them access to. Recent evidence of this type of control is the refusal by MNOs to allow MVNOs and Service Providers to offer tariffs that include LTE (other than re-selling the MNOs' own LTE tariffs).
- (585) Deutsche Telekom, Vodafone and Telefónica do not grant wholesale access to their LTE services other than for the resale of their own LTE tariffs. On the basis of the data gathered during the Market Investigation, no MVNO or Service Provider is currently able to offer 4G services to its customers under its own tariffs.⁴⁴⁶ Indeed, other than reselling original MNO tariffs, even the largest MVNOs/ Service Providers have not been able to negotiate wholesale access to 4G services.⁴⁴⁷ In meetings with the Commission, both [...] and [...] addressed their concerns regarding a potential coordinated refusal of access to 4G service.⁴⁴⁸
- (586) According to internal documents of the Notifying Party, this [...] is based on a [...]:
- "The current entry price for LTE is set at 40€ and we will protect this entry level by not giving LTE proactively to other brands or our wholesale partners. Thanks to LTE we will be able to target even more data centric customer segments and reduce our churn because we lack 3G coverage."⁴⁴⁹
- (587) In another presentation, the [...], that means the turning into profit, of 3G data in the past is described as a [...] of the industry that has to be done [...] with 4G.⁴⁵⁰ What exactly has to be done [...], includes among others, the following:

⁴⁴⁵ Reply to the Article 6(1)(c) Decision, paragraph 43.

⁴⁴⁶ See responses to Questionnaire Q2, MVNOs dated 20. January 2014, questions 59 and 59.2.

⁴⁴⁷ See minutes of the meeting with [...] on 15 January 2014; see minutes of the meeting with [...] on 14 January 2014; see minutes of the meeting with [...] on 21 January 2014.

⁴⁴⁸ See minutes of the meeting with [...] on 14 January 2014; see minutes of the meeting with [...] on 21 January 2014.

⁴⁴⁹ See the Presentation [...] dated [...] Document ID 991-11204, p. 16.

⁴⁵⁰ See the Presentation [...] dated [...] Document ID 991-10868, p. 37.

- (588) [...] In the presentation referred to in recital (587) of this Decision, the Notifying Party further distinguishes two options: [...].⁴⁵¹ The first option is described as having a [...]. The graphical box of the second option has attached to it a note stating [...].
- (589) The Notifying Party claims that that document is of no evidential value as it "only discusses options and different scenarios but does not give indications whether Telefónica internally decided to pursue a strategy to [...]."⁴⁵² The Notifying Party, in particular, points out that one option discussed in the document is [...]. While it is true that the document only presents options, the outcome can obviously be seen in the market: no non-MNO offers LTE tariffs other than reselling MNO tariffs.
- (590) Not becoming a [...] is also in line with the recommendations of Telefónica's internal documents. The effects of the two scenario are described as follows:⁴⁵³

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- (591) The presentation referred to in recital (590) of this Decision concludes that in 2015 Telefónica will lose [...] of its service revenues in the [...] scenario compared to the [...] scenario.⁴⁵⁴ Therefore that presentation recommends [...] (emphasis in the original).⁴⁵⁵
- (592) Regarding the behaviour of other competitors, the presentation referred to in recital (590) of this Decision further shows [...],⁴⁵⁶ [...].
- (593) The presentation referred to in recital (590) of this Decision also explains that [...].⁴⁵⁷ [...] .⁴⁵⁸ [...] .⁴⁵⁹ [...] .⁴⁶⁰
- (594) A presentation on data monetization dated [...] summarises the [...] as follows⁴⁶¹:

⁴⁵¹ See Presentation [...] dated [...] Document ID 991-10868, p. 39.

⁴⁵² Reply to Statement of Objections, paragraph 538.

⁴⁵³ Presentation [...] from [...] Document ID 991-13597, p. 11.

⁴⁵⁴ Presentation [...] from [...] Document ID 991-13597, p. 14.

⁴⁵⁵ Presentation [...] from [...] Document ID 991-13597, p. 17.

⁴⁵⁶ See the Presentation [...] dated [...], Document ID 991-10868, p. 40.

⁴⁵⁷ See the Presentation [...] dated [...], Document ID 991-10868, p. 40.

⁴⁵⁸ See the Presentation [...] dated [...], Document ID 991-10868, p. 40.

⁴⁵⁹ See the Presentation [...] dated [...], Document ID 991-10868, p. 40.

⁴⁶⁰ See the Presentation [...] dated [...], Document ID 991-10868, p. 40.

Data Dos**Data Don'ts**

Leverage LTE to monetize data	Avoid repeat of 3G data shortfalls
Keep premium on LTE and differentiate 3G and LTE data	No LTE for non-core brands
Leverage LTE as core-brand product and key differentiator	No repeat of aggressive and unspecific pricing of 3G
Change mindset: Data as scarce good, priced accordingly	No giving-in to short-term gains compromising data monetization
Strongly manage €/GB price	No more data as "free give-away"
Limit 'free' data (e.g., overusage)	No return to real flatrates
Tailor offers to demand and introduce new data dimensions	Defocus product development and marketing plans for non-data monetization levers
Leverage offers tailored to usage	
Monetize new data dimensions	
Push data and LTE penetration	

- (595) According to the presentation referred to in recital (594) and other recent presentations, the Notifying Party further considers [...]*.⁴⁶²
- (596) The intention referred to in recital (595) [...] seems to be followed by the other MNOs as well. The Notifying Party estimated in its presentation on LTE in the wholesale market that [...]*. However, it seems that [...] was willing to give up the exclusive relationship with [...] in order to protect the advantage of LTE for its core brands. [...]*.⁴⁶³ As already mentioned in recital (591), [...]*.⁴⁶⁴ The only MNO that is currently willing to include its (future) LTE network in wholesale agreements is E-Plus.
- (597) According to the strategy of the Notifying Party, that [...] of [...] will weaken the position of these players.⁴⁶⁵
- (598) The Notifying Party seems to already have further plans that go beyond the competitive advantage described in recitals (596) and (597). In a presentation called [...] dated [...], it is said that the [...].⁴⁶⁶ According to that presentation, such a [...]. In the [...] during the period from [...], called [...], the Notifying Party aims, among other things, to [...], to engage in [...] and to [...]. In the [...] during the period from [...], called [...], the Notifying Party plans to [...] and to [...]. In the [...] during the period from [...], called [...], the Notifying Party will then [...] and [...].

⁴⁶¹ See "[...]" dated [...], Document ID 990-5245, page 14.

⁴⁶² See "[...]" dated [...], Document ID 990-5245, page 3; see "[...]" dated [...], Document ID 990-8072, page 5; see "[...]" dated [...], Document ID 995-8276, p. 3; see "[...]" dated [...], Document ID 991-10981, page 10; and see "[...]" dated [...], Document ID 995-7905, p. 14.

⁴⁶³ [...].

⁴⁶⁴ Presentation "[...]" from [...], Document ID 991-13597, p. 17.

⁴⁶⁵ See [...] dated [...], Document ID 991-16676: [...].

⁴⁶⁶ See page 6 of Document ID 988-2812.

- (599) The presentation referred to in recital (598) does not explain in more detail what the Notifying Party plans, in particular, during the [...]*. However, the intent to [...]* and to [...]* from [...]* onwards puts into context the claim of the Notifying Party in its Reply to the Article 6(1)(c) Decision that "non MNOs would in the future still have the ability to compete [in the low-value segment] at least for a high number of years (until 2G/3G is replaced)".⁴⁶⁷
- (600) The Commission further notes that if a "paradigm shift from voice to data" is currently occurring or will occur in the near future, as suggested by the Notifying Party⁴⁶⁸, such change will provide additional opportunities for MNOs to deny MVNOs and Service Providers access to their future technologies addressing such changed demand. According to the Notifying Party, MNOs must continually invest in mobile technology and spectrum during the coming years "to efficiently meet increasing customer demand"⁴⁶⁹. The Notifying Party estimates that due to such investments, the maximum speed will increase to approximately [...]*while, at the same time, the cost per MB will decrease considerably.⁴⁷⁰ Both trends work to the disadvantage of MVNOs and Service Providers. Their wholesale access conditions, as agreed in any given point in time, reflect the market conditions at that time. They depend on MNOs to include additional technologies or to decrease prices in a way that reflects, for example, the reduced cost per MB. In other words, the difficulties of MVNOs and Service Providers to gain access to LTE that are described in this Section are likely to arise again for each such new technology.
- (601) Moreover, the Commission notes that, MVNOs and Service Providers are not able to compete with their respective host MNOs on network infrastructure related parameters of competition, such as network coverage and/or quality. However, in this context, the Commission also acknowledges the argument of the Notifying Party that MVNOs and Service Providers are able to compete on network quality by applying a multi-sourcing strategy and offering tariffs on different host MNOs networks. Indeed, the more successful MVNOs and Service Providers (namely Freenet, 1&1 and Drillisch) apply such a multi-sourcing strategy and procure wholesale access from several host MNOs. Smaller MVNOs and Service Providers have, however, not been able to apply multi-sourcing strategies.
- (602) The parameters of competition on which, according to the Reply to the Statement of Objections, MVNOs and Service Providers can compete with MNOs fall short of providing a competitive advantage to MNOs in particular since the vast majority of them require or are facilitated by a larger customer base. For example, while MVNOs and Service Providers may conclude their own agreements with mobile device producers, they are unlikely to be able to negotiate better terms than an MNO. The same holds true for providers of value added services such as game flats. In the German market, only Freenet may have a market position to be an attractive contractual partner to such third parties. But even Freenet faces disadvantages when offering such services. MNOs are able to integrate a value added service into their own tariff structure. Deutsche Telekom, for example, offers a music flat rate together with Spotify GmbH. Customers booking such flat rates may stream music onto their

⁴⁶⁷ Reply to the Article 6(1)(c) Decision, paragraph 391.

⁴⁶⁸ See for example the presentation [...]dated [...]*

⁴⁶⁹ See "The need for scale in an irreversible changed market environment" dated 17 March 2014, page 13, Document ID 4160.

⁴⁷⁰ See "The need for scale in an irreversible changed market environment" dated 17 March 2014, page 13, Document ID 4160.

mobile devices without using the data volume of their mobile tariff.⁴⁷¹ A Service Provider is unable to make such an offer unless the host MNO carries out the technical implementation required.

- (603) As to the design of retail offers that MVNOs and Service Providers can offer under their wholesale agreements, the Commission found that MNOs can exercise a strong influence on their contractual wholesale partners and thereby limit their ability to compete. In particular, the claim of the Notifying Party that the price-per-unit wholesale model leaves the non-MNO total freedom in the design of its tariffs is contradicted by the internal documents of the Notifying Party. According to an internal email exchange, the Notifying Party considers itself able to [...]*

"I would like to have a discussion on Monday in the Board what we can on the latest drillisch offer with 3,95 Euro on Amazon for 100/100/500 MB. I guess we all agree this is not helpful nor from a wholesale neither from a consumer perspective. If you want my team can prepare a presentation with your team together including stop of SIM delivery and other measures. Thoughts?"⁴⁷²

- (604) [...]***⁴⁷³

- (605) The Notifying Party claims in its Reply to the Statement of Objections that [...]* decided not to ask for further actions to avoid the risk of [...]***.⁴⁷⁴ However, that email exchange shows that while MNOs would have the ability to [...]*, even if MNOs might find it commercially unattractive to do so in the case of a few, successful partners [...]**.

- (606) Furthermore, the Commission considers that the MVNOs and Service Providers' dependency on the wholesale conditions granted to them is compounded by the fact that the ability to switch existing customers to another host MNO of MVNOs and, in particular, Service Providers is very limited as is the explicit or implicit threat of switching. In the circumstances, the Commission does not share the Notifying Party's view in the present case that the threat of "even potential switching constitutes an appreciable constraint on MNOs wholesale policy."⁴⁷⁵

- (607) MVNOs and, in particular, Service Providers face significant commercial, contractual and technical challenges in the event that they would want to switch an existing customer base to another MNO. These challenges are described in more detail in recitals (825) to (829). They include the issuance of new SIM cards to each customer and an individual request to transfer the existing mobile numbers to the respective new SIM cards that needs to be signed by each customer individually. In addition, many MNOs restrict the mass migration of customers or provide for "farewell-fees".

- (608) The data gathered during the Market Investigation support the conclusion that Service Providers are de facto unable to switch customers from one host MNO to another one.⁴⁷⁶ According to [...]**, "[t]he only threat the MNO might face is the fact that they would lose subscribers on the network if the MVNO would file for

⁴⁷¹ Document ID 4153.

⁴⁷² See email by [...]* dated [...]*, Document ID 995-4561.

⁴⁷³ See email by [...]* dated [...]*, Document ID 995-4561.

⁴⁷⁴ See Reply to Statement of Objections, paragraph 527.

⁴⁷⁵ Reply to the Article 6(1)(c) Decision, paragraph 459.

⁴⁷⁶ See slide 17 of the presentation attached to the minutes of the meeting with Freenet on 14. January 2014; see One QSC's response to Questionnaire Q2, MVNOs dated 20 January 2014, question 33.1.

bankruptcy in case they produce negative margin."⁴⁷⁷ [...] explained in a meeting with the Commission that "it is nearly impossible for Service Providers to change Host MNO" because there is no way to port a large amount of numbers to another network and thus an explicit request of every single end-customer would be required.⁴⁷⁸

- (609) Contrary to what the Notifying Party suggest in its Reply to the Statement of Objections, the response to the Market Investigation by [...] according to which there is "no impediment to switch" does not relate to the ability of non-MNOs to switch their customer base to a new MNO.⁴⁷⁹ [...] made that statement in reply to the question "Do customers find it easy to switch mobile telephony providers, for example in terms of number portability or other factors?".⁴⁸⁰ [...] considers that there are no impediments for individual customers to switch to a new mobile service provider. Therefore, that is a different issue.
- (610) Furthermore, the Commission does not share the Notifying Party's interpretation of the submission of the Monopolkommission according to which the Monopolkommission considers the "switching of its host MNO as possible and very important option for MVNOs/Service Providers and Branded Resellers" as mentioned by the Notifying Party.⁴⁸¹ On page 6 of the submission of the Monopolkommission, cited by the Notifying Party, the Monopolkommission expresses its concern that the option to switch the host MNO is very important for the negotiating position of Branded Resellers and that such a negotiating position will deteriorate significantly after the proposed merger.⁴⁸²
- (611) As regards the argument of the Notifying Party that Drillisch was able to migrate one million customers from Deutsche Telekom to Telefónica between Q4/2011 and Q2/2012, the Commission notes that that switch took place under very specific circumstances that do not serve as a feasible blueprint on how Service Providers can switch customers to a new host MNO. According to publicly available information, those specific circumstances included a termination for cause of all contracts between Drillisch and Deutsche Telekom by Deutsche Telekom, because of an alleged fraudulent calculation of commissions for new contracts, filings by Deutsche Telekom with public prosecutors to initiate criminal proceedings against Drillisch because of the alleged frauds and also civil proceedings by Deutsche Telekom against Drillisch claiming the repayment of several million euros in fees. Drillisch, in turn, initiated civil proceedings against Deutsche Telekom raising counter claims and made a filing with public prosecutors to initiate criminal proceedings against Deutsche Telekom because of alleged market manipulation.
- (612) Against this background, Drillisch and Deutsche Telekom negotiated an agreement to settle their respective claims referred to in recital (611) of this Decision. According to an adhoc press release issued by Drillisch on 21 March 2012, the settlement reached between Deutsche Telekom and Drillisch included specific

⁴⁷⁷ See [...] response to Questionnaire Q2, MVNOs dated 20 January 2014, Document ID 1487, question 57.

⁴⁷⁸ See slide 17 of the presentation attached to the minutes of the meeting with [...] on 14 January 2014.

⁴⁷⁹ Reply to the Statement of Objections, paragraph 508.

⁴⁸⁰ See [...] response to Questionnaire Q2 to MVNOs dated 31. October 2013, Document ID 572, question 52.1

⁴⁸¹ Reply to the Statement of Objections, paragraph 508.

⁴⁸² See the opinion of the Monopolkommission "Stellungnahme der Monopolkommission zu COMP/M.7018 – Telefónica/E-Plus", Document ID 1685, p. 6.

clauses to "ensure" the migration of some of Drillisch's customers that had been using the network of Deutsche Telekom:

"Today, several companies of Drillisch Group ('Drillisch') and Deutsche Telekom AG and its subsidiary Telekom Deutschland GmbH (together 'Telekom') signed a settlement agreement.

The agreement settles a dispute that had led to the termination of contracts between Telekom Deutschland GmbH and Drillisch Group as well as to legal proceedings.

The agreement aims at ending all civil proceedings still pending between Drillisch and Telekom. It further ensures a smooth takeover of customers still using Telekom's mobile network and allows the remaining customers to continue to use Telekom's network.

The agreement is still subject to several conditions, in particular the clearance by the Bundeskartellamt (Federal Cartel Office)."⁴⁸³

- (613) Based on this information referred to in recitals (611) and (612), the Commission deems the migration of customers from Deutsche Telekom to the Notifying Party by Drillisch not as a convincing example that Service Providers are able to exercise significant pressure on their host MNO by threatening to switch to another host MNO. The Commission notes, however, that the Notifying Party failed to provide in its Reply to the Statement of Objections any other example of a Service Provider switching a considerable amount of existing customers to a new MNO.
- (614) The Notifying Party itself seems to regard the threat of migrating existing customers to another MNO as rather low. According to an email by [...]":
- "If drillisch still plays the game between Voda and us and they are not credible because by migrating customers away from us they need to invest into new SIMs again and Voda is not matching our MVNO terms (double lose for them). I think we have a very strong position".⁴⁸⁴
- (615) Contrary to the claim of the Notifying Party, the answer to that email referred to in paragraph 532 of the Reply to the Statement of Objections does not prove that [...] is able to successfully threaten to switch customers to [...]*. The opposite is true: the email describes how [...]*. While the Notifying Party contends itself with stating that [...]*.⁴⁸⁵ It is obvious that [...] still does not have wholesale access to LTE – more than [...] after that email exchange.
- (616) Certain Service Provider contracts even include an obligation on part of the Service Provider to transfer all of its customers to the MNO after the termination of the contract.⁴⁸⁶ Such clauses are included, for example, in the Service Provider agreements [...]*.⁴⁸⁷ These clauses further increase the barriers faced by Service Providers to switch host MNO.
- (617) Finally, the Commission considers that its finding that MVNOs and Service Providers do not have the ability to compete on the same level as MNOs given their dependency on wholesale access conditions is not contradicted by the general

⁴⁸³ [...] *Document ID 4154.

⁴⁸⁴ See email by [...] * dated [...], Document ID 991-17534.

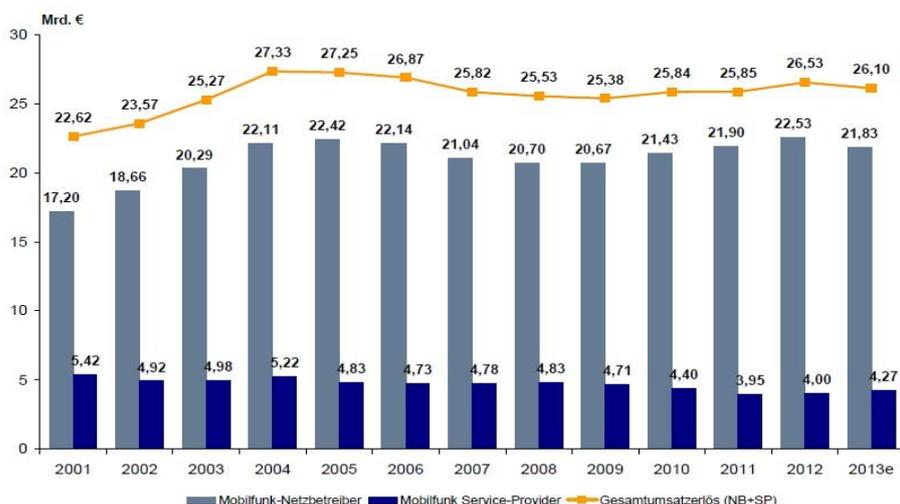
⁴⁸⁵ [...] *.

⁴⁸⁶ See slide 18 of the presentation attached to the minutes of the meeting with [...] * on 14. January 2014.

⁴⁸⁷ [...] *.

argument made by the Notifying Party concerning the degree of competitive pressure exercised by MVNOs and Service Providers.⁴⁸⁸

- (618) Contrary to the argument of the Notifying Party, that the non-MNO share is growing, the market share of Service Providers based on revenues has continually decreased during recent years from 22.24% in 2001 to 16.36% in 2013. According to the Bundesnetzagentur⁴⁸⁹, the service revenues of MNOs and Service Providers have developed as shown in the following graph:



Source: Bundesnetzagentur

- (619) The figures in the graph set out in recital (618) provide for the following market shares:

	Market Shares of	
	MNOs	Service Provider
2001	77.76	22.24
2002	79.13	20.87
2003	80.29	19.71
2004	80.90	19.10
2005	82.28	17.72
2006	82.40	17.60
2007	81.49	18.51
2008	81.08	18.92
2009	81.44	18.56

⁴⁸⁸ Reply to the Statement of Objections, paragraph 505 *et seq.*

⁴⁸⁹ Bundesnetzagentur, Tätigkeitsbericht Telekommunikation 2012/2013 dated December 2013, p. 348, Document ID 4140.

2010	82.97	17.03
2011	84.72	15.28
2012	84.92	15.08
2013	83.64	16.36

Source: Commission based on data by Bundesnetzagentur

- (620) According to the numbers in the table set out in recital (619), the overall market share of Service Providers based on revenues decreased each year in the period from 2001 to 2012 other than in 2007 and 2008. Overall, the market share declined from more than 22% in 2001 to 15% in 2012. This market share in 2012 is roughly in line with the Notifying Party's estimate according to which the MVNOs and Service Providers had an overall market share based on revenues of 14.5% in 2012. According to the data published by the Bundesnetzagentur and according to estimates by the Notifying Party, the market share of non-MNOs increased in 2013.
- (621) Similarly, the overall market share of Service Providers based on subscribers also decreased considerably. While Service Provider initially had almost the same market share as MNOs, their share sunk to 38% at the end of 1997 and to 31% in March 1999.⁴⁹⁰ According to a report of the Monopolkommission, their market share further decreased in the period from 2005 to 2012 from 25.3% to 20.6%.⁴⁹¹ The Notifying Party estimates that the overall market share of MVNOs and Service Providers, based on subscribers, amounted to 18.1% in 2012 and to 18.2% in 2013.⁴⁹²
- (622) The overall trend referred to in recitals (618) to (621) is mirrored in the customer numbers of the largest Service Provider Freenet. In its annual reports, Freenet reported 23.29 million customers in 2008, 18.94 million customers in 2009, 15.65 million customers in 2010, 15.19 million customers in 2011, 14.08 million customers in 2012 and 13.29 million customers in 2013.
- (623) Overall, the figures referred to in recital (622) do not support the proposition that MVNOs and Service Providers have been particularly successful in the German retail market for mobile telecommunications services. While individual Service Providers – most notably, United Internet AG with its brand 1&1 – have been able to grow during the last few years, the overall market share of Service Providers in terms of subscribers and in terms of revenue continually declines since the very early days of mobile telephony in Germany.
- (624) For the same reason, the fact that the market share of non-MNOs in Germany is higher than the market share of non-MNOs in many other Member States of the European Union does not in itself prove that non-MNOs have a significant competitive influence. As the figures referred to in recitals (618) to (621) show, the overall market share of non-MNOs has decreased continually from 22.24% in 2001 to 16.36% in 2013.

⁴⁹⁰ Kruse/ Haucap (Hrsg.), *Mobilfunk zwischen Wettbewerb und Regulierung* (2004), p. 178, Document ID 4168.

⁴⁹¹ Monopolkommission, *Sondergutachten 61 - Telekommunikation 2011: Investitionsanreize stärken, Wettbewerb sichern*, p. 62, Document ID 4171.

⁴⁹² See Tables 17 and 18 set out in recital (226).

- (625) With regard to the argument that the leading Service Providers achieved better EBIT margins in 2013 than the Parties, the Commission notes that a comparison of EBIT margins in one specific year provides no meaningful basis to assess the respective market participants' ability to compete. First, and most important, a financial performance indicator, such as the EBIT margin, is not a suitable measurement for the competitive pressure exercised by the respective undertaking. Second, an undertaking that reduces all marketing efforts or ceases to invest will achieve higher EBIT margins at the expense of future business. Third, a comparison of other financial indicators provides for different results. For example, in 2013 the EBITDA margin of Freenet amounted to 11.2%⁴⁹³, the EBITDA margin of Drillisch amounted to 24.4%⁴⁹⁴ and the EBITDA margin of the access segment of United Internet AG amounted to 13.7%⁴⁹⁵, while E-Plus achieved an EBITDA margin of 30.1%⁴⁹⁶ in 2013 and the Notifying Party an operating income before depreciation and amortization ("OIBDA") margin of 25.2%⁴⁹⁷.
- (626) Based on the matters referred to in recitals (567) to (625), the Commission considers that MVNOs and Service Providers are unable to compete in the same way as MNOs in the German retail market for mobile telecommunications services. This is mainly because of the dependency of wholesale partners on MNOs (access conditions and inability to switch).
- Even greater inability to compete based on post-merger market conditions
- (627) Due to the dependency of MVNOs and Service Providers on wholesale conditions, the ability of MVNOs and Service Providers to compete on the German retail market mobile telecommunications services strongly depends on the competition between MNOs on the wholesale market. Post the proposed transaction, the ability of MVNOs and Service Providers to compete with MNO would further be decreased for the reasons outlined in more detail in Section 6.4.2.
- (628) It should also be noted that the fact that the Commission leaves the question open in this Decision as to whether or not the proposed transaction is likely to give rise to a significant impediment of effective competition on the wholesale market, does not undermine the conclusion that the proposed transaction, if anything, will worsen the competitive conditions on this market and therefore further reduce the MVNOs' and Service Providers' ability to compete on this market.
- (629) Therefore, contrary to the argument of the Notifying Party in the Reply to the Article 6(1)(c) Decision, the current share of the Parties in the wholesale market does not demonstrate "that the merger will not bring about any significant change to the market for access and call origination"⁴⁹⁸, the Commission finds that a consolidation of MNOs will further deteriorate the already limited ability of MVNOs and Service Providers to compete in the retail market.

⁴⁹³ Based on revenue of EUR 3,193.3 million and EBITDA of EUR 357.4 million, see Annual Report 2013 of the Freenet group, Document ID 4161.

⁴⁹⁴ 2013 Annual Report of Drillisch, Document ID 4155.

⁴⁹⁵ The access segment includes landline and mobile access products, including the respective applications (such as home networks, online storage, telephony or video-on-demand), for the EBITDA-margin of the access segment see the Annual Financial Statements 2013 of United Internet AG, p. 23, Document ID 4184.

⁴⁹⁶ Restated KPN Factsheets Q4 2013, Document ID 4166.

⁴⁹⁷ Telefónica Deutschland Annual Report 2013.

⁴⁹⁸ Reply to the Article 6(1)(c) Decision, paragraph 392.

Service Provider Obligation

- (630) The deterioration of the position of, in particular, Service Providers after the proposed transaction will probably be worse after the expiry of the Service Provider Obligation in 2016. As outlined in more detail in Section 6.2.4.5, the so-called Service Provider Obligation (*Diensteanbieterverpflichtung*) is incorporated in 2G licences granted to Deutsche Telekom, Vodafone and E-Plus that will expire on 31 December 2016. In meetings with the Commission, [...] stressed the importance of the Service Provider Obligation in order to gain wholesale access from MNOs.⁴⁹⁹
- (631) The current refusal of MNOs to grant MVNOs and Service Providers access to LTE services (despite reselling MNO LTE tariffs) might serve as a preview of what could happen after the expiry of the Service Provider Obligation on 31 December 2016 with regard to all mobile telecommunications services. According to several internal presentations, Telefónica takes the view that [...] to grant wholesale access to LTE and it regards the potential risks of [...]*. Those internal presentations describe the regulatory law concerning LTE wholesale access as follows:⁵⁰⁰

Description	Legal implications
For new frequencies no general service provider obligation	[...]*
However BNetzA has the legal opinion, that existing service provider obligation applies also for new frequencies (obligation is seen as technology & frequency independent)	In case LTE is not offered to classical SP risk of legal actions against TEF
At least 3 months innovation period would apply	If court decides for an obligation partner have to have same rights like affiliated companies (e.g. Fonice)
LTE needs to be offered only after SP request	
BNetzA legal view is not confirmed by court yet	

- (632) The fact that the Notifying Party grants 2G/3G wholesale access despite not being subject to the Service Provider Obligation is no indication of its incentives to grant access after the expiry of the Service Provider Obligation on 31 December 2016 as no MNO will then be subject to such obligation. Without the Service Provider Obligation, the bargaining position of Service Providers will be further weakened.⁵⁰¹

Branded Resellers

Notifying Party's view

- (633) In the Form CO, the Notifying Party claims that the shrinking pre-paid market will provide a strong incentive for Branded Resellers to compete aggressively in the pre-paid segment. Furthermore, the Notifying Party states that Branded Resellers, [...]*, will strongly incentivise MNOs to compete on the retail market.

⁴⁹⁹ [...]*.

⁵⁰⁰ See [...]*dated Document ID 991-16472, p. 10; [...]*dated [...]* Document ID 991-13597, p. 30; and see also [...]*dated [...]*Document ID 995-8846, p. 13.

⁵⁰¹ [...]*.

(634) In its Reply to the Article 6(1)(c) Decision, the Notifying Party explains that certain Branded Resellers possess significant buying power and that the current Branded Reseller Agreements include certain clauses that further increase their negotiating power (for example, [...]*). These contractual terms will not be affected by the proposed transaction. The Notifying Party further maintains that only the contractual parties to a branded reseller agreement can judge the respective relationships between the MNO and the Branded Resellers.

(635) With regard to Aldi, [...]*

(636) Concerning the incentive to compete, the Notifying Party underlines that Branded Resellers will have an incentive to continue to compete aggressively. Even if MNOs were to restrict access to 4G services, this would only motivate these market players to compete more aggressively on 2G/3G services.

Commission's assessment

(637) In the Commission's view, Branded Resellers do not exercise a significant competitive pressure on MNOs. The Commission notes that the term "Branded Reseller" includes various models of cooperation between the reseller that provides the brand name and the MNO.⁵⁰² While all have mobile subscriptions sold by a Branded Reseller result in a contractual relationship for mobile services between the customer and the respective MNO, some Branded Resellers seem only to provide their brand and have no further involvement in the design of the tariff they resell and/or its pricing. [...]* for example, explained the following to the Commission:

"[...] is rather an advertising partnership between [...] and Vodafone for the sale of Vodafone's telephony products and services branded under the name of [...]*. The partnership aims at leveraging the brand strength of [...] to promote mobile telephony services supplied by Vodafone. In practice, [...] acts as a pure intermediation tool between the end-customer and the end-customer's ultimate contracting party for the provision of mobile telephony services, which is namely the Vodafone GmbH (or one of its subsidiaries) (together: Vodafone), and not [...]*

[...]

Vodafone, and not [...]*, is solely responsible for the pricing of [...] products and services."⁵⁰³

(638) As those Branded Resellers do not influence any element of the mobile telephony products and services sold under their brand, they are unable to exercise any competitive constraint on their host MNO.

(639) The Commission, however, notes that other Branded Resellers take a more active role in the design of the products and services they resell. However, contrary to the Notifying Party's claim, the Commission considers that these Branded Resellers also do not exercise any material influence on the design of the tariff and/or the prices offered by the host MNO.

(640) This conclusion is based, firstly, on the structure inherent to Branded Reseller relationships. As Branded Resellers only resell tariffs offered to them by the respective host MNO, Branded Resellers are unable to act independently on the

⁵⁰² Also see Section 6.2.4.3.

⁵⁰³ [...]*.

mobile retail telecommunications market. A Branded Reseller will never be able to offer a tariff that the host MNO did not agree to. Even if a Branded Reseller demands more price aggressive tariffs than the host MNO is (initially) willing to offer, such demands may only influence the willingness of the respective MNO to act more or less aggressive on the market for mobile telecommunications services. It should be noted that the discussions documented in the internal documents of the Parties and described in further details in recitals (654) to (666) concern the end-customer prices offered under the respective brand, not the fees of the Branded Resellers themselves. In this regard, negotiations with Branded Resellers are more similar to strategic discussion within an MNO than to the market behaviour of an independent competitor.

- (641) In other words, Branded Resellers are essentially independent marketing channels of the respective host MNOs, which use them (and remunerate them) to market the MNOs' products and services to their (often large) customer base. Using Branded Resellers is a very efficient marketing tool for MNOs. This is, however, not to say that Branded Resellers compete with the host MNOs. They operate in the marketing of mobile products only to the extent to which the host MNO considers them a viable marketing channel, which fits the MNO's overall market strategy at a given point in time.
- (642) The only credible threat that most Branded Resellers can exercise in the event that the MNO is not willing to match tariffs suggested by the Branded Reseller is the termination of the Branded Reseller relationship and to enter into a potential new agreement with another MNO.⁵⁰⁴ In such a case, the current customers using the respective branded tariff are most likely to stay with the current MNO as they are customers of this MNO and not of the Branded Reseller.⁵⁰⁵ The existing MNO would only lose future business through the sales channel provided by the Branded Reseller while another MNO might gain these customers. This effect is exactly the same for pricing decisions made by an MNO with regard to its own brands: if the own offer becomes less attractive (to customers or to Branded Resellers), another MNO with a more attractive offer might win a bigger share of the future business. The more price aggressive the own offers, the more new customers are likely to switch to the MNO. An MNO will always weigh up the positive and potential countervailing negative effects (for example, cannibalisation of the existing customer base) when making pricing decision – irrespective of whether the decision is made for an own tariff or for a tariff branded and sold by a third party.
- (643) This “structural” assessment is supported by the results of the Market Investigation and the review of contractual clauses in Branded Reseller agreements and the internal documents of the Parties conducted by the Commission.
- (644) According to responses to the Market Investigation, Branded Resellers are unable to compete with MNOs. [...]*, for example, explains:

"Branded Resellers do not really have the possibility to compete against MNO. We believe they are only offering what they are allowed to. Minimal

⁵⁰⁴ Multisourcing, as suggested by the Notifying Party in its Reply to the Statement of Objections, will most often not be an alternative for Branded Resellers as the Branded Reseller agreements reviewed by the Commission often contained an exclusivity clause.

⁵⁰⁵ Even in the – to the Commission's knowledge – rare case that the MNO is contractually obliged to allow the Branded Reseller to switch such customers to a new MNO, technical requirements make such a switching very difficult to implement in practice. See also recitals (825) to (829).

competitive pressure of Branded Resellers is only a reflex of the competitive pressure brought by the E-Networks."⁵⁰⁶

(645) Similarly, [...] explains:

"The Branded Reseller has no power of competition at all. The Branded Reseller enters a contract with one MNO and afterwards the Branded Reseller is fully dependent if the MNO offers continuously competitive tariff products under the Branded Reseller brand."⁵⁰⁷

(646) [...] notes:

"Given that, in this category, the pricing is actually decided by the MNO, the branded reseller will usually be positioned against the other MNOs. The home MNO will use the reseller to explore segments not yet, or insufficiently, covered by its own retail business and dominated by the competition."⁵⁰⁸

(647) [...] replied:

"Branded Resellers typically do not devise tariff plans. They merely resell existing products and, in particular, are not a party to the contractual relationship with the end customer. Therefore, they do not have retail offers of their own."⁵⁰⁹

(648) Asked for the main challenges faced by Branded Resellers when competing with MNOs, [...] stated in the Phase II Market Investigation:

"Challenges may be even greater than those faced by MVNOs, as Branded Resellers have more limited ability to switch host MNOs (as they do not hold their own numbering resources). They therefore have limited ability to negotiate on wholesale pricing once they have selected their host network. They also have less control over the customer experience as they control less of the network, so their ability to challenge based on service features is reduced."⁵¹⁰

(649) [...] answered to the same question:

"See answer to 34. Additionally Branded Resellers usually have only one host MNO and very little own resources (IT, billing, customer care ...) which results in little bargaining power and high dependency on the host MNO."⁵¹¹

(650) Branded Resellers themselves did not provide detailed answers to the relevant questions in the Market Investigation. However, when asked about the ability of Branded Resellers to independently devise tariff plans, the Branded Reseller [...]

⁵⁰⁶ See [...] response to Questionnaire Q2, MVNOs dated 31. October 2013, question 46.3.

⁵⁰⁷ See [...] response to Questionnaire Q2, MVNOs dated 31. October 2013, question 46.3.

⁵⁰⁸ See [...] response to Questionnaire Q2, MVNOs dated 31. October 2013, question 46.3.

⁵⁰⁹ See [...] response to Questionnaire Q2, MVNOs dated 31. October 2013, question 46.3.

⁵¹⁰ See [...] response to Questionnaire Q2, MVNOs dated 20. January 2014, Document ID 1415, question 37.

⁵¹¹ See [...] response to Questionnaire Q2, MVNOs dated 20 January 2014, Document ID 1366, question 37.

stated that "tariff plans are given"⁵¹², [...] replies that such ability is "highly limited, differentiation based on distribution and marketing"⁵¹³ and [...] explained that:

"Since branded resellers do not act in their own name and on their own account, but rather as agents of the MNO without being party to the contractual relationship with the end customer their ability to independently devise tariffs plans is limited. The MNO who holds the contractual relationship to the customer and bears the resulting business risks will generally have a say in defining the final tariff."⁵¹⁴

- (651) In addition, these companies consider that the main challenges faced by Branded Resellers when competing with MNOs are to "remain competitive regarding prices", "to receive early new tariff structures" and the fact that "they rely on the prices and net speed the operator offers".⁵¹⁵
- (652) These replies show that market participants (including the Branded Resellers themselves) regard the ability of Branded Resellers to compete on the mobile retail market as rather limited.
- (653) The review of the contractual arrangements between each of the Parties and their largest Branded Resellers submitted by the Parties also confirms the limited negotiating power of Branded Resellers when it comes to amending the branded tariffs. [...] ⁵¹⁶ Therefore, although the Branded Reseller may [...], the MNO will always be able to [...] by [...].⁵¹⁷
- (654) A review of the internal documents submitted by the Parties further supports this conclusion. The internal documents contain internal reports about negotiations with [...] in [...] that had the following background: [...]. However, shortly before [...], [...] offered a new tariff that included 2 000 minutes or SMS, 500 MB data and unlimited calls/ SMS to other [...] mobile customers for EUR 19.99.
- (655) [...] ⁵¹⁸ [...] ⁵¹⁹ [...] ⁵²⁰ [...] ⁵²¹ [...] ⁵²²
- (656) [...] ⁵²³
- (657) [...] ⁵²⁴ [...]
- (658) [...] ⁵²⁵ [...] ⁵²⁶

⁵¹² See responses of [...] to Questionnaire Q2, MVNOs dated 31. October 2013, Document ID 748, question 45.3.

⁵¹³ See responses of [...] to Questionnaire Q2, MVNOs dated 31. October 2013, Document ID 575, question 45.3

⁵¹⁴ See responses of [...] to Questionnaire Q2, MVNOs dated 31. October 2013, Document ID 645, question 45.3

⁵¹⁵ See responses to Questionnaire Q3, Branded Resellers dated 20 January 2014, question 37.

⁵¹⁶ [...].

⁵¹⁷ [...].

⁵¹⁸ [...].

⁵¹⁹ See [...] dated [...], Document ID 990-8616, [...]

⁵²⁰ See [...] dated [...], Document ID 990-8714.

⁵²¹ See [...] dated [...], Document ID 991-12834.

⁵²² [...] dated [...], Document ID 990-8714.

⁵²³ [...] dated [...], Document ID 995-6628.

⁵²⁴ [...].

⁵²⁵ Reply to the Statement of Objections, paragraph 561.

⁵²⁶ [...] dated [...], Document ID 990-8602.

- (659) A further example of the limited influence of [...] on tariffs is described in a presentation prepared for the pricing board of Telefónica. [...] ⁵²⁷ [...] ⁵²⁸ [...] ⁵²⁹
- (660) Again, the Commission finds that, despite the request by [...] to offer a [...], Telefónica was able to convince [...] to offer only a [...] comparable to [...] in order to [...].
- (661) The fact that, for example, the Notifying Party essentially uses [...] in its overall market strategy in the same way it would use any of its own [...] is further confirmed by the reasons given in the presentation for the [...].⁵³⁰
- (662) The way new tariffs are designed to fit into the overall brand and pricing strategy of the Notifying Party can further be seen in a presentation for the pricing board of Telefónica regarding a potential new tariff designed for [...] ⁵³¹ [...] ⁵³²
- (663) While the Commission does not know whether [...] accepted the offer referred to in recital (662), the reasoning referred to in recital (662) clearly shows that tariffs of Branded Resellers are used to [...] and are part of an overall strategy of the MNO. In the case of the tariff suggested for [...], Telefónica, in particular, wanted to address a [...]. Presumably, the presentation referred to the [...] tariff by [...] that has been introduced in 2012 and included a [...].
- (664) A further example that the Notifying Party is actively designing tariffs of Branded Resellers to fit into an overall strategy can be found within the presentation for the pricing board referred to in recital (662). The next item on the agenda for the meeting was a new "All-Net-Flat" under [...]. According to the presentation, there have been "aggressive All-Net-Flat Promotions by competition" and [...].⁵³³
- (665) In addition to these examples of fitting individual tariffs offered by Branded Resellers into the overall pricing strategy of the Notifying Party, Telefónica is developing a specific "Brand Portfolio Management". The Branded Resellers Tchibo and [...] are regarded as [...] in a presentation setting out the overall brand strategy of Telefónica.⁵³⁴ According to a presentation prepared for the steering committee of the Notifying Party, a project team developed [...] ⁵³⁵ [...] ⁵³⁶
- (666) Overall, these examples show that Branded Resellers are part of an overall brand strategy of the MNO.
- (667) [...] ⁵³⁷
- (668) However, the Commission considers that the price aggressive tariffs offered by Aldi are not a consequence of the negotiating power of [...] and in particular, [...]. Similarly, it has been and still is the deliberate choice of E-Plus to cooperate with [...] and to market its products at low prices. This is the same challenger strategy

⁵²⁷ [...], [...], [...], Doc.Id. 995-8075.

⁵²⁸ [...], [...], [...], Doc.Id. 995-8075.

⁵²⁹ See Document ID 4169.

⁵³⁰ Presentation by [...]: [...], [...], [...], Document ID 995-8075.

⁵³¹ Presentation by Telefónica: [...], [...], Document ID 991-18038.

⁵³² Presentation by Telefónica: : [...], [...], Document ID 991-18038, also see similar statement on page [...].

⁵³³ Presentation by Telefónica: [...], [...], Document ID 991-18038.

⁵³⁴ See [...] Document ID 991-18589; see [...] dated [...] Document ID 992-2757

⁵³⁵ See [...] dated [...], Document ID 988-2063.

⁵³⁶ See [...] dated [...], Document ID 988-2655.

⁵³⁷ [...].

that E-Plus follows with its own tariffs (see recitals (357) to (394)) [...]*. Unsurprisingly, [...]* stated that [...]*.⁵³⁸

- (669) This assessment is supported by [...]* statements. According to the statements made by [...]* during a meeting with the Commission, the interests of [...]* and E-Plus in making a competitive prepaid offer are aligned.⁵³⁹ [...]* further explained that because [...]* and E-Plus know "[...]* business strategy of [...]*", they jointly apply this strategy to the pricing of the [...]* tariffs.⁵⁴⁰ [...]*.
- (670) Furthermore, the Commission was unable to verify the Notifying Party's claim that [...]* has and exercises a strong bargaining power by [...]*.⁵⁴¹
- (671) [...]*
- (672) [...]*
- (673) For those reasons, the Commission considers that while [...]* might have a greater bargaining power than [...]*, it is not able to exercise a competitive pressure of its own in the mobile retail telecommunications [...]*. [...]* tariff seem to be the result of a combination of the willingness of [...]* to offer [...]*. Without an MNO that was and is willing to be the price leader, [...]* would not be able to continue offering [...]* mobile tariffs to its customers. [...]*.
- (674) To conclude, taking into account the inherent structure of Branded Reseller relationships, the results of the Market Investigation, the review of the contractual relationship with Branded Resellers as well as the review of internal documents, the Commission finds that Branded Resellers do not compete independently with MNOs. In particular the internal documents of the Notifying Party have shown that to the extent Branded Resellers do make price-aggressive offers in the retail market, these offers are very much driven by an overall strategy of the MNO. Therefore, similar to the situation of MVNOs and Service Providers, the ability of Branded Resellers to offer competitive tariffs depends to a large degree on competition between MNOs. Other than MVNOs and Service Providers, Branded Resellers play a more "direct" role in addressing certain market segments, as MNOs exercise more control over the tariffs offered under the brand of a Branded Resellers.
- (675) In that sense, Branded Resellers are the extended 'arm' of their respective MNO. The tariffs are designed by the MNO – whether or not in cooperation with the Branded Reseller – to fit into the overall brand portfolio of other own or third-party branded offers. This process is documented in several presentations to the pricing board of the Notifying Party referred to in recitals (659) to (665). The ultimate decision concerning the tariff of a Branded Reseller will be made by the MNO, taking into account the effects on the entire brand portfolio. Even if an MNO is willing to make concessions to demands for price-aggressive tariffs by a strong Branded Reseller, these concessions will always be made within the overall strategic framework of the MNO. As referred to in recitals (654) to (658), even the threat of [...]* to put in question the cooperation with [...]* and to cooperate with other MNOs was not sufficient [...]*.
- (676) Therefore, the Commission regards the competitive pressure of a Branded Reseller on other MNOs, MVNOs, Service Providers or Branded Resellers as much weaker

⁵³⁸ See minutes of the meeting with [...]* on 24 January 2014, Document ID 1929.

⁵³⁹ See minutes of the meeting with [...]* on 24 January 2014, Document ID 1929.

⁵⁴⁰ See minutes of the meeting with [...]* on 24 January 2014, Document ID 1929.

⁵⁴¹ See minutes of the meeting with [...]* on 24 January 2014, Document ID 1929.

than the pressure of another MNO because any such pressure by Branded Resellers is ultimately based on the decision and thus the incentive to compete of the respective host MNO.⁵⁴² In case the willingness to compete of the merged entity and of the remaining MNOs decreases after the proposed transaction, Branded Resellers will not be able to exercise any significant competitive pressure on these MNOs in the mobile retail telecommunications market.

6.3.1.7. Quantitative analysis of horizontal non-coordinated effects

- (677) The Commission has undertaken an in-depth quantitative assessment of the likely effects of the elimination of horizontal competition as a result of the merger between Telefónica and E-Plus.
- (678) The analysis carried out consists of two approaches. First, the Commission has used an extended upward price pressure ("UPP") framework to analyse likely price effects on the basis of observed diversion ratios between MNOs and observed prices and margins at the segment level for voice and data. Second, the Commission has used tariff level data to perform an econometric estimation of consumer demand in the residential segment (data-only services excluded) which is used to obtain estimates for likely price effects in this segment.
- (679) The UPP framework set out in recitals (686) to (752) extends the standard UPP assessment by taking into account rivals' reactions in accordance with the Horizontal Merger Guidelines, and in particular paragraph 24 thereof, thereby allowing more refined results.
- (680) The second approach consists of an econometric estimation of consumer demand using tariff level data on the residential segment (data-only services excluded). It then assesses the implications of the obtained estimates for likely price effects in this segment taking account of reactions by rivals.
- (681) Both approaches may be considered as a merger simulation exercise. They both assume a differentiated products industry in which firms set prices to maximise their respective profits. Moreover, they both seek to quantify the implied price changes resulting from the merger by comparing the optimal pre-merger prices with the post-merger prices. The post-merger prices are computed taking into account that the merged entity will maximize its profits over the combined product portfolio post-merger. The merged entity will therefore "internalise" sales that were previously lost to the other merging party.
- (682) The major difference between the two approaches lies in the inputs used to compute the implied price changes. The first approach uses observed diversion ratios derived from MNP/survey data and observed margins to calibrate demand parameters.⁵⁴³ The second approach estimates demand parameters from data on consumer choices at the tariff level. Instead of inserting observed margins on the basis of data per undertaking, it then uses the margins implied by such data on consumer choices to calculate prices post-merger. The two methods are therefore complementary.
- (683) Both approaches compute the predicted price change post transaction due to the elimination of competition between the merging parties.

⁵⁴² The Commission notes that this result is in line with the assessment of the proposed transaction by the German Monopolkommission. See the opinion of the Monopolkommission "Stellungnahme der Monopolkommission zu COMP/M.7018 – Telefónica/E-Plus", Document ID 1685, p. 3.

⁵⁴³ The demand parameters are not observed. Therefore, the Commission identifies numerically the demand parameters so that the margins predicted by the model equal the observed margins in the data.

- (684) The Commission considers that MNOs are constantly competing for contestable customers, that is to say new customers and retained customers. This excludes subscribers that are not at the end of their minimum contract term. The Commission therefore conducted its quantitative analysis on the basis of new subscribers and retained subscribers. However, the Commission considers that predicted price increases would, over time, affect the entire customer base as every customer will become contestable at some point in time as minimum contract terms expire and customers change tariffs or upgrade handsets.⁵⁴⁴
- (685) A summary of these two approaches is set out in recitals (686) to (772). Annex A to this Decision provides a more comprehensive and technical outline of the quantitative analysis of the horizontal non-coordinated effects performed by the Commission.

First approach: UPP analysis and merger simulation based on diversion ratios

Description of the approach

- (686) In the first approach, the Commission has used observed diversion ratios, margins, prices and volumes of contestable customers to quantify the harm to competition as a result of the elimination of competition between the merging parties by considering: (a) the unilateral incentive of the merged entity to increase prices when reactions from rival firms are ignored (a standard UPP analysis); and (b) the likely equilibrium effect on all firms' prices in the market once rivals' reactions are taken into account (which corresponds to a calibrated merger simulation). To derive indicative price increases, the Commission uses the assumption of linear demand in both parts of the analysis.⁵⁴⁵
- (687) While a standard UPP analysis (ignoring rivals' reactions) provides useful insights on the purely unilateral incentives of the merged entity to raise prices and does not require data from rival MNOs, the Commission considers that taking reactions by rivals into account in a calibrated merger simulation provides a better indication of likely overall price rises in each segment and in the market as a whole.⁵⁴⁶
- (688) The role of diversion ratios within the UPP framework is to quantify the extent to which a price increase by one firm leads to an increase in demand for the others. The Commission's quantitative analysis assumes that post-merger, the merged entity will "internalise" such demand shifts between the products of the merging parties. There will be a unilateral incentive to raise prices because some of the demand that would be lost following a price increase pre-merger will be recaptured by the merged entity post-merger which makes it profitable to increase prices. In addition, the extent of the demand shift to other firms in the market will determine the extent to which rivals will increase their prices in response to a price increase by the merged entity.⁵⁴⁷

⁵⁴⁴ As noted in Case No COMP/M.6497 – Hutchison 3G Austria / Orange Austria (recital 313), as the unit prices decrease or the functionality of handsets increases over time, the value of existing tariff plans and handsets decreases which implies that existing consumers will have an incentive to switch to a new tariff at some point. Therefore, the option to remain on their current tariff does not provide existing subscribers with sufficient protection from price increases.

⁵⁴⁵ The assumption of linear demand will lead to lower price increases than frequently used alternative assumptions for the form of the demand function (for example log linear demand).

⁵⁴⁶ The effect of rival reactions is recognised in the Horizontal Merger Guidelines, and in particular paragraph 24 thereof.

⁵⁴⁷ See paragraph 24 of the Horizontal Merger Guidelines.

- (689) Moreover, the higher the observed margins, the higher will be the incentives to increase prices.
- (690) 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, the stronger will be the merged entity's incentives to raise prices post-merger.
- (691) The UPP analysis also considers the constraints imposed on the merging firms' incentives to raise prices when rival firms produce close substitutes. The UPP analysis takes into account that this constraint may mitigate the incentives of the merging parties to raise prices post-merger.⁵⁴⁸ Diversion ratios already reflect the closeness of all substitutes offered on the market. Where a firm other than the merging parties also offers a close substitute, fewer customers will switch between the merging parties than in the case where the third party would offer a non-close substitute. Therefore, the constraints of third party products described in paragraph 28 of the Horizontal Merger Guidelines are already reflected in the diversion ratios.
- (692) The Commission calculated diversion ratios based on data from all four MNOs which allowed identifying the origin and destination segments of customers porting their number from one operator to another. The resulting diversion ratios therefore provide a measure of the customer switching between all MNO-segment combinations.
- (693) In particular, the Commission used two different approaches to incorporate information on cross-segment switching, that is to say switching from post-paid residential to pre-paid segments and vice-versa. As regards the first, so-called HybridMNP approach, MNP data permit the identification of the MNO-segment of origin and the destination MNO. However, MNP data does not permit the identification of the destination segment. Therefore, the Commission uses InfoSurvey data which permit the identification of the destination segment.⁵⁴⁹ Next, MNP data are combined with InfoSurvey data to compute the cross-segment diversion ratios matrix. As regards the second approach, the Commission only uses InfoSurvey data to compute the cross-segment diversion ratios matrix. This second approach is presented as a robustness check in Annex A to this Decision.⁵⁵⁰
- (694) The Commission used data at segment level which were obtained from the Parties and from competing MNOs to compute prices and margins. The price measure in the UPP calculation is proxied by ARPU (excluding revenues not paid for by own users such as incoming termination revenues). In the baseline scenario, the Commission used contribution margins which account for direct costs of usage, such as termination fees and handset subsidies. As a sensitivity scenario, the Commission also used estimates of the incremental margins which, in addition to the costs accounted for in the contribution margins, also account for the Parties' estimates of how substantially variations in subscribers would affect their OPEX or CAPEX.⁵⁵¹

⁵⁴⁸ See paragraph 28 of the Horizontal Merger Guidelines.

⁵⁴⁹ Technically, InfoSurvey data allows computing the probability (or share) of switching between different MNOs and segments.

⁵⁵⁰ Note that the results presented here are based on the hybrid approach with MNP data. The results based on the INFO survey data are presented in Annex A to this Decision.

⁵⁵¹ The incremental margins are calculated by deducting incremental costs from contribution margins. With incremental margins, it is assumed that a variation in the number of subscribers generates additional costs. The incremental margin includes incremental costs based on OPEX costs, as well as amortisation costs and depreciation cost for a hypothetical reduction in the number of consumers by 10 percent. This

As regards the contestable customer base, the Commission used market shares of new and retained subscribers provided by the Notifying Party.⁵⁵²

- (695) In order to verify the robustness of the results the Commission performed an extensive sensitivity analysis reported in Annex A. The sensitivity analysis shows that the UPP results are robust to changes in the market shares of contestable customers,⁵⁵³ to the data source used to construct the diversion ratios⁵⁵⁴ and to the level of margins when wholesale customers are included.⁵⁵⁵

The Commission's analysis in the Statement of Objections

- (696) In the Statement of Objections, the Commission reported results from the UPP analysis and the calibrated merger simulation for a scenario using contribution margins (the so-called "baseline scenario") and for a scenario using estimated incremental margins (the so-called "sensitivity scenario"). The results in the Statement of Objections took price based switching of consumers between MNOs within the pre-paid and post-paid residential segments and across the two segments into account.
- (697) The results in the Statement of Objections can be summarised as follows. Annex A to this Decision sets out a more detailed summary of the analysis reported in the Statement of Objections.
- (698) In the standard UPP analysis, when price reactions by rivals are ignored and switching across segments is considered, the (multi-segment) UPP analysis indicated very substantial unilateral price rises.⁵⁵⁶ In the baseline model based on contribution margins, the predicted price increases are at 52% for Telefónica and 40% for E-Plus in the pre-paid segment. In the post-paid residential segment the baseline model predicts price increases of 10% for Telefónica and 15% for E-Plus. In the sensitivity scenario based on estimated incremental margins, the multi-segment UPP analysis indicates unilateral price rises of 36% for Telefónica and 31% for E-Plus in the pre-paid segment and 9% for Telefónica and 11% for E-Plus in the post-paid residential segment.
- (699) In the Statement of Objections, the calibrated merger simulation based on contribution margins, which takes into account price reactions of rivals, indicated average price increases of 33% in the pre-paid segment, 11% in the post-paid

estimated incremental margin thereby takes the Parties' estimates of additional avoidable costs resulting from a change in subscriber numbers (in the absence of the proposed transaction) into account.

⁵⁵² As regards the contestable customers, the Commission uses the retained customers and gross adds market shares provided by Telefónica (see reply on 29 January 2004, to the RFI dated 24 January 2014). Note that both for the retail and the wholesale markets, the prepaid segment and the post-paid residential segment also include data-only tariffs as some of the MNOs were not able to provide data in which data-only tariffs were split out of the voice segment.

⁵⁵³ In order to verify the robustness of the results with respect to the volumes used, the Commission also reports results under the assumption of symmetry in the cross price derivatives. In this Case, the volumes do not have an impact on the results of the UPP analysis. See equation 11 of "Unilateral effects of mergers with general linear demand", Hausman, Moresi, Rainey, Economics Letters, 2011.

⁵⁵⁴ In this Case, the Commission uses only data from the INFO Survey studies to construct the diversion ratios matrix.

⁵⁵⁵ In order to integrate the MVNOs in the UPP analysis, the Commission requested data of the merging parties and the competitors at the wholesale level to calculate ARPUs and margins at the wholesale level. The Commission then used a weighted-revenue average of the wholesale and retail market to calculate the corresponding ARPUs and margins used in the UPP calculation.

⁵⁵⁶ See Table 35 of the Statement of Objections.

residential segment, and an overall average price increase of 16% across the pre-paid and post-paid residential segments.⁵⁵⁷

- (700) In the sensitivity scenario based on incremental margins, the calibrated merger simulation indicates average price increases of 25% in the pre-paid segment, 8% in the post-paid residential segment, and an overall average price increase of 12% across the pre-paid and post-paid residential segments.⁵⁵⁸
- (701) In Annex 1 to the Statement of Objections, the Commission reported the results of the UPP analysis without cross-segment effects.⁵⁵⁹ In the baseline model with contribution margins, the results indicated average price increases of 10% in the pre-paid segment, 5% in the post-paid residential segment, and an overall average price increase of 6% across the pre-paid and post-paid residential segments.⁵⁶⁰ In the sensitivity scenario based on incremental margins, the results indicated average price increases of 7% in the pre-paid segment, 4% in the post-paid residential segment, and an average price increase of 5% across the pre-paid and post-paid residential segments.
- (702) In Annex 1 to the Statement of Objections, the Commission provided an extensive sensitivity analysis which showed the robustness of the results in case of changes in the market shares of contestable subscribers, of the data source used to construct diversion ratio, and of the level of margins when wholesale customers are included.
- (703) Overall, the Commission therefore considered that the quantitative implications derived from diversion ratios and margins in the Statement of Objections indicated that the elimination of competition for contestable customers between the Parties is likely to lead to significant price increases.

Assessment of the Notifying Party's arguments in the Response to the Statement of Objections and to the Letter of Facts

- (704) The main issues raised by the Notifying Party on the UPP analysis, in the Response to the Statement of Objections and to the Letter of Facts, are set out in recitals (705) to (708).⁵⁶¹
- (705) The main comments of the Notifying Party related to the UPP analysis are set out in the following points (a) to (f):
- (a) The Notifying Party contests the use of switching ratios from MNP data as a proxy for price elasticities and consumer behaviour. According to the Notifying Party, there is a fundamental shortcoming of approximating forward looking price elasticities through past switching ratios. The Notifying Party also mentions that switching ratios are based on factors other than the price.

⁵⁵⁷ See Table 36 of the Statement of Objections.

⁵⁵⁸ Note that the results for the calibrated merger simulation relate to the segment-wide or average price increase, while the figures given for the extended UPP analysis related to price increases by the merged entity only. As expected, the full results of the calibrated merger simulation indicate, that rivals would increase their prices in response to price increases by the merged entity. This in turn leads to additional price increases (compared to the predictions of the standard UPP analysis) by the merged entity in the new equilibrium.

⁵⁵⁹ Technically, this amounts to an assumption that firms do not jointly optimise across the pre-paid and the post-paid residential segments, which is a conservative assumption.

⁵⁶⁰ See Table 10 of Annex 1 to the Statement of Objections.

⁵⁶¹ Annex A to this Decision sets out in detail the arguments of the Notifying Party.

- (b) The Notifying Party argues that the cross-segment analysis distorts predictions even more than the simpler model without cross-segment switching.
 - (c) The Notifying Party claims that the UPP analysis predicts implausible scenarios post-merger with much higher prices for the merging parties than for competing MNOs. Therefore, the Notifying Party argues that the UPP analysis fails to pass a "reality check".
 - (d) The Notifying Party questions the constant usage assumption which implies that overall market demand is perfectly inelastic.
 - (e) The UPP analysis does not incorporate the competitive pressure created through non-MNOs.
 - (f) The Notifying Party contests the relevance of contribution and incremental margins to determine pricing decisions.
- (706) The Notifying Party argues that the results of the first and second quantitative approaches cannot be reconciled. In particular, the Notifying Party argues that the higher margins used in the UPP analysis contradict the margins implied by the second quantitative approach. The Notifying Party argues that an UPP analysis based on the margins derived from the second quantitative approach leads to lower predicted price increases.
- (707) As regards the countervailing factors, the Notifying Party argues that:
- (a) The UPP analysis ignores countervailing effects, such as horizontal product repositioning.
 - (b) The UPP analysis ignores countervailing effects, such as vertical product repositioning.
 - (c) Under the heading "*scope of UPP analysis*", the Notifying Party argues that a UPP analysis will always predict price increases. Therefore, the Notifying Party argues that the use of UPP-techniques requires either an acceptable threshold of upward pricing pressure or an efficiency analysis which is part of the competitive effects analysis.
- (708) The Notifying Party also made a number of more specific comments:
- (a) The Notifying Party argues that the Statement of Objections only takes 2012 data into consideration instead of looking at more recent figures of 2013.
 - (b) The Notifying Party argues that the predicted price increase from the demand estimation (second quantitative approach) is lower than the [10-20]% range estimated in the Case M.6497 - Hutchison 3G Austria / Orange Austria. Moreover, the Notifying Party argues that the best predictions of price increases in this Case are substantially lower than the best predictions on which the Commission based its Decision in Case M.6497 – Hutchison 3G / Orange Austria, where it considered that (post-paid) prices were likely to increase by [10-20]%.
 - (c) The Notifying Party argues that it is unclear on which numbers the Commission bases its assessment in this Case.
- (709) All these arguments of the Notifying Party are assessed in detail in Annex A to this Decision. The Commission also sets out a summary of its assessment in recitals (710) to (735).
- (710) As regards the main comments related to the UPP analysis, the Commission disagrees with the Notifying Party for the reasons set out in recitals (711) to (716).

- (711) First, the Commission considers that as the MNP data relate to actual switching by customers, they are informative about substitution patterns and they constitute a reliable basis to infer consumer preferences. The Commission considers that substitution patterns pre-merger are good predictors of likely substitution patterns post-merger.
- (712) Second, in the UPP framework used, the Commission accepts that observed switching across different segments (that is to say, cross-segment effects) may be less likely to be driven by price and is therefore less likely to be informative as regards consumer reactions to price changes than observed switching within a segment. The Commission therefore sets out in recitals (736) to (752) the results of a revised-UPP analysis which assumes no price-based switching across segments, while using diversion ratios from MNP data as a basis for price based switching a within segment.
- (713) Third, as regards the results set out in recitals (736) to (752) of the revised-UPP analysis with no cross-segment effects, the Commission finds, as further set out in point (a), (b) and (c), that the predicted price increases lead to plausible prices post-merger both in the pre-paid and post-paid segments. This is discussed in detail in Section 3.4 of Annex A to this Decision.⁵⁶²
- (a) In the post-paid residential segment, the predicted post-merger prices are plausible since E-Plus and Telefónica have [...] ARPUs (within a price range of EUR [...]*per month), while Deutsche Telekom and Vodafone have [...] ARPUs (within a price range of EUR [...] per month). These predicted prices are consistent with the pre-merger prices where the ARPUs of E-Plus and Telefónica fall within the price range of EUR [...]*per month, while the ARPUs of Deutsche Telekom and Vodafone fall within the price range of EUR [...] per month.⁵⁶³
- (b) In the pre-paid segment, the Commission considers that the predicted post-merger ARPUs are plausible within a price range of [...] per month for [...]. In the absence of the merger, the price range of ARPUs would be between [...] per month for [...]. While the post-merger price of E-plus is [...] (around EUR [...]* per month), this is consistent with the pre-merger situation where E-Plus has [...] ARPU as well (EUR [...]*). The post-merger ARPU of Telefónica, around EUR [...]* per month, is also plausible since it is [...] the post-merger ARPU of [...].⁵⁶⁴
- (c) For the reasons set out in points (a) and (b), the Commission considers that the UPP analysis predicts plausible prices post-merger and that the Parties' argument that the UPP analysis fails a "reality check" is not well founded.
- (714) Fourth, the Commission acknowledges that the analysis in the Statement of Objections assumes that subscribers will not stop using mobile telephones in the event of market wide price increases, which is what the Notifying Party describes as a perfectly inelastic overall market demand. While this assumption appears reasonable, the Commission also considers that consumers may reduce their usage of mobile telephones due to price increases. To account for this effect, the Commission includes in the revised-UPP analysis set out in recitals (736) to (752) the assumption

⁵⁶² See Tables 11 and 12 of Annex A to this Decision.

⁵⁶³ See Tables 11 and 12 of Annex A to this Decision.

⁵⁶⁴ See Tables 11 and 12 of Annex A to this Decision.

that a certain percentage of customers leaving an MNO would stop using mobile telephones. This provides a proxy for a reduction in usage as it implies a reduction in market demand following market-wide price increases.

- (715) Fifth, as stated in Section 6.3.1.6, the UPP analysis is consistent with the limited competitive constraints that non-MNOs exert on MNOs. In the Reply to the Letter of Facts, the Notifying Party argues that the "entire economic analysis of alleged predicted price increase dismisses the role of non-MNOs completely thereby disregarding 20% of the German Market". While the Commission considers that competitive constraints from non-MNOs are limited, the Commission notes that the comment of the Notifying Party is already taken into account in recital (714). The assumption made in recital (714) that "a certain percentage of customers leaving an MNO would stop using mobile telephones" could be interpreted as "a certain percentage of customers leaving an MNOs would stop using mobile telephones or switch to a non-MNO".
- (716) Finally, the Commission considers that the contribution margin is a relevant measure of profitability. In particular, contribution margins reflect the short run marginal costs of acquiring additional subscribers within current capacity limits and direct the costs of usage, such as termination fees and handset subsidies. Therefore, the Commission considers that contribution margins are relevant in determining pricing decisions by firms.⁵⁶⁵ In addition, as a sensitivity scenario, the Commission uses estimates of the incremental margins which in addition to the costs accounted for in the contribution margins also account for long-run avoidable costs resulting from a 10% change in subscriber numbers (that is to say, incremental costs). In other words, these incremental costs include the changes in network capacity costs due to a substantial variation in subscriber numbers post-merger.
- (717) As regards the consistency between the two quantitative approaches, the Commission disagrees with the Notifying Party for the reasons set out in recitals (718), (719) and (720).
- (718) First, the Commission notes that the predicted price effects across the pre-paid and post-paid residential segments are similar between the demand estimation approach and the most conservative scenario of the revised-UPP analysis (see recital (771)).
- (719) Second, complementary, but different, approaches are not required to generate identical intermediary implications in terms of margins. As already mentioned, the two quantitative approaches differ in terms of the empirical inputs used to draw conclusions concerning the predicted price increases. The calibration based UPP approach uses observed diversion ratios and observed margins to calibrate the demand parameters. The demand estimation approach uses the observed tariff characteristics to estimate the margins, diversion ratios, and demand parameters. Given that these two approaches use different sets of inputs, it is not surprising that intermediate results (such as margins) differ to some extent.⁵⁶⁶ The Commission further notes that the estimated margins are also related to the assumed demand function.⁵⁶⁷ Therefore, the Commission considers that using the estimated margins

⁵⁶⁵ See also Case M.6497 - *Hutchison 3G Austria / Orange Austria*.

⁵⁶⁶ It should be noted that diversion ratios, which are other intermediate results, may also differ between the two approaches.

⁵⁶⁷ This demand function is a random coefficient logit function in the demand estimation approach compared to a linear demand function in the UPP analysis.

from the demand estimation approach (based on a random coefficient logit demand) in the UPP analysis (based on a linear demand function) would be inappropriate.

- (720) Third, the overall level of margins is not identified in a demand estimation framework. Therefore, the lower implied margins of the demand model do not necessarily imply that the observed incremental margins over-estimate the "true" economic margins.
- (721) For the reasons set out in recitals (718), (719) and (720), the Commission disagrees with the Notifying Party's suggestion to use the implied margins from the demand estimation in the UPP analysis. In the Commission's view, what matters is that these two approaches lead to similar final results in terms of price increases across the pre-paid and post-paid residential segments. Therefore, the Commission considers that the two approaches can be reconciled and thus confirm the robustness of the estimated price increases.
- (722) As regards horizontal product repositioning as a countervailing factor, the Notifying Party mainly refers to a paper from Gandhi et al. (2008).⁵⁶⁸ The Commission understands from Gandhi et al. (2008) that the brands combined by a merger could be repositioned away from each other to reduce cannibalisation, and non-merging substitutes are, in response, repositioned between the merged products. The Commission considers that in this Case horizontal brand repositioning is unlikely to mitigate the merged entity's incentives to raise price for the reasons set out in recitals (723) to (726).
- (723) First, the Commission considers that brand positioning is an important element of differentiation in the market and hence part of product positioning. 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. Moreover, the Commission understands that brand repositioning costs and delays in brand repositioning are not taken into account in Gandhi et al. (2008).⁵⁶⁹
- (724) Second, the Commission also notes that it is not clear whether the merged entity's existing competitors in each market segment (that is to say, pre-paid and post-paid) would have an incentive to reposition their products so as to increase competition with the merging parties, given that those competitors would benefit from the proposed transaction as they would be able to raise prices as well.⁵⁷⁰ The Horizontal Merger Guidelines recognise the fact that non-merging firms can also benefit from

⁵⁶⁸ Gandhi et al; (2008), "Post-Merger Product Repositioning", *The Journal of Industrial Economics*, Vol. LVI, No.1, 49-67. See also Document ID 2262.

⁵⁶⁹ The Notifying Party mainly cites an economic paper to support its claim that post-merger product repositioning would mitigate price effects: Ghandi et al. (2008). Ghandi et al (p.66) also notes that "product repositioning in the real world can be quite expensive and time consuming, and mergers therefore may have no effect on product repositioning over the relatively near term. Werden and Froeb (1998) showed that relatively modest fixed cost of entry generally can be expected to prevent entry in response to differentiated products merger, and the same is likely true for product repositioning. Certainly, the significance of post-merger product repositioning must be judged on the basis of the facts associated with any particular merger". Therefore, if product repositioning is expensive and time consuming, even the relatively low cost of doing so will likely prevent product repositioning.

⁵⁷⁰ Due to the loss of competition following the proposed transaction, the overall competitive pressure in the market would be reduced which would make it possible for the Parties' rivals to increase their prices.

the reduction of competitive pressure which results from a merger.⁵⁷¹ This has been acknowledged to be the case in the present instance by a number of respondents to the Market Investigation (see, for example, recital (539)) and is also reflected in the internal documents of the Parties (see, for example, recital (542)).

- (725) Third, as mentioned in Gandhi et al, (2008), "critically, whatever their pre-merger positions, the merged stores (interchangeably) take the outside locations in the post-merger equilibrium, and the non-merging stores (interchangeably) take the inside locations." In this Case, that would mean that post-merger the brands of one merging party would be perceived to be of a higher quality than the brands of, for example, Deutsche Telekom. The Commission considers that this situation is unlikely to be relevant in this Case and the Notifying Party has provided no evidence that this type of repositioning could happen post-merger.
- (726) Fourth, the Commission considers that the weight that can be given to arguments based on an abstract model depends on the extent to which the insights from such a model are robust and shown to be relevant in the context of the specific case in question. However, the Notifying Party has neither demonstrated such robustness nor such relevance. The Commission considers that the paper submitted by the Notifying Party on horizontal repositioning (Gandhi et al., 2008) is not specific enough to allow concrete inferences for the assessment of the proposed transaction. In the Commission's view, the effect of product repositioning is not sufficiently established in the economic literature to draw robust conclusions on an abstract level.
- (727) As regards vertical product repositioning, the Commission considers that it is not likely to mitigate the anti-competitive effects from the proposed transaction for the reasons set out in recitals (728) to (731).
- (728) First, the Commission disagrees that vertical product repositioning would give rise to effects in addition to demand side efficiencies.⁵⁷² As discussed in recital (473), to the extent that potential quality improvement resulting from the merger would lead to pro-competitive effects able to counteract the negative effects on competition, this is an efficiency claim which is analysed, in line with the Horizontal Merger Guidelines, by applying the three cumulative conditions set out in paragraphs 76 *et seq.* of these Guidelines. For the Commission to be able to take these efficiency claims into account, demand side efficiencies do not only have to be verifiable but they also must be merger specific and passed on to consumers. The Commission refers to its assessment of network efficiencies in Section 6.9.1.2 of this Decision.
- (729) As discussed in Section 6.9.1.2 of the Decision, the Commission considers that the Notifying Party's claims on quality improvements do not qualify as efficiencies of the merger as they do not satisfy the conditions referred to in recital (728).
- (730) Second, and in any event, to account for the Notifying Party's claimed quality improvements in the quantitative assessment, the claimed improvements would need to be correctly quantified. However, the studies provided by the Notifying Party to quantify the demand side efficiencies contain methodological shortcomings (see recitals (939) *et seq.*). For these reasons the Commission cannot take these studies into account in its quantitative analysis.

⁵⁷¹ See paragraph 24 of the Horizontal Merger Guidelines.

⁵⁷² The claimed additional effects that higher network quality would make the Parties more aggressive competitors on the market is precisely what is reflected by taking into account that substantiated demand side efficiency claims would lead, all else being equal, to lower quality adjusted (or "hedonic") prices in the UPP analysis.

- (731) Third, as set out in recital (476), insofar as the Notifying Party's claims that its improved quality of service would enable it to compete more aggressively with Deutsche Telekom and Vodafone for large business customers, the Commission notes that this argument is not relevant in the context of its quantitative analysis since it relates to the pre-paid customers and post-paid residential customers, excluding business customers. Moreover, this argument of the Notifying Party is already addressed in recitals (476) and (477).
- (732) As regards the scope of the UPP analysis, the Commission notes that the UPP analysis is able to incorporate efficiencies and balance additional consumer benefits caused by quality increases with competitive harm. However, it is for the Notifying Party to provide an appropriate quantification of such efficiencies. In the Commission's view, the Notifying Party's claims concerning quality improvements do not qualify as efficiencies of the merger as they do not satisfy the respective conditions laid down in the Horizontal Merger Guidelines, in particular the merger-specificity condition and the verifiability condition. Moreover the quantification of demand side efficiency contains methodological shortcomings (see Section 6.9.1.2 for further details).
- (733) Following the Notifying Party's suggestion to include 2013 data in the analysis, the Commission sent a Letter of Facts to replicate the analysis carried out in the Statement of Objections based on data from 2013. The analysis leads to similar results compared to outcome based on 2012 data as discussed in the Statement of Objections. The Commission reports on the results of the revised-UPP analysis using 2012 and 2013 data in recitals (736) to (752).
- (734) As regards the [10-20]% range of price increases found in Case M.6497 - Hutchison 3G Austria / Orange Austria, the Commission notes that it relied on a standard UPP analysis with no rivals' reaction and that that analysis is based on direct margins and contribution margins. However, in this Case, the Commission uses more conservative margins with contribution margins and incremental margins. The Commission considers that a comparison with Case M.6497 requires a like-to-like comparison. Section 3.3.1 of Annex 1 to the Statement of Objections in this Case reported the predicted price increase using a similar methodology with contribution margins, with predicted price rises in the range of [...]*[20-30]*% to [30-40]*% in the pre-paid segment and [0-10]*% to [10-20]*% in the post-paid residential segment.⁵⁷³ Using direct margins as was done in Case M.6497 - Hutchison 3G Austria / Orange Austria would lead to higher ranges of predicted price increases in this Case.
- (735) Following the arguments put forward by the Notifying Party, the Commission bases its assessment of the proposed transaction on the results of the revised UPP analysis referred to in recitals (736) to (752). It should be noted that those results are very similar to the results of the within-segment UPP analysis reported in the Letter of Facts.

Revised results from the first approach and the Commission's assessment

- (736) Following the arguments put forward by the Notifying Party, the Commission has examined the results from its first quantitative approach when the following changes are implemented: (a) the argument that customer switching from one segment to another is less likely to be price driven and (b) the argument that the analysis should

⁵⁷³ See also Table 9 of the Letter of Facts.

account for a reduction in usage following price increases across the pre-paid and post-paid residential segments.

- (737) In order to examine the implications of the absence of price-based switching across segments, the Commission has adjusted diversion ratios derived from MNP data by setting observed cross segment switches to zero.⁵⁷⁴ This approach reflects the Commission's view that while switching across segment may not be price driven, switching patterns in the MNP data are informative as regards consumers' preferences in respect of different MNOs and therefore provide a good basis from which to infer consumer switching following price increases within a segment. The results of this approach are also presented in the Letter of Facts.⁵⁷⁵
- (738) To account for the possibility that segment-wide or price increases across the pre-paid and post-paid residential segments affect usage, the Commission has further assumed a diversion ratio of 20% to an outside option which implies that aggregate demand in the calibrations is no longer perfectly inelastic. The literal interpretation of diversion to an outside option in the analysis would be that a significant number of consumers stop using mobile telephones.⁵⁷⁶ While this is unlikely, the Commission considers this approach to proxy the effect of a reduction in usage to price increases across the pre-paid and post-paid residential segments. The Commission considers that this approach is conservative and uses it to derive a lower bound for the predicted price increases.
- (739) Table 37 set out in recital (742) reports the results of a standard UPP analysis without rivals' reaction (and assuming linear demand). The indicative price rises by the merging parties are reported for each segment. Panel (a) of Table 37 shows the baseline scenario based on contribution margins, which reflect the short run marginal costs of acquiring additional subscribers within current capacity limits, that is to say variations in subscribers' numbers that do not affect OPEX or CAPEX expenditure. Panel (b) of that Table gives results for the sensitivity scenario which accounts for additional incremental OPEX and CAPEX cost savings which the Parties would expect from a substantial variation in subscriber numbers post-merger.
- (740) While the results from the UPP analysis shown in Table 37 set out in recital (742) are a useful starting point, the Commission considers that the results in Table 38 set out in recital (748) give a better indication of likely price rises, as they incorporate rival reactions in the analysis. The effect of rival reactions is acknowledged in the Horizontal Merger Guidelines and in particular paragraph 24 thereof).
- (741) Annex A to this Decision contains an extensive sensitivity analysis, which confirms the robustness of the significant price rise predicted post-merger as shown in Tables

⁵⁷⁴ Technically this amounts to setting cross-segment diversion ratios to zero and rescaling the within segment diversion ratios so that they add up to 100%.

⁵⁷⁵ With respect to the UPP analysis presented in the Letter of facts, the Commission has made a minor modification to construct the incremental margins. The total long run avoidable cost is now allocated to the pre-paid and post-paid residential segments using their respective shares of the total service revenue. In the Letter of Facts and the Statement of Objections, the allocation was based on the sum of the total service revenues from the pre-paid and post-paid residential segments, and not on the total service revenue. Using the total service revenue permits a more comparable percentage margins across the four MNOs.

⁵⁷⁶ The 20% diversion ratio to the outside option could be interpreted more generally. For instance, it could represent the number of customers that would stop using mobile telephones and/or switch to non-MNOs. This is consistent with the argument of the Notifying Parties in the Reply to the Letter of Facts where it is mentioned that the "entire economic analysis of alleged predicted price increase dismisses the role of non-MNOs completely thereby disregarding 20% of the German Market".

37 and 38 set out in recitals (742) and (748). The sensitivity analysis demonstrates that the UPP results are robust to changes in the market shares of contestable subscribers, to the data source used to construct diversion ratios, and to the level of margins when wholesale customers are included.

- (742) The different columns in the Table 37 introduce the modifications discussed in recitals (736) to (738) using 2012 and 2013 data, where 2013 data refers to the first and second quarter of 2013. The third and fifth columns of Table 37 correspond to the results reported in the Letter of Facts with no cross-segment effects. The fourth and sixth columns of Table 37 introduce, in addition, a diversion ratio of 20% to the outside option.

Table 37. UPP analysis without rivals' reactions

Predicted price increase		2012 data		2013 data (Q1+Q2)	
Diversion to outside option		no	yes	no	yes
(a) Baseline case based on contribution margins					
Pre-paid	E-Plus	19.9%	14.1%	18.4%	13.2%
	Telefónica	34.3%	24.9%	28.5%	20.7%
Post-paid residential	E-Plus	14.8%	11.5%	12.5%	9.7%
	Telefónica	6.9%	5.1%	7.4%	5.5%
(b) Sensitivity scenario based on incremental margins					
Pre-paid	E-Plus	14.7%	10.6%	15.6%	11.3%
	Telefónica	23.7%	16.8%	23.2%	16.6%
Post-paid residential	E-Plus	12.1%	9.5%	11.1%	8.7%
	Telefónica	5.2%	3.7%	6.2%	4.5%

Notes: The indicative (unilateral) price rise is based on the assumption of linear demand and expresses as a percentage of ARPU.

- (743) The results of the baseline scenario (with 2012 data) based on contribution margins with 2012 data (see the third and fourth columns of Table 37 set out in recital (742)) indicate substantial price increases post-merger for both Telefónica and E-Plus. The upper bound is obtained by assuming no reduction in overall usage and the lower bound is obtained by using a 20% diversion ratio to the outside option. In the pre-paid segment, the predicted price increases are particularly large in the range of 14% to 20% for E-Plus and 25% to 34% for Telefónica. In the post-paid residential segment, predicted price increases are lower than in pre-paid segment, but remain significant in the range of 12% to 15% for E-Plus and 5% to 7% for Telefónica.
- (744) In the sensitivity scenario based on incremental margins (with 2012 data), the predicted price effect for the Parties ranges between 11% and 15% for E-Plus and between 17% and 24% for Telefónica in the pre-paid segment. In the post-paid residential segment, the predicted price effects range between 10% and -12% for E-Plus and between 4% and 5% for Telefónica.

- (745) The fifth and sixth columns of Table 37 set out in recital (742) also show the predicted unilateral price increases using 2013 data. Those results are in line with the significant price increases predicted when 2012 data are used.
- (746) Table 38 set out in recital (748) shows segment and market-wide average price increases when rival equilibrium reactions are accounted for. Table 38 has the same structure as Table 37 set out in recital (742): panel (a) of Table 38 shows results for the baseline scenario based on contribution margins and panel (b) thereof for the sensitivity scenario based on incremental margins. The results are reported using 2012 data, by assuming a constant usage to obtain the upper-bound and by assuming a decrease in usage (assuming a 20% diversion ratio to the outside option) to obtain the lower-bound. The segment and average price effects across the pre-paid and post-paid residential segments are computed as weighted averages covering all MNOs in the predicted new equilibrium.
- (747) In the baseline scenario, the predicted price increases are significant in the range of 12% to 20% in the pre-paid segment and 4% to 6% in the post-paid residential segment. The average across the pre-paid and post-paid residential segments is in the range of 6% to 10%. In the sensitivity scenario based on incremental margins, the corresponding figures are 9% to 15% in the pre-paid segment, 4% to 6% in the post-paid residential segment, with an average across the pre-paid and post-paid residential segments in the range of 5% to 8%.
- (748) As regards the merging parties, the inclusion of equilibrium price effects of competitors triggers further price increases of the merging parties, compared to the multi-segment UPP without rivals' reactions. In the baseline scenario based on contribution margins, the predicted price increases are in the range of 16% to 25% for E-Plus and 28% to 43% for Telefónica in the pre-paid segment. In the post-paid residential segment, the predicted price increases are in the range of 12% to 17% for E-Plus and 6% to 10% for Telefónica. The sensitivity scenario based on incremental margins confirms the significant price increases, with price increases in the range of 12% to 18% for E-Plus and 20% to 31% for Telefónica in the pre-paid segment; in the post-paid residential segment, the predicted price increases are in the range of 10% to 14% for E-Plus and 5% to 9% for Telefónica.

Table 38. Revised calibrated merger simulation results (2012 data)

Indicative price rise (%)	2012 data		2012 data	
Diversion to outside good	no	no	yes	yes
(a) Baseline case based on contribution margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	6.9%	2.0%	3.4%	1.1%
Vodafone	8.6%	3.5%	4.3%	1.9%
E-Plus	25.4%	16.6%	16.1%	12.2%
Telefónica	43.1%	10.2%	28.1%	6.4%
Overall segment	20.2%	6.4%	12.4%	4.2%
Average across pre-paid and post-paid residential	9.5%		6.0%	
(b) Sensitivity scenario based on incremental margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	5.8%	1.9%	2.9%	1.0%
Vodafone	7.9%	3.8%	3.9%	2.0%
E-Plus	18.4%	13.5%	11.9%	10.0%
Telefónica	31.2%	8.6%	19.5%	5.1%
Overall segment	15.3%	5.6%	9.2%	3.5%
Average across pre-paid and post-paid residential	7.8%		4.8%	

Notes: Based on 2012 MNP/InfoSurvey data and segment data – The indicative (unilateral) price rise is derived under the assumption of linear demand and expresses as a percentage of ARPU.

- (749) In Table 38 set out in recital (748), one can also approximate the aggregate elasticity implied by the assumption of a 20% diversion to the outside option. In the baseline scenario, the approximate implied elasticity is $[-0.5 \text{ to } 0]^*$ for the pre-paid segment, $[-0.5 \text{ to } 0]^*$ for the post-paid residential segment, and $[-0.5 \text{ to } 0]^*$ across the pre-paid and post-paid residential segments. In the sensitivity scenario, the 20% diversion to an outside option implies an approximate elasticity of $[-0.5 \text{ to } 0]^*$ for the pre-paid segment, $[-0.5 \text{ to } 0]^*$ for the post-paid residential segment, and $[-0.5 \text{ to } 0]^*$ across the pre-paid and post-paid residential segments.
- (750) As explained in recital (738), the Commission considers that the diversion to an outside option is a proxy for possible reductions in usage following general price increases of the MNOs. The approximated aggregate elasticities of $[-0.5 \text{ to } 0]^*$ in the analysis referred to in recital (749) correspond to a reduction in overall usage in the pre-paid and post-paid residential segments for the MNOs by $[0 \text{ to } 10]^*\%$ (in terms

of voice minutes, number of SMSs and data volumes) following a price increase of 10%. The Commission considers these implied usage elasticities to be reasonable.⁵⁷⁷

- (751) Table 39 shows the predicted price increases using 2013 data. The results are in line with Table 38 set out in recital (748) where 2012 are used.

Table 39. Revised calibrated merger simulation results (Q1 +Q2 2013 data)

Indicative price rise (%)	2013 data		2013 data	
	no	no	yes	yes
(a) Baseline case based on contribution margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	7.2%	2.2%	3.6%	1.2%
Vodafone	9.5%	4.2%	4.8%	2.2%
E-Plus	23.2%	14.3%	14.9%	10.4%
Telefónica	36.3%	10.4%	23.5%	6.7%
Overall segment	18.8%	6.4%	11.6%	4.1%
Average across pre-paid and post-paid residential	9.0%		5.7%	
(b) Sensitivity scenario based on incremental margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	6.6%	2.2%	3.3%	1.1%
Vodafone	8.9%	4.3%	4.4%	2.3%
E-Plus	19.5%	12.7%	12.7%	9.3%
Telefónica	30.5%	9.3%	19.3%	5.7%
Overall segment	16.2%	6.0%	9.9%	3.7%
Average across pre-paid and post-paid residential	8.1%		5.0%	

Notes: Based on the first quarter and second quarter of 2013 MNP/InfoSurvey data and segment data – The indicative (unilateral) price rise is derived under the assumption of linear demand and expresses as a percentage of ARPU.

- (752) Overall, all modifications introduced to account for the criticisms by the Notifying Party which the Commission considers reasonable reduce the predicted price effects from the Commission's first quantitative approach relative to the results set out in the Statement of Objections. Nevertheless, the predicted price increases from the analysis remain significant after applying these modifications. The Commission therefore considers that the quantitative implications derived from the analysis in recitals (736) to (751) indicate that the elimination of competition for contestable

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An economic study by Lukasz Grzybowski and Pedro Pereira based on data for Portugal for the years 2003 and 2004 found price elasticities of the demand for calls of -0.38 and of the demand for messages of -0.28 (Grzybowski L, and P. Pereira (2008), See "The complementarity between calls and messages in mobile telephony", Information Economics and Policy 20, 279-287, Document ID 4162).

customers between the Parties is likely to lead to significant price increases. In the pre-paid segment where the Parties have the strongest position, predicted average price increases are in the range of 12% to 20% in the baseline scenario (respectively 9% to 15% in the sensitivity scenario). In the post-paid residential segment, predicted-average price increases are in the range of 4% to 6% in the baseline scenario and in the sensitivity scenario. The corresponding predicted average price increases across the pre-paid and post-paid residential segments are in the range of 6% to 10% in the baseline scenario (respectively 5% to 8% in the sensitivity scenario). The analysis also predicts significant price increases for the Parties.

Second approach: Merger simulation based on demand estimation

Description of the approach

- (753) For the purposes of the demand estimation based simulations of the residential segment (data-only services excluded), the Commission has requested monthly tariff level data from the five main operators on the German retail market for mobile telecommunications services, Deutsche Telekom, Vodafone, Telefónica, E-Plus and Freenet, for the period from 2010 to 2013. The data contains information on tariff characteristics (such as monthly fees, allowances/bundles, out-of-bundle prices, commitment periods and options) and the monthly evolution of tariff level subscriber numbers and usage for voice, text and data.⁵⁷⁸
- (754) Based on the data referred to in recital (753), the demand model quantifies the relationship between the number of contestable (new plus retained) subscribers of a given tariff and changes in its price.⁵⁷⁹ To do so, the Commission has chosen the so-called discrete choice demand model family as an estimation framework.⁵⁸⁰ The Commission relied upon both the so-called random coefficient and nested logit type demand models.⁵⁸¹ As explained in recital (681), the demand model is complemented with a supply side aspect where the operators compete with each other by setting their tariff prices optimally. The model is then used to predict the operators' post-merger prices by assuming that Telefónica and E-Plus set their post-merger tariff prices jointly.⁵⁸²
- (755) The Commission presented its preliminary results in the Statement of Objections, and subsequently set out further results in the Letter of Facts. The results set out in the Letter of Facts partly corrected some data and modelling errors of the preliminary modelling results of the Statement of Objections. These errors were partly explained

⁵⁷⁸ See Section 4.1 of Annex A to this Decision for more details on the data and calculations.

⁵⁷⁹ In a demand model, the most important product characteristic is the price. As each tariff has many different price components, such as, fixed fees, bundle allowances, out-of-bundle prices and options, it is difficult to directly compare the tariffs according to these characteristics. To circumvent this problem and to make the different tariffs comparable, the Commission has calculated a single price for each tariff. This price is what a new subscriber to a given tariff would have paid in a given month if it had used a fixed basket of telecommunications services (a fixed amount of voice minutes, text messages and data consumption, where the amounts are based on the typical usage pattern observed in the data). For all tariffs the same fixed basket is used, hence, the resulting prices are comparable across tariffs. The price has also been adjusted by taking into account the handset subsidies paid by the different operators to new and retained subscribers.

⁵⁸⁰ "Estimating Discrete-Choice Models of Product Differentiation," *Rand Journal of Economics*, Berry, S. T., 1994, Vol 25, 2, Summer, 242-262.

⁵⁸¹ See Section 4.2 of Annex A to this Decision for more details.

⁵⁸² In the simulations, Freenet's tariffs have been allocated to the respective host network. The simulation also assumes that the merged entity keeps all the pre-merger tariffs of Telefónica and E-Plus, and changes only their price.

by the Notifying Party in its Reply to the Statement of Objections.⁵⁸³ The Letter of Facts also partly set out more refined versions of some of the Commission's models, addressing some of the Notifying Party's comments.⁵⁸⁴ In recitals (756) to (767), the Commission briefly summarises first the results of its analysis in the Statement of Objections and Letter of Facts, second the Notifying Party's arguments in the Reply to the Statement of Objections and the Reply to the Letter of Facts, and, third, it sets out the Commission's assessment. More technical details are set out in Annex A to this Decision.

The results of the Commission's analysis in the Statement of Objections and Letter of Facts

- (756) The results of the Commission's analysis in the Statement of Objections and Letter of Facts, which are derived from the demand estimation based simulation, showed price increases for Telefónica and E-Plus in the residential segment that tended to be above 10%. The predicted overall price increases were in the range of 5% to 9% in the segment. These ranges tended to be, or were close to, the lower end of the ranges of price estimates of the first approach.

The Notifying Party's arguments in the Reply to the Statement of Objections and to the Letter of Facts

- (757) In the Reply to the Statement of Objections and to the Letter of Facts, the Notifying Party makes several observations on the Commission's demand estimation based modelling. As a general remark, the Commission notes that the Notifying Party does not reject the second approach as a whole. Instead, it points to some alleged weaknesses of some of the models and proposes some modifications to others. The main points are the following:⁵⁸⁵ First, the Notifying Party claims that the random coefficient model of the Commission is highly unreliable.^{586,587} Moreover, according to the Notifying Party the Commission's nested logit model better fits the data and hence is preferred to the Commission's other models.^{588,589}
- (758) Second, the Notifying Party claims that an improved implementation of the nested logit model leads to lower price predictions than the Commission's original model specifications.^{590,591} The Notifying Party also states that the nested logit model, after these improvements, is more mature, robust, reliable and more suitable to inform a policy decision than the Commission's other models.⁵⁹²
- (759) Third, the Notifying Party claims that by treating Aldi as a fully independent competitor, the price increase predicted by the model is further reduced by roughly a half.^{593,594}

⁵⁸³ See Annex 5 to the Reply to the Statement of Objections, page 16 and pages 20 to 24.

⁵⁸⁴ Reply to the Statement of Objections, paragraphs 63 and 64. The Commission also presented results from the so-called simple logit model, which is another member of the discrete choice demand model family. However, the Commission did not rely on this model's results because of technical reasons. See Annex A to this Decision for more details.

⁵⁸⁵ Section 4.4 of Annex A to this Decision provides more technical details.

⁵⁸⁶ Reply to the Statement of Objections, paragraph 63.

⁵⁸⁷ Reply to the Letter of Facts, paragraph 91, first indent.

⁵⁸⁸ Reply to the Statement of Objections, paragraph 63.

⁵⁸⁹ Reply to the Letter of Facts, paragraph 91, first indent.

⁵⁹⁰ Reply to the Statement of Objections, paragraphs 64 to 65.

⁵⁹¹ Reply to the Letter of Facts, paragraph 91, second indent.

⁵⁹² See the memorandum by E.CA attached to the Reply to the Letter of Facts, page 31.

⁵⁹³ Reply to the Statement of Objections, paragraph 66.

- (760) Fourth, the Notifying Party claims that the results of the demand estimation based modelling cannot be reconciled with the changes stated in the Letter of Facts.⁵⁹⁵ This is because when using the original code of the nested logit model used in the Statement of Objections and applied to the data used in the Letter of Facts, the results are numerically slightly different than using the code of the nested logit model used in the Letter of Facts. Moreover, according to the Letter of Facts the changes (related to the handling of the VAT rate in the model simulations) should have affected only the results of the simple logit model and not those of the nested logit model. The Notifying Party submits that this shortcoming does not meet the necessary legal standard and does not comply with the Notifying Party's right to be heard.

The Commission's assessment

- (761) As regards the Notifying Party's first criticism (namely, the unreliability of the random coefficient model), the Commission considers that the Commission's refined random coefficient models are sufficiently reliable to be taken into account. Even when the sample and specification changes implemented by the Notifying Party (excluding negative prices from the sample and adding brand indicator variables to the explanatory variables of the model⁵⁹⁶) are taken into account, the models' results are in line with those of the nested logit model which is preferred by the Notifying Party.
- (762) The Notifying Party also presents some alternative versions of the random coefficient model to indicate that the model's results are very sensitive to small changes and are therefore unreliable.⁵⁹⁷ However, the Notifying Party fails to mention that all of these alternative models fail to pass some of the required statistical specification tests.⁵⁹⁸ Therefore, these alternative models are not indicative of the robustness of the original models, which do pass the necessary statistical tests.
- (763) Nevertheless, the Commission does acknowledge that in this Case the random coefficient model, as compared to the nested logit model, produces numerically somewhat less stable results. This relative instability, however, is not sufficiently serious that it would lead the Commission to reject the random coefficient models. The random coefficient models are instead viewed as useful alternatives to the nested logit models. On balance, and given that the two types of models lead to similar price increase predictions, the random coefficient models' outcome is taken into account as evidence corroborating the comparatively more robust nested logit models' results. In particular, the refined random coefficient models predict 4% to 5% overall price increase for the residential segment, with a 10% to 12% range for Telefónica and 7% to 8% range for E-Plus.
- (764) As regards the Notifying Party's second criticism (namely, that nested logit is the preferred model), the Commission considers that the different types of models have different strengths and weaknesses. On the one hand, although the random coefficient model in general is more prone to some forms of instability, it is potentially better able to capture consumer heterogeneity in the price sensitivity than other types of models. On the other hand, the nested logit model in general is more stable. In this Case, both models are able to provide some indicative evidence. The

⁵⁹⁴ Reply to the Letter of Facts, paragraph 91, third indent.

⁵⁹⁵ Reply to the Letter of Facts, paragraph 88 to 90.

⁵⁹⁶ Reply to the Statement of Objections, paragraph 64.

⁵⁹⁷ See the memorandum by E.CA attached to the Reply to the Letter of Facts, page 29.

⁵⁹⁸ In particular, the test in question is the so-called over-identification test or Hansen-test.

Commission notes that the models, even after implementing the sample and specification changes (excluding negative prices from the sample and adding brand indicator variables to the explanatory variables of the model) the nested logit model predicts non-negligible price increases. In particular, the refined nested logit models predict 4% to 8% overall price increase for the residential segment, with a 9% to 16% range for Telefónica and 7% to 12% range for E-Plus. Also, these ranges are not in contradiction with those predicted by the random coefficient models referred to in recital (763).

- (765) As regards the Notifying Party's third criticism (whereby Branded Resellers, such as Aldi, should be regarded as fully independent competitors), the Commission refers to its discussion in Section 6.3.1.6 on Branded Resellers. In particular, the Commission considers that Branded Resellers do not exercise a significant competitive pressure on MNOs. As a result, any model simulation treating Branded Resellers, in particular a Branded Reseller such as Aldi which directly depends on the Parties, is not indicative of the likely price effect of the proposed transaction.
- (766) As regards the Notifying Party's fourth criticism (the nested logit code of the Statement of Objections produces numerically different results), the Commission notes that the discrepancy described by the Notifying Party in relation to the nested logit model had arisen for the same reason as in the case of the simple logit model. Namely, the VAT rate was not properly taken into account in the marginal cost calculation stage of the modelling. The computer code used in the Letter of Facts, and available to the Notifying Party in the data room, solved this problem for both the simple logit and nested logit models. In the case of the nested logit model, on which the Commission relies in its assessment, the results do not change significantly. In any event, the results set out in the Letter of Facts and the subsequent refinements, generated by the correct code, are the relevant ones. The Commission notes that these changes were transparent to the Notifying Party as all the codes, original and corrected, were made available to the Notifying Party in the context of the data room. Therefore, the Notifying Party was sufficiently able to take note of, and to comment on the evidence the Commission relies on in the context of the demand estimation based merger simulation.
- (767) Overall, the Commission considers that the results of its demand estimation based merger simulations, even when refined to take into account the Notifying Party's relevant criticisms, predict significant price increases for the residential segment. In particular, the results show price increases for Telefónica in the residential segment that tend to be around or above 10%, and in the range of 7% to 12% for E-Plus. The aggregate predicted price increases in this segment are in the range of 4% to 8%. These ranges are consistent with the of price increase estimates of the first approach's sensitivity scenario (see recital (752)).

Conclusion from the quantitative analysis

- (768) The Commission concludes that the predicted price increases from the two approaches provide a quantitative measure of the likely effect of the elimination of competition between the merging parties. In generating these price predictions, the Commission has taken into account the arguments raised by the Notifying Party in its Reply to the Statement of Objections and to the Letter of Facts and has modified its analysis to reflect certain of them which were considered reasonable. In particular, the Commission agrees that switching across segments may not be price based and the Commission has also adapted its analysis to consider the suggestion of the Notifying Party that market-wide price increases may lead to a reduction in usage.

- (769) Once those arguments are integrated, the Commission's first quantitative approach based on diversion ratios and margins predicts segment-wide price increases of around 12% to 20% in the pre-paid segment and around 4% to 6% in the post-paid residential segment. When studying the average effects across the pre-paid and post-paid residential segments, the predicted price increases range between 6% and 10%. In the sensitivity scenario based on incremental margins, the corresponding predicted average price increases are in the range of 9% to 15% in the pre-paid segment, 4% to 6% in the post-paid residential segment, and 5% to 8% across the pre-paid and post-paid residential segments.
- (770) The Commission's second quantitative approach predicts average price increases in the range of 4% to 8% for the residential segment. This range is consistent with the price increase estimates of the first approach's sensitivity scenario.
- (771) The Commission considers that the two quantitative approaches are consistent with one another. The results from the second approach (4% to 8%) are similar to the sensitivity scenario of the first approach (with an effect of around 5% to 8% across the pre-paid and post-paid residential segments).
- (772) Overall, the Commission's quantitative assessment indicates that the merger is likely to lead to significant price increases in the pre-paid and post-paid residential segments.

6.3.2. *Conclusion on non-coordinated effects*

- (773) In light of all of the elements referred to in Section 6.3.1, the Commission considers that the proposed transaction would give rise to non-coordinated anti-competitive effects because it involves, in an already highly concentrated market, 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. Therefore, unless these non-coordinated anti-competitive effects are offset by countervailing factors such as possible buyer power, entry and efficiencies, the proposed transaction would significantly impede effective competition on the retail market for mobile telecommunication services in Germany.

6.3.3. *Horizontal coordinated effects*

- (774) According to the case law⁵⁹⁹ and the Horizontal Guidelines,⁶⁰⁰ coordination is most likely to emerge in markets where it is relatively simple to reach a common understanding on the terms of coordination. Three conditions have to be met for coordination to be sustainable: (1) the coordinating firms must be able to monitor to a sufficient degree whether the terms of coordination are being adhered to; (2) discipline requires that there is some form of credible deterrent mechanism that can be activated if deviation is detected; and (3) the reactions of outsiders, such as current and future competitors not participating in the coordination, as well as customers, should not be able to jeopardise the results expected from the coordination.
- (775) In the Article 6(1)(c) Decision, the Commission considered that the proposed transaction would lead to an increase in market symmetry resulting from more symmetric market shares of the remaining MNOs on a network level and a possible

⁵⁹⁹ Case C-413/06 P, *Bertelsmann v. Impala*, [2008] ECR I-4951, paragraph 123; Case T-342/99, *Airtours v Commission* [2002] ECR II-2585.

⁶⁰⁰ Horizontal Merger Guidelines, paragraph 39 to 57.

alignment of the quality of the merged entity's mobile network with that of the two remaining MNOs. Moreover, the Commission found that the retail market for mobile telecommunication seems to be transparent as regards tariff setting and customer flows. Against that background, the Commission considered in the Article 6(1)(c) Decision, that competition concerns resulting from coordinated effects on the retail market for mobile telecommunication services in Germany could not be excluded with the requisite degree of certainty.

- (776) The Commission further investigated the risk of horizontal coordinated effects through the Phase II Market Investigation and a review of the internal documents provided by the Parties. It ascertained whether the evidence collected could be interpreted to contain some indications that the proposed transaction would lead to coordinated effects on the German retail market for mobile telecommunications services. However, the evidence at the Commission's disposal did not meet the requirements the Commission has to meet according to the case law in order to prove a significant impediment to effective competition due to coordinated effects.⁶⁰¹
- (777) In any event, even if coordinated effects in the German retail market for mobile telecommunication services were assumed, the fact would remain that the Final Commitments would address such coordinated effects (see recital (1401)).

6.4. Wholesale market for access and call origination on mobile networks

6.4.1. Market structure

- (778) The proposed transaction will reduce the number of providers of wholesale access and call origination services from four to three.
- (779) In the Form CO, the Notifying Party submitted that, based on its best estimates, the merged entity's revenue market share would amount to [...] and would be less than Deutsche Telekom's and Vodafone's market shares (approximately [...] each). In its Reply to the Article 6(1)(c) Decision, the Notifying Party submits revised market share estimates for the wholesale market based on the number of subscribers hosted for MVNOs and Service Providers. According to these revised estimates based on number of subscribers, the combined market share of the Parties would amount to less than [...], with E-Plus being the smallest player with a market share of less than [...].
- (780) According to the Commission's reconstruction of the wholesale market, the Parties' combined market share was below [...] based on the number of subscribers hosted for MVNOs and Service Providers in the years 2010 to 2012 and the first half of 2013. However, based on revenues generated on the wholesale level, the Parties' combined market share was above [...] in 2011, 2012 and the first half of 2013.

⁶⁰¹ See, to that effect, Case T-342/00 *Petrolescence* and *SG2R v Commission* [2003] ECR II-1161, paragraph 101, and the case-law cited; Case C-12/03 P *Commission v Tetra Laval* [2005] ECR I-987, paragraph 38; and Case T-87/05 *EDP v Commission* [2005] ECR II-3745, paragraph 63.

Table 40: Wholesale access and call origination market shares based on revenue*

	2010	2011	2012	2013 (Jan to July)
Deutsche Telekom	n/a	[30-40]%	[30-40]%	[30-40]%
Vodafone	n/a	[40-50]%	[40-50]%	[50-60]%
Telefónica	n/a	[5-10]%	[10-20]%	[10-20]%
E-Plus	n/a	[5-10]%	[0-5]%	[0-5]%
Combined	n/a	[10-20]%	[10-20]%	[10-20]%

Source: European Commission based on revenue figures reported by the four MNOs active in Germany

* The wholesale revenues reported by the four MNOs include all revenues generated with MVNOs and Service Providers, as well as incoming mobile termination fees generated with calls to subscribers hosted for MVNOs and Service Providers.

Table 41: Wholesale access and call origination market shares based on number of subscribers hosted for MVNOs and Service Providers

	2010	2011	2012	2013 (Jan to July)
Deutsche Telekom	[30-40]%	[30-40]%	[30-40]%	[40-50]%
Vodafone	[50-60]%	[50-60]%	[40-50]%	[40-50]%
Telefónica	[0-5]%	[5-10]%	[5-10]%	[5-10]%
E-Plus	[...]*	[0-5]%	[0-5]%	[0-5]%
Combined	[5-10]%	[10-20]%	[10-20]%	[10-20]%

Source: European Commission based on subscriber numbers reported by the four MNOs active in Germany

- (781) Table 42 submitted the Notifying Party provides an overview of the main MVNOs and Service Providers in Germany including the identities of their respective host MNOs.

Table 42: Overview of MVNOs and Service Providers active in German

Non-MNOs (MVNOs, Service Provider and Branded Reseller)	Hosting MNO	Market entry	Tariff type	Current number of subscribers (in k) as of 30 September 2013
MVNOs / Service Providers				
Freenet	All four MNOs	2007 (merger, 1991 Mobilcom AG)	Post and prepaid	[...]*
1&1	Vodafone	2010	Postpaid	[...]*
Drillisch	Telefónica, Vodafone	2010 ¹	Mainly postpaid	[...]*
Lebara	Dt. Telekom	2010	Prepaid	[...]*
Lycamobile	Vodafone	2011	Postpaid	[...]*
Unitymedia/Kabel BW	Telefónica	2010 (Kabel BW) / 2011 (Unitymedia)	Postpaid	[...]*
KDG	Telefónica	Q1/2 2009	Postpaid	[...]*
GTCOM	E-Plus	n/a	Prepaid	[...]*
M-Net	Telefónica	End of 2008	Postpaid	[...]*
Versatel	E-Plus; Telefónica	1999	Postpaid	[...]*
NetCologne	E-Plus	2007	Postpaid	[...]*
Breko	Telefónica	2013		[...]*
Tele 2	E-Plus	Q2 2013	Postpaid	[...]*
ecotel	E-Plus	2007	Post- and Prepaid	[...]*
getsmart	E-Plus	2013	Prepaid	[...]*
Yes Telecom	E-Plus	2009	Postpaid	[...]*
ACN	E-Plus	2005	Postpaid	[...]*
Vintage (sipgate)	E-Plus	2011	Prepaid	[...]*
QSC Mobil	E-Plus	2012	Postpaid	[...]*
Star Communications	Telefónica	2013	Prepaid	[...]*
Telogic*	E-Plus	2005	Prepaid	[...]*
One Phone	E-Plus	2009	Postpaid	n.a.
Macheen	E-Plus	n/a	Prepaid	n.a.

Source: Notifying Party

6.4.2. Horizontal non-coordinated effects

6.4.2.1. The Notifying Party's view

(782) In the Form CO, the Notifying Party submitted that the proposed transaction will not lead to any non-coordinated effects for the following reasons. First, post-merger, all MNOs in Germany would have spare capacity available and could easily extend capacity in their networks and frequency segments to host additional MVNOs and Service Providers. Second, each of the MNOs would have incentives to attract additional MVNOs/ Service Providers because the latter can be used to address

customer groups which the MNOs cannot effectively address through their own brands. Moreover, customers hosted for MVNOs and Service Providers would lead to a better network utilisation, which would help MNOs to realise benefits of scale. The proposed transaction would not change anything with respect to these incentives, neither for the merged entity nor for the two competing MNOs. Third, the proposed transaction would even have a pro-competitive dimension, as the merged entity would be able to provide better network quality to MVNOs and Service Providers. Accordingly, post-transaction, the latter would have the choice between three competing networks with good quality. Finally, the regulatory regime would ensure that MNOs are prevented from impeding non-MNO wholesale access post-transaction.

- (783) Moreover, in its Reply to the Article 6(1)(c) Decision and the Reply to the Statement of Objections, the Notifying Party points out that based on the actual wholesale market shares, it can be excluded that the proposed transaction will have any negative impact on competition in the wholesale market; the market share increments, as well as the combined market shares based on number of subscribers hosted for MVNOs and Service Providers and based on revenue will be very low. Furthermore, the Notifying Party claims that due to their poor network quality, Telefónica and E-Plus cannot be considered as particularly strong forces on the wholesale market. For this reason, any impact on competition could not be qualified as a significant impediment of competition.
- (784) In addition, the Notifying Party claims that the Parties are not close competitors on the wholesale market for access and call origination, as the wholesale products offered by the German MNOs are not differentiated such that the Parties' products constitute closer substitute than others. In this context, the Notifying Party submits that those MVNOs and Service Providers that engage in dual or multiple sourcing actually tend to combine a D-network supplier (Deutsche Telekom or Vodafone) with an E-network supplier (Telefónica or E-Plus). Only Freenet that sources from all four German MNOs would source from Telefónica, as well as from E-Plus. Furthermore, Telefónica's main competitors in negotiations of wholesale agreements in the past were Vodafone and Deutsche Telekom rather than E-Plus. Conversely, E-Plus' main competitors in negotiations for wholesale agreements in the past were rather all other MNOs and not specifically Telefónica.
- (785) In addition, the Notifying Party argues that E-Plus cannot be characterised as a substantial competitive force on the wholesale market. It explains that while E-Plus hosts a considerable number of MNVOs/Service Providers, its market share is nevertheless insignificant (below [...]*). Moreover, according to the Notifying Party, E-Plus' role in the wholesale market will further decrease, given that it lags behind in rolling out a 4G network, which would be crucial to attract wholesale customers in the changed market environment where mobile data services are of significantly increased importance. The same would apply to Telefónica while Deutsche Telekom and Vodafone would be the unrivalled leaders on the wholesale market with high quality networks. Moreover, E-Plus would not be very price aggressive on the wholesale market, as evidenced by its decreasing market share. Also, Telefónica would have lost several pitches against Vodafone, but none against E-Plus.
- (786) The Notifying Party further submits that any concern as to wholesale terms and conditions restricting MVNOs and Service Providers in their ability to compete would be unwarranted given the particular commercial success of the three leading Service Providers, namely Freenet, Drillisch, and 1&1.

- (787) Furthermore, the merged entity would have strong incentives to compete post-transaction. In this context, the Notifying Party firstly points out that the Parties' combined subscriber market share on the wholesale market is below 15%, which would make any potential impact of an enlarged customer base highly unlikely. Secondly, the merged entity would not be able to use its enlarged brand portfolio to target new customer groups, as Telefónica's and E-Plus core and second brands essentially target the same customer groups today. Thirdly, the merged entity would have a strong incentive to grant wholesale access to its network so as to monetise on enhanced network quality. Moreover, the fact that Deutsche Telekom and Vodafone allegedly would be reluctant to grant wholesale access would not be a result of the proposed transaction, but stem from the respective strategies of these two MNOs pre-transaction.
- (788) Finally, the Notifying Party reiterates that MVNOs and Service Providers are able to switch and actually do switch their providers from time to time, which constitutes an appreciable constraint on MNOs wholesale policy.

6.4.2.2. Commission's assessment

- (789) In light of the results of the Phase II Investigation, the Commission considers that the proposed transaction may give rise to horizontal non-coordinated effects on the wholesale market for access and call origination on public mobile telecommunication networks.
- (790) The Commission considers that the reduction from four to three suppliers of wholesale access constitutes a significant change in the market structure, which increases the level of concentration in a market that is already very concentrated. Moreover, the proposed transaction would eliminate two important competitive forces, namely Telefónica and E-Plus, at the wholesale level. In light of the results of the Phase II Investigation, the Commission continues to consider that the proposed transaction would have a negative impact on the merged entity's, and the other two MNOs', incentive to grant MVNOs and Service Providers access to their respective mobile networks at commercially attractive conditions. Furthermore, the Commission considers that MVNOs and Service Providers face major challenges if they want to switch their existing customers to another host MNO, which essentially means that, even if competing MNOs were to offer attractive wholesale access conditions post-transaction, it would be very difficult for the Parties' wholesale customers to switch to other MNOs, if the merged entity were to raise prices. Moreover, these likely anti-competitive effects on the market for wholesale access and call origination will compound the anti-competitive effects of the proposed transaction on the retail market for mobile telecommunications services. As the ability of MVNOs and Service Providers to compete with MNOs crucially depends on the access conditions that they obtain at the wholesale level, a deterioration of these conditions following the proposed transaction will also have an impact on the retail level. Finally the Commission also notes that, although not merger-specific, the uncertain future of the Service Provider obligation in Germany, which, as outlined in Section 6.2.4.5, forms the basis of the Service Providers' business model, further compounds the risk that, in the near future, Service Providers may be unable to obtain wholesale access at terms and conditions, which are sufficiently attractive for them to be able to operate on the market, let alone exercise a meaningful competition constraint on MNOs at the retail level.

Significant change in market structure

- (791) The proposed transaction will reduce the number of providers of wholesale access and call origination services from four to three and thereby lead to a significant

change in the market structure, as MVNOs and Service Providers will be left with only three alternative suppliers of wholesale access. In this context, the Notifying Party submits that a change in market structure as such – even if significant, does not automatically lead to a significant lessening of competition. The Commission, however, does not assess the change in the market structure in an isolated way, but within the context of the elements referred to in recital (790), which taken together suggest that the proposed transaction may lead to anti-competitive unilateral effects.

- (792) Moreover, while the combined market shares of the Parties based on revenues and on number of subscribers hosted for MVNOs and Service Providers are more limited than those of the other two MNOs, the proposed transaction takes place in a highly concentrated market. Indeed, pre-merger and post-merger HHIs based on revenue and on subscriber market shares are very high (above 3700).
- (793) In addition, the Commission also considers that the high wholesale market shares of Deutsche Telekom and Vodafone are to a certain extent due to the fact that these two players were the first to be obliged to grant wholesale access. It is therefore also for historical reasons that, for example, the well-established and largest Service Provider, Freenet has [...] subscribers hosted by Deutsche Telekom and Vodafone.⁶⁰² Given the size of Freenet compared to the other MVNOs and Service Providers,⁶⁰³ the “[...]” in itself contributes significantly to the difference in market share between the Parties and each of Deutsche Telekom and Vodafone on the wholesale market. Without Freenet, the combined market share of the Parties would be roughly twice as large.⁶⁰⁴ Hence, as also explained in more detail at recitals (795) to (803), the market shares as set out in the Tables 40 and 41 in recital (780) do not reflect the full dynamics of the wholesale market.

Removal of an important competitive force

- (794) The Commission also considers that the proposed transaction would remove two important competitive forces, namely Telefónica and E-Plus, from the market.
- (795) In this context, the Commission considers that the current market shares of the four MNOs do not accurately reflect their respective competitive strength on the wholesale level. For the reasons set out in recitals (796) to (803), the Commission considers that the Parties’ competitive strength is greater than that suggested by their market share.
- (796) First, Telefónica has significantly gained market share on the wholesale market during recent years. Based on the number of subscribers hosted for MVNOs and Service Providers, it has nearly doubled its market share from 2010 to the first half of 2013. Based on revenues, Telefónica increased its wholesale market share by around 1/4 from 2011 to the first half of 2013. Telefónica's market share increase on the

⁶⁰² [...]*

⁶⁰³ On the overall retail market for mobile telecommunications services, Freenet's 2012 market share amounted to [10-20%] based on number of subscribers and [10-20%] based on revenues, while none of the other MVNOs and Service Providers achieved a market share of more than [0-10%] based on number of Subscribers and [0-10%] based on revenues, see Table 14 in recital (225).

⁶⁰⁴ This estimate is based on the subscriber numbers submitted by the Notifying Party in its Reply to the Article 6(1)(c) Decision, Document ID 1172, paragraph 445; the total number of Freenet's subscribers submitted by the Notifying Party in Table 96 of the Form CO; as well as the Notifying Party's submission of number of subscribers hosted for Freenet in its response to RFI No 7 dated 20 December 2013, Document ID 1142, question 21; and E-Plus' submission of the number of subscribers hosted for Freenet in its response to RFI No 3 dated 20 December 2013, Document ID 1144 & 1156-97, question 19.

wholesale level in recent years is also in line with a parallel increase of the share of Telefónica's network occupied by traffic from subscribers hosted for MVNOs and Service Providers. In the period from 2009 to 2013, the share of voice traffic originated by subscribers hosted for MVNOs and Service Providers increased from [5-10]% to [10-20]% on Telefónica's network. In the same time frame, the share of data traffic caused by subscribers hosted by Telefónica on its network for MVNOs and Service Providers increased from [0-5]% to [5-10]%.⁶⁰⁵ Telefónica's [...] market share over recent years may be explained by the fact that [...]*.⁶⁰⁶ [...]*.⁶⁰⁷ Based on the foregoing, the Commission considers that Telefónica is an important competitive force on the wholesale market for access and call origination.

- (797) Secondly, while E-Plus' market share on the wholesale market is not very high, it nevertheless attracts a large number of wholesale partners, as shown by Table 42 in recital (781). Also, E-Plus appears to be the MNO that is more willing than the other three MNOs to host MVNOs that do not benefit from the Service Provider Obligation. Indeed, E-Plus hosts [...] two MVNOs that [...] and whose customers mainly [...]*.⁶⁰⁸ In contrast, Vodafone and Deutsche Telekom only host MVNOs that have a focus on [...] and therefore have a different business focus from their host MNOs. Telefónica does not currently host any MVNO at all. Therefore, E-Plus is possibly more attractive as a wholesale partner for MVNOs that target domestic mobile telecommunication services than competing MNOs.
- (798) The majority of respondents in the Market Investigation consider Telefónica and E-Plus to be particularly strong competitive forces on the market for wholesale access and call origination.⁶⁰⁹
- (799) Moreover, E-Plus appears to be willing to be more flexible in the negotiation of wholesale access. While Deutsche Telekom, Vodafone, and Telefónica currently [...]*. [...]*.⁶¹⁰ [...]*.⁶¹¹ This requirement [...]*.
- (800) Furthermore, from Telefónica's internal documents, it clearly appears that Telefónica pursues the strategy to [...] in order to [...] and not to be [...]*, see recitals (586) to (599). While E-Plus is currently in the early stages of rolling out its 4G network, [...]*.⁶¹²
- (801) In the recitals of the wholesale agreement between E-Plus and [...]*.⁶¹³ [...]*.⁶¹⁴ ⁶¹⁵
- (802) The Commission considers that once E-Plus enables a wholesale partner to offer 4G services [...] other MNOs will follow. [...]*.

⁶⁰⁵ See Telefónica's response to the Commission's RFI dated 20 December 2013, RFI No 7, Document ID 1142 p. 26.

⁶⁰⁶ [...]*.

⁶⁰⁷ [...]*.

⁶⁰⁸ [...]*.

⁶⁰⁹ See responses to the Commission's questionnaire Q2 to MVNOs and Service Providers dated 31 January, question 55.

⁶¹⁰ [...]*.

⁶¹¹ See Telefónica's response to the Commission's RFI No 8 dated 24 January 2014, Document ID 1524, question 16.

⁶¹² See Document ID 1742, wholesale agreement between E-Plus and [...] dated 25 November 2013.

⁶¹³ [...]*.

⁶¹⁴ [...]*.

⁶¹⁵ See E-Plus' response to the Commission's RFI No 4 dated 24 January 2014, Document ID 1527, question 12.

- (803) Against that background, the Commission considers that E-Plus plays the role of a pioneer with regard to granting wholesale access to 4G services. As regards the Notifying Party's submission that E-Plus' 4G network is at present very limited, the Commission considers that E-Plus has a clear 4G roll-out strategy and intends to achieve [...] population 4G population coverage by 2018, see recital (173). Therefore, in the Commission's view, despite its small market share, E-Plus does constitute an important competitive force on the wholesale market.

Change of incentives of the merged entity

- (804) In the Commission's view the proposed transaction is likely to decrease the merged entity's incentives to grant wholesale access on favourable terms to MVNOs and Service Providers, as it will benefit from a larger customer base and an increased brand portfolio. Moreover, in an environment characterised by reduced competitive pressure compared to today's four player market, the merged entity is likely to be more reluctant to share new technologies, such as 4G, with its wholesale partners. In addition, the Commission considers that the decrease of competitive pressure on the retail market is also likely to have negative impact on the merged entity's incentive to compete aggressively on the wholesale market.⁶¹⁶
- (805) In line with the Notifying Party's explanation and the view of MNOs and MVNOs and Service Providers, which responded to the Phase I Market Investigation, the Commission considers that the main commercial incentives for an MNO to grant wholesale access to its mobile network consist of (i) a better utilisation of network capacity, which leads to economies of scale, as well as (ii) of the ability to reach customer groups that it cannot effectively reach with its own brands.⁶¹⁷
- (806) A number of respondents to the Phase I Market Investigation considered that following the proposed transaction, the main considerations and incentives to grant wholesale access to its network would change for the merged entity.⁶¹⁸ These respondents are of the view that the merged entity would need less MVNOs and Service Providers compared to each of the two Parties on a stand-alone basis to optimise the use of its network, generate economies of scale and to reach customer groups, which each of the Parties alone could not reach as effectively. The following quote (translated from German into English) is a representative example of the concerns voiced in the Phase I Market Investigation: "[f]ollowing the concentration, significantly more own customers will be supplied via ONE own network. Therefore, the degree of network utilisation will significantly increase with the merged entity's] own retail customers and the necessity of wholesale offers will decrease."⁶¹⁹

⁶¹⁶ In the response to the Statement of Objection, [...] Based on its economic model, [...] argues that in the absence of coordinated effect, rivalry to secure wholesale revenues forces MNOs to offer competitive term for wholesale access. The Commission notes that the theoretical argument by [...] relies on the extreme assumption that MNOs networks are identical in terms of technical characteristics which is not the case. The Commission notes the differentiated nature of wholesale access, which is not evident in the economic submission of [...]. The products offered by the non-MNOs depend on the hosting MNOs network. Therefore, the standard unilateral effects due to the merger would apply and leads to a decrease of competitive pressure at the wholesale level.

⁶¹⁷ See Form CO paragraph 720; responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 84 and responses to Questionnaire Q1 to MNOs dated 31 October 2013, question 99.

⁶¹⁸ See responses to Questionnaire Q2, MVNOs dated 31 October 2013, question 86.

⁶¹⁹ The original quote reads as follows: "*Durch den Zusammenschluss werden erheblich mehr eigene Kunden über EIN eigenes Netz versorgt werden. Daher wird die Netzauslastung bereits mit eigenen Retail-Kunden deutlich höher werden und die Notwendigkeit von Wholesale-Angeboten stark sinken.*"

(807) Similarly, the majority of respondents to the Commission's Phase II Market Investigation expressed the concern that the merged entity will have fewer incentives to grant wholesale access on commercially attractive terms to MVNOs and Service Providers and to compete on the wholesale market.⁶²⁰ Such a decrease in the incentive to compete and grant commercially attractive wholesale access is partly explained by an increase in the size of the merged entity's customer base, as illustrated by the following responses:

"The larger the customer base, the higher the utilization rate, and therefore the better the economies of scale. Therefore the increased customer base does not only decrease the incentive of the merged entity to compete on price on the retail market (no/low need to win customers from competitors) but also the incentive to grant wholesale access (lowering competitive pressure on the market /lowering the risk to cannibalize the large customer base).⁶²¹", "[W]e believe an increase in size of own customer base will reduce the incentive for an MNO to grant wholesale access to MVNOs. The larger the retail customer base, the more there is to lose by assisting competitors to join the market. Plus if the MNO has its own sub-brands operating in the niche markets targeted by MVNOs, an increase in the customer base (e.g. by merging 2 MNOs) may mean that the MNO is more likely to be servicing those niche markets via its own brands. This would no doubt reduce the incentive to offer wholesale access to MVNOs that target the same niche markets."⁶²²

(808) Furthermore, respondents explained that the incentive of the merged entity to compete will also be reduced as the competitive pressure in the wholesale market will reduce following the reduction from four to three suppliers.⁶²³

(809) For the reasons set out in recitals (810) to (814), the Commission considers that the concerns referred to in recitals (806) and (807) which were raised consistently in the Market Investigation are likely to be founded.

(810) First, the merged entity's own customer base will be almost twice as large as that of each of the Parties pre-transaction. The merged entity's own customer base will also be larger than Deutsche Telekom's and Vodafone's customer bases. As a result, the Commission considers that post-transaction, the merged entity may not need to attract MVNOs and Service Providers with commercially as attractive wholesale conditions, as each of the Parties on a stand-alone basis to optimally utilise the capacity of its single network. As set out in recital (980), the merged entity may even face capacity constraints in supplying its own customers with 2G/3G services in certain areas covered by the integrated network. As regards the Notifying Party's argument that the number of subscribers hosted by E-Plus for MVNOs and Service Providers today is very limited, and therefore the increment of subscribers hosted for MVNOs and Service Providers would be negligible, the Commission notes that the merged entity would nevertheless be less dependent on the number of subscribers hosted for MVNOs and Service Providers. Therefore, even if the merged entity would be willing to grant wholesale access to the same extent in terms of number of subscribers hosted for MVNOs and Service Providers as the two Parties on a stand-alone basis today, it may still be less inclined to do so at attractive commercial terms.

⁶²⁰ See responses to the Commission's questionnaire Q2 to MVNOs and Service Providers dated 31 January, questions 60 and 61.

⁶²¹ [...]*.

⁶²² [...]*.

⁶²³ [...]*.

In this context, the Notifying Party submits that the merged entity will operate a nationwide network that has sufficient spectrum and capacities available or can easily extend capacity in the various network and frequency segments in order to not only host and serve the existing MVNOs and Service Providers, but also to add new or switching MVNOs and Service Providers to its wholesale partners. Again, the Commission considers that the incentive of the merged entity to do so will be reduced compared to today's incentives of Telefónica and E-Plus on a stand-alone basis, as the merged entity will be less dependent on the subscribers of its wholesale partners to fill up its network.

- (811) Secondly, the merged entity would benefit from three well-established core brands (that is to say, O2, E-Plus, Base) as well as a large number of second brands, including Fonic, Netzclub, Türk Telekom Mobile, Simyo, blau/blauworld, Yourfone, AyYildiz and Ortelmobil. This increased brand portfolio would allow the merged entity to refine the target groups of specific brands and be better equipped to address niche customer groups, without the need to rely on MVNOs and Service Providers, at least to the same extent as each of the Parties does at present. As regards the Notifying Party's argument that the current brand portfolios of the Parties overlap and that Telefónica in any event pursues a strategy to focus on [...]*, the Commission considers that it would also be possible for the merged entity to refine the focus of the brands that currently target the same customer groups and thereby reach those customer groups that the two Parties do not address at present.
- (812) Thirdly, the Commission considers that the reduced competitive pressure on the wholesale market due to the reduction in the number of suppliers from four to three is likely to have a negative impact on the merged entity's incentive to grant wholesale access at attractive commercial terms. In this context, the Commission specifically sees the risk that the merged entity would continue Telefónica's current strategy to [...]*. Even [...]* takes the view that "[t]he combined entity may be in a position to charge higher prices for MVNO access on its network, at least over the medium term, or to refuse access to its network to retain the network advantage for its own retail business."⁶²⁴
- (813) Fourthly, the Commission considers that the decrease of competitive pressure at the retail level, which is likely to result from the proposed transaction (see Section 6.3.1) is likely to also have an impact on the merged entity's incentive to compete on the wholesale market. In fact, MNOs grant wholesale access to MVNOs and Service Providers *inter alia* in order to compete in areas of the retail market, namely the lower end of the retail market, where they do not want to compete aggressively on prices with their core brands. By means of this strategy they generate some revenues without running the risk that they cannibalise their revenues generated with their core brands on the retail market. As the competitive pressure on the retail market and in particular in the lower end of the retail market is likely to significantly decrease post-transaction, MNOs will probably have less incentives to grant such favourable terms to MVNOs and Service Providers that would allow the latter to compete aggressively in the lower end of the retail market.
- (814) Fifthly, as regards the Notifying Party's argument that the merged entity will have a strong incentive to continue granting wholesale access to MVNOs and Service Providers so as to monetise on enhanced network quality, the Commission notes that this statement actually contradicts Telefónica's current strategy to [...]* by [...]*, see

⁶²⁴ [...]*

recitals (586) to (599). Hence, the statement that the merged entity will pursue a very different approach does not appear to be convincing.

- (815) In light of those elements, the Commission considers that post-transaction MVNOs and Service Providers are likely to play a less important role for the merged entity as regards a means to achieve optimal network utilisation and reaching customer groups that cannot be effectively reached through own distribution channels. Therefore, the proposed transaction may have a negative impact on the merged entity's incentives to grant wholesale access to these operators.

The likely reaction of competing MNOs

- (816) The Commission considers that there is the risk that the proposed transaction would reduce the incentives of Deutsche Telekom and Vodafone to compete to the same extent on the wholesale market for access and call origination as they do at present.
- (817) As regards the other MNOs' ability to compete with the merged entity post-transaction, [...] explains that "[i]n the absence of sufficient spectrum divestment conditions, there is the potential for a considerable degree of market power to be conferred on the combined entity in the market for wholesale mobile access. Because of the quantitative spectrum advantage other mobile network operators may be less effective competitors for wholesale mobile access, particularly for wholesale access seeker that may be focused on mobile data services."⁶²⁵
- (818) As set out in recital (524), the Commission considers that the aggregation of spectrum in the hands of the merged entity will not significantly impact on Vodafone's and Deutsche Telekom's ability to compete. However, their incentives to compete on the wholesale market are likely to decrease post-transaction, or at best remain at the same level as today.
- (819) Several MVNOs and Service Providers explained in the course of the Phase I Market Investigation that, already today, Deutsche Telekom and Vodafone tend to minimise the number of MVNOs and Service Providers on their networks and that the situation is unlikely to change (or, if anything, is likely to deteriorate) post-transaction. The following response illustrates these concerns: "[a]fter E-Plus opened up its network to MVNOs, service providers and resellers, the other operators reluctantly followed, entering into similar agreements to compete for the new wholesale business that E-Plus was now attracting. If E-Plus is no longer a driver of wholesale activity, the pressure on the other MNOs to enter into wholesale deals will also decrease."
- (820) Furthermore, a majority of MVNOs and Service Providers,⁶²⁶ [...]*,⁶²⁷ do not think that post-transaction the incentives to grant wholesale access to their networks would change for Deutsche Telekom or for Vodafone. However, none of the respondents in the Phase I Market Investigation considered that the incentive of Deutsche Telekom and Vodafone to compete would increase post-transaction.
- (821) The majority of the MVNOs and Service Providers, which expressed an opinion on the question whether the proposed transaction will have an impact on price and/or other conditions of competition in the wholesale access and call origination market in Germany, also stated that conditions on the wholesale market will deteriorate and, in particular, that wholesale access prices charged by the merged entity, but also by the

⁶²⁵ [...]*.
⁶²⁶ [...]*.
⁶²⁷ [...]*.

two other MNOs, will increase following the proposed transaction/not mirror price decreases on the retail level.⁶²⁸ This concern can be illustrated by the following response: "[a]s mentioned above, the three MNOs will have similar shares in a saturated market and will not compete on price as aggressively as before. Wholesale access will be further reduced and wholesale pricing will remain unchanged to complete the squeezing out of the remaining, non MNO, market participants. The risk of anticompetitive pricing here may be lower than in the retail market, but is certainly not small." In a market environment that is characterised by a significant decrease of retail prices during recent years, a stagnation of prices at the wholesale level equals a price increase from the perspective of MVNOs and Service Providers as they need to lower their retail prices in order to stay competitive.

- (822) Moreover, the Commission considers that the reduced competitive pressure on the wholesale market due to the reduction in the number of suppliers from four to three, is likely to have a negative impact on Deutsche Telekom's and Vodafone's incentives to grant wholesale access at attractive commercial terms. In this context, the Commission specifically foresees the risk that Deutsche Telekom and Vodafone would continue their current strategy [...]*.⁶²⁹ Based on the description of the Notifying Party in the presentation called [...]*.⁶²⁹ The proposed transaction would lead to the persistence of such market conditions. In addition, the internal emails of the Notifying Party indicate that the Notifying Party is [...]*.⁶³⁰
- (823) In that context, the Commission notes that Vodafone has even recently publicly announced that it intends to become stricter in its approach to MVNO wholesale access "to ensure that [its] advantage and [its] differentiation is protected."⁶³¹ This implies that Vodafone is not likely to offer MVNOs and Service Providers flexible wholesale access to 4G services at prices that would allow Vodafone's wholesale partners to aggressively compete with Vodafone at the retail level.
- (824) In addition, the Commission considers that the decrease of competitive pressure on the retail level, which is likely to result from the proposed transaction (see Section 6.3.1) is likely to also have an impact on Deutsche Telekom's and Vodafone's incentives to compete on the wholesale market. As mentioned, MNOs grant wholesale access to MVNOs and Service Providers *inter alia* in order to compete in areas of the retail market, namely the lower end of the retail market, where they do not want to compete aggressively on prices with their core brands. Through this strategy they generate some revenues without running the risk that they cannibalise their revenues generated with their core brands on the retail market. As the competitive pressure on the retail market and in particular in the lower end of the retail market is likely to significantly decrease post-transaction, MNOs will probably have less incentives to grant such favourable terms to MVNOs and Service Providers that would allow the latter to compete fiercely in the lower end of the retail market.

The ability to switch

- (825) Finally, the Commission notes that, even if the other MNOs had the incentive to compete aggressively with the merged entity on the wholesale market, based on the results of the Market Investigation, it appears that MVNOs and Service Providers,

⁶²⁸ See responses to Questionnaire Q2, MVNOs dated 31 October 2013, question 111.3.

⁶²⁹ See [...]*, Document ID 991-10868, [...]*

⁶³⁰ [...]*

⁶³¹ See transcript of conference call on Vodafone Q1 2014 - Interim Management Statement, p. 6, 12, Document ID 4187.

which are currently hosted on the Parties' networks, would face major challenges of commercial, contractual and technical nature in switching to other host MNOs, if the merged entity were to raise prices.⁶³²

- (826) While the Notifying Party submits a limited number of switches of existing customers to a new host MNO which relate to the particular case of Drillisch and Deutsche Telekom (see recitals (611) to (613)), based on the results of the Phase I Market Investigation, it appears that switching is particularly complex for Service Providers. The fact that Service Providers do not issue their own SIM cards, but provide their customers with SIM cards issued by the host MNO, constitutes a major technical challenge to switch their customer base. In the event of a change of the host MNO, all existing customers of the Service Provider would need to exchange their SIM cards. For that reason, even [...]*.⁶³³ Moreover, it appears that the contractual arrangements between Service Providers and MNOs at the wholesale level often contain provisions which make the switching of the host MNO very unattractive, such as "farewell-fees" or exclusivity clauses. For example, the wholesale agreement between Telefónica and [...]*. Similarly, the wholesale agreement between E-Plus and [...]*. In this context, the Commission considers that the Notifying Party's argument that a number of Service Providers multi-source and therefore enjoy significant negotiating power is not pertinent. Multi-sourcing does not make the switching of existing customers any easier; it only allows the respective Service Providers to place new customers on a different host-network.
- (827) In contrast to Service Providers, MVNOs typically issue their own SIM cards, which would make the switching of the host MNO easier. However, some technical issues related to the SIM card security profile appear to exist. As the security settings of SIM cards are MNO specific, MVNOs would have to exchange their customers' SIM cards, in the event that the new host MNO does not accept the security profile of the former MNO. Furthermore, MVNOs also face contractual barriers when wishing to switch existing customers to a new host MNO or engage in a multi-sourcing strategy. E-Plus' [...]* wholesale contract with [...]* serves as an illustrative example in this respect. [...]*.
- (828) The obstacles described to switching host MNO are reflected by the fact that the majority of the responding MVNOs and Service Providers have never switched to another host MNO⁶³⁴ and the majority of the responding MVNOs and Service Providers do not even consider switching to be feasible.⁶³⁵ [...]* only refer to few cases where MVNOs and Service Providers switched existing customers to a new host MNO.⁶³⁶
- (829) Due to the challenges faced by MVNOs and Service Providers that wish to switch to another host MNO, it would be very difficult for the Parties' wholesale customers to switch to other MNOs, if the merged entity was to raise prices (even if Deutsche Telekom or Vodafone were to offer attractive wholesale access conditions post-transaction).

Conclusion

⁶³² See responses to Questionnaire Q2, MVNOs dated 31 October 2013, question 101.

⁶³³ [...]*

⁶³⁴ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 105.

⁶³⁵ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 102.

⁶³⁶ [...]*

(830) In light of the preceding elements, the Commission considers that whilst there is some evidence that the proposed transaction may give rise to horizontal non-coordinated effects on the wholesale market for access and call origination on public mobile communication networks, it can be left open whether the proposed transaction would lead to a significant impediment of effective competition on this market as the final commitments submitted by the Notifying Party on 29 May 2014 with a view to addressing the competition concerns on the retail market would, in any event, also effectively address any competition concern on the wholesale market.

Impact on the retail market for mobile telecommunications services

(831) The Commission further considers that any possible anti-competitive effects on the market for wholesale access and call origination as described in recitals (789) to (830), may compound the anti-competitive effects of the proposed transaction on the retail market for mobile telecommunications services. As the ability of MVNOs and Service Providers to compete with MNOs depends on the access conditions that they obtain at the wholesale level, a deterioration of these conditions following the proposed transaction will also have an impact on the retail level.

6.4.3. Horizontal coordinated effects

(832) Recital (774) sets out the conditions under which, according to the case law, horizontal coordinated anticompetitive effects are most likely to emerge.

(833) In the Article 6(1)(c) Decision, the Commission considered that it could not be ruled out that the proposed transaction may lead to coordinated effects on the wholesale market for access and call origination. In particular, the Commission was not able to rule out the risk that the proposed transaction could lead to a coordinated refusal of MNOs to share improved network quality resulting from technical innovation with MVNOs and Service Providers or grant wholesale access to their 4G networks.

(834) The Commission further investigated the risk of horizontal coordinated effects through the Phase II Market Investigation and a review of the internal documents provided by the Parties. It ascertained whether the evidence collected could be interpreted to contain some indications that the proposed transaction would lead to coordinated effects on the German wholesale market for access and call origination. However, the evidence at the Commission's disposal did not meet the requirements the Commission has to meet according to the case law in order to prove a significant impediment to effective competition due to coordinated effects.⁶³⁷

(835) In any event, even if coordinated effects in the German wholesale market for access and call origination were assumed, the fact would remain that the Final Commitments would address such coordinated effects (see recital (1401)).

6.5. Buyer power on the retail market for mobile telecommunications services

(836) The Notifying Party does not express any specific view on the extent to which retail customers of mobile telecommunications services are able to exert countervailing buyer power on suppliers of mobile telecommunications services.

(837) Based on the results of the Phase I Market Investigation, the Commission notes that a large part of customers of retail mobile telecommunications services are private consumers, who do not have any degree of buyer power vis-à-vis the suppliers of

⁶³⁷ See, to that effect, Case T-342/00 *Petrolescence* and *SG2R v Commission* [2003] ECR II-1161, paragraph 101, and the case-law cited; Case C-12/03 P *Commission v Tetra Laval* [2005] ECR I-987, paragraph 38; and Case T-87/05 *EDP v Commission* [2005] ECR II-3745, paragraph 63.

mobile telecommunications services. Moreover also among business customers,⁶³⁸ only the larger companies may be able to exercise some degree of negotiating power.⁶³⁹

- (838) The Commission therefore considers that possible buyer power exercised by customers of retail mobile telecommunications services does not constitute a countervailing factor such to offset the possible anti-competitive effects of the proposed transaction.

6.6. Entry on the retail market for mobile telecommunications services

6.6.1. Notifying Party's view

- (839) The Notifying Party submits that there are no barriers to entry into the retail market for mobile telecommunications services for the reasons set out in recitals (840) to (844).
- (840) First, entering the market as an MVNO or a Service Provider would only require limited investments, while offering considerable margins. For this reason, several MVNOs and Service Providers have entered the German market in recent years, including 1&1, Lycamobile, Lebara, KDG, Unitymedia/Kabel BW, M-net, Versaget, Breko, Tele2 and Telgic. The Notifying Party estimates that entering the market as a Service Provider or MVNO without existing brand and sales channels would require investments of around EUR [0-5] to [10-20] million[0-5]*. Entering the market as a Service Provider or MVNO with an existing brand and sales channels would require investments of around EUR [0-5] to [5-10] million*.
- (841) Second, there are no any regulatory barriers for market entry as MVNOs and Service Providers. Operatros only have to notifyNetzA when they want to begin providing retail mobile telecommunication services.
- (842) Third, the regulatory framework, in particular the Service Provider Obligation, supports market entry.
- (843) Fourth, MVNOs and Service Providers also have the possibility of converting into MNOs by acquiring spectrum at auctions. In the Notifying Party's view, some blocks in the high band or in the low band suffice for market entry. In this context, it refers to several examples of market entry in France, Italy and Spain. The Notifying Party further submits that entry costs for MNOs vary and strongly depend on uncertain factors such as spectrum costs, network purchase and roll-out conditions, and whether a business presence of the company, including a brand and sales channels already exists. Based on the spectrum costs in the last frequency auction in 2010 and assuming that the new entrant would aim at rolling out a 4G network covering 50% of the population in Germany, in the Notifying Party's view, the overall investment requirements could be estimated at EUR [...] * without costs incurred for employees.

⁶³⁸ In this context, business customers cover undertakings that procure mobile telecommunication services for their own use, such as undertakings of various sizes or public institutions. Branded Resellers, however, do not constitute business customers in this sense, as they do not procure telecommunication services for their own use, but act as agents for the MNOs. As explained in recital (176), Branded Resellers do not become a contractual party to the mobile communication services contract, but obtain a commission for the distribution services rendered to the MNOs. In other words, Branded Resellers offer distribution services to MNOs so that the latter would qualify as customers of Branded Resellers in this perspective.

⁶³⁹ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 59; and Questionnaire Q1 to MNOs dated 31 October 2013, question 60.

In addition, around [...] Full Time Equivalents ("FTEs") would be required, which would cost around EUR [...] per year.

- (844) Fifth, the Notifying Party points out that contrary to the Commission's preliminary view, BNetzA considers a new MNO entry in Germany possible. For this reason, BNetzA would take into account the strategic interests of new entrants in the preparations for the spectrum auction in 2016. In the view of the Notifying Party, one of the possibly interested new entrants could be [...], as shown by its response to the Commission's Phase I Market Investigation.

6.6.2. Commission's assessment

- (845) The Commission considers that a distinction must be made between market entry as a Service Provider, as an MVNO or as an MNO, when assessing the barriers to entry in the German market for mobile telecommunications services. While barriers to entry as an MVNO or a Service Provider appear to be lower, barriers to entry as MNO are very high, given the major investment needed.
- (846) As explained by the Notifying Party, entry as an MNO not only requires substantive investments for the acquisition of spectrum (in addition to the fact of having the possibility to acquire spectrum in the first place), but also for the roll-out of the physical infrastructure of a mobile network. Based on the Notifying Party's estimates and the results of the Phase I Market Investigation,⁶⁴⁰ the Commission considers that the necessary investments easily figure in the range of several billion euros, which constitutes a significant barrier to entry. Furthermore, any new entrant would have to start its network operations despite the competitive pressure exercised by three established MNOs that already benefit from existing network infrastructure.
- (847) Moreover, in the course of the Phase II Market Investigation, the Commission screened the interest of MNOs active outside of Germany and of MVNOs and Service Provider active in Germany to enter the German retail market for mobile telecommunications services as a MNO. However, none of the respondents with the exception of [...] had considered entering the German market during the course of the last five years or has indicated that it would be interested in entering the German market post-transaction.⁶⁴¹ As regards specifically [...], the Commission notes that while [...] would be interested in entering the German market as an MNO, it does not currently hold any spectrum to operate as an MNO and it is uncertain whether [...] will be in a position to secure spectrum in the spectrum auction in 2016. In fact, the BNetzA [...]. Hence, it is uncertain how BNetzA will assess [...].
- (848) As regards Telefónica's submission that the BNetzA would take the strategic interests of new entrants into account in the preparations for the spectrum auction in 2016 and therefore would evaluate the likelihood of new entry differently than the Commission, the Commission refers to BNetzA's clarifications. In its comments on the Notifying Party's Reply to the Article 6(1)(c) Decision, [...].
- (849) As regards entry as an MVNO, in light of the responses to the Phase Market I Investigation,⁶⁴² the required investments appear to be more limited. Moreover, it

⁶⁴⁰ [...].

⁶⁴¹ See responses to Questionnaire Q1 MNOs outside Germany dated 20 January 2014, questions 17 to 19, Questionnaire Q2 MVNOs and Service Providers dated 21 January 2014, questions 66 to 68, and emails sent to selected Chinese and US based MNOs on 24 January 2014 (Document IDs 1706, 1707, 1708, 1709, 1740).

⁶⁴² See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 43 and responses to Questionnaire Q1 to MNOs dated 31 October 2013, question 42.

appears that entry as a full MVNO may take place within a time span of one to two years. While the required investment costs and time span suggest that barriers to entry as an MVNO are manageable, the Commission considers that the main barrier to entry consists in the need to negotiate an MVNO agreement with a host MNO. As the Service Provider Obligation only supports wholesale access as a Service Provider and not as an MVNO, potential entrants as MVNOs have a much weaker negotiating position compared to potential entrants as Service Providers. The fact that, the number of MVNOs is rather limited compared to the number of Service Providers active in Germany, supports this finding. In this context, the Notifying Party submits in its response to the Statement of Objections, that possible new entrants prefer the business model of a Service Provider over the business model of an MVNO. In light of the success of Freenet, 1&1 and Drillisch, possible new entrants believe that the Service Provider business model promises greater commercial success. From the Commission's perspective, this argument supports the conclusion that countervailing entry as an MVNO would not mitigate the competition concerns raised by the proposed transaction.

- (850) As regards entry as a Service Provider, in light of the responses to the Phase I Market Investigation,⁶⁴³ the Commission considers that the required investments also appear to be rather limited. Moreover, it appears that entry as a Service Provider may take place within a time span of six months to one year. In addition, at least as of today, market entry as a Service Provider is supported by the Service Provider Obligation. Nevertheless based on the results of the Phase I Market Investigation, the Commission considers that in the current conditions entry as a Service Provider may not be very attractive, as the majority of MVNOs, Service Providers and Branded Resellers do not expect any new MVNOs or Service Providers to enter the German market in the next two to three years.⁶⁴⁴ This can be explained by the fact that there are already several well-established Service Providers active in the German market. Furthermore, despite the existence of the Service Provider Obligation, Service Providers may still find it challenging to negotiate commercially attractive wholesale access terms with MNOs.
- (851) Moreover, in light of the results of the Phase I Market Investigation, the Commission considers that the proposed transaction may make market entry as a Service Provider or as an MVNO more difficult than it is currently the case. While MNOs consider that the proposed transaction will not have any impact on the ability of market entrants to start operating as an MVNO or as a Service Provider in Germany,⁶⁴⁵ the majority of MVNOs, Service Providers and Branded Resellers consider that, post-transaction, market entry will become more difficult than it is today⁶⁴⁶ and that there will not be sufficient alternatives for them to obtain competitive offers for wholesale access and call origination services.⁶⁴⁷
- (852) In light of the reasons set out in recitals (845) to (852), the Commission concludes that entry could potentially constitute a relevant countervailing factor only with respect to Service Providers (and only for as long as the Service Provider Obligation continues to be in place). The Commission, however, also notes that, for the reasons

⁶⁴³ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 44 and responses to Questionnaire Q1 to MNOs dated 31 October 2013, question 43.

⁶⁴⁴ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 92.

⁶⁴⁵ See responses to Questionnaire Q1 to MNOs dated 31 October 2013, question 103.

⁶⁴⁶ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 88.

⁶⁴⁷ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 99.

outlined in recitals (567) to (626), any such entry or threat of entry is unlikely to be of sufficient scale to offset the possible anti-competitive effects of the proposed transaction. As explained, Service Providers are not in a position to exercise significant competitive pressure on MNOs. Moreover, entry as a Service Provider will become more difficult following the proposed transaction.

6.7. Buyer power on the wholesale market for access and call origination

6.7.1. Notifying Party's view

(853) The Notifying Party submits that successful non-MNOs with strong marketing and sales capabilities enjoy significant bargaining power, irrespective of their role as MVNO, Service Provider or Branded Reseller, as they have access to distribution channels and in some cases also to additional customer groups that the MNOs themselves cannot address. Moreover, the Notifying Party explains that non-MNOs benefit in their negotiations with MNOs from strong wholesale infrastructure competition and can choose between different MNOs as infrastructure suppliers. The Notifying Party further points out that non-MNOs have the possibility of switching or adding another infrastructure supplier, which would leverage their negotiating position. It provides several examples of the successful switching and migration of customers in Germany.

(854) In its response to the Statement of Objections, the Notifying Party further underlines that the proposed transaction will increase choice for MVNOs and Service Providers as regards a host network that is capable to meet the increasing data demand. Moreover, the Notifying Party stresses the examples of the two Branded Resellers [...] that would exercise significant bargaining power on their host networks. Moreover, the Notifying Party claims that [...] to increase its bargaining power vis-à-vis its original host MNO [...].

6.7.2. The Commission's assessment

(855) Firstly, the Commission notes that buyer power possibly exercised by Branded Resellers, such as [...], to which the Notifying Party refers at several occasions, is not relevant in the context of assessing possible countervailing buyer power on the wholesale market for access and call origination, as Branded Resellers are not active on the demand side of this market (see footnote 39). The claimed ability of certain Branded Resellers to negotiate attractive tariffs to distribute and market under their own brands is better dealt with when assessing the ability of Branded Resellers to effectively compete with MNOs on the retail market (see Section 6.3.1.6).

(856) Secondly, as regards the Notifying Party's argument that there is infrastructure competition, as MVNOs and Service Providers can choose between several mobile networks, the Commission considers that the proposed transaction will actually reduce this infrastructure competition significantly, as the number of MNOs will be reduced from four to three. Also as already pointed out, the incentives of the merged entity to grant wholesale access at commercially attractive conditions, as well as the respective incentives of Deutsche Telekom and Vodafone are likely to decrease post-transaction.

(857) Thirdly, the results of the Market Investigation contradict the Notifying Party's description of the degree of negotiating power enjoyed by MVNOs and Service Providers. As explained in Section 6.3.1.6, MVNOs and Service Providers are not in a position to effectively compete with MNOs. Respondents to the Phase I Market

Investigation point out that this is *inter alia* due to the fact that MVNOs and Service Providers do not have sufficient bargaining power to negotiate wholesale access conditions which would allow them to do so.⁶⁴⁸ Furthermore, despite the fact that the Notifying Party refers to several examples of successful switching or multi-sourcing by MVNOs and Service Providers, based upon the results of the Market Investigation, the Commission considers that switching an existing customer base from one host MNO to another is very challenging for MVNOs and particularly for Service Providers, see recitals (825) to (829). Therefore, it appears to be unlikely that switching to another MNO is a credible threat that Service Providers and MVNOs can use to leverage their negotiating position. This finding is also supported by the responses to the Phase II Market Investigation. Many MVNOs and Service Providers explained that they have little or no negotiating power vis-à-vis MNOs and that there are no credible threats that they can use in negotiations.⁶⁴⁹ Moreover, these respondents fear that this imbalance in negotiating power will become even more pronounced post-transaction.⁶⁵⁰ In this context, the Commission also considers the fact that [...] * was not able to negotiate a 4G wholesale access agreement with [...] * shows the imbalance in negotiating power to the detriment of MVNOs and Service Providers.

- (858) Based on the reasons referred to in recitals (855) to (857), the Commission considers that Service Providers and MVNOs do not enjoy strong bargaining power vis-à-vis MNOs and that their bargaining power is likely to decrease even further post-transaction. For this reason, the risk of anti-competitive effects resulting from the proposed transaction cannot be offset by countervailing buyer power exercised by MVNOs and Service Providers.

6.8. Entry on the wholesale market for access and call origination

- (859) Entry on the wholesale market for access and call origination is limited to entry as MNO, because MVNOs and Service Providers are not active on the supply side, but on the demand side of this market.

6.8.1. Notifying Party's view

- (860) As referred to in recitals (843) to (844), the Notifying Party submits that entry as an MNO would be feasible through the conversion of a Service Provider or MVNO into an MNO and would require the investments referred to in recital (840).

6.8.2. The Commission's assessment

- (861) As explained in recitals (846) to (848), the Commission considers that the investment requirements to enter the German market as an MNO, as well as the presence of well-established MNOs with existing network infrastructure constitute a serious barrier to entry.
- (862) As a result, entry (or the threat thereof) does not constitute a relevant countervailing factor to offset the anti-competitive effects of the proposed transaction on this market.

⁶⁴⁸ See responses to Questionnaire Q2 to MVNOs dated 31 October 2013, question 46.

⁶⁴⁹ See responses to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, questions 56 and 57.

⁶⁵⁰ See responses to Questionnaire Q2 to MVNOs and Service Providers dated 21 January 2014, question 58.

6.9. Efficiencies on the retail market for mobile telecommunications services

- (863) The Notifying Party submitted that there are five types of efficiencies related to (a) mobile telecommunication networks; (b) the distribution network; (c) general and administrative expenses; and (d) additional business opportunities and (v) mobile termination rates.
- (864) According to the framework for assessing efficiencies as laid down in recital 29 of the Merger Regulation and the Horizontal Merger Guidelines,⁶⁵¹ the Commission will consider whether any efficiencies brought about by the merger counteract the effects on competition, and in particular the potential harm to consumers that it might otherwise have, as part of its overall assessment of the concentration, provided that those efficiencies are substantiated and satisfy the following three cumulative criteria:
- (a) Verifiability: efficiencies have to be verifiable, so 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.⁶⁵²
 - (b) Benefit to consumers: efficiencies have to benefit consumers, in the sense that they should be substantial and timely and should, in principle, benefit consumers in those relevant markets where it is otherwise likely that competition concerns would occur;⁶⁵³
 - (c) Merger specificity: efficiencies have to be a direct consequence of the concentration and cannot be achieved to a similar extent by less anti-competitive alternatives;⁶⁵⁴
- (865) The Horizontal Merger Guidelines further explain that it is incumbent upon the Notifying Party to provide in due time all the relevant information necessary to demonstrate that the claimed efficiencies are merger-specific and likely to be realised as most of this information is in the possession of the Parties. Similarly, it is for the Notifying Party 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.⁶⁵⁵ Furthermore, evidence relevant to the assessment of efficiency claims should include, in particular, internal documents that were used by the management to decide on the merger, statements from the management to the shareholders and financial markets about the expected efficiencies, historical examples of efficiencies and consumer benefit, and pre-merger external experts' studies on the type and size of efficiency gains, and on the extent to which consumers are likely to benefit.⁶⁵⁶ In the following recitals, the Commission will assess whether each of the submitted efficiencies fulfils the three cumulative criteria defined in the Horizontal Merger Guidelines.

⁶⁵¹ Horizontal Merger Guidelines, paragraphs 76 to 88.

⁶⁵² Horizontal Merger Guidelines, paragraph 86.

⁶⁵³ Horizontal Merger Guidelines, paragraph 79.

⁶⁵⁴ Horizontal Merger Guidelines, paragraph 85.

⁶⁵⁵ Horizontal Merger Guidelines, paragraph 87.

⁶⁵⁶ Horizontal Merger Guidelines, paragraph 88.

6.9.1. Network efficiencies

6.9.1.1. The Notifying Party's view

- (866) As regards network-related efficiencies, the Notifying Party claims that the merger will, on the one hand, create efficiencies that will directly accrue to consumers ("demand-side efficiencies") and, on the other hand, result in significant cost-savings that will be passed on to the merged entity's customers ("supply-side efficiencies").
- (867) The claimed demand-side efficiencies consist mainly of quality improvements of the 2G, 3G and 4G mobile services provided by the merger entity as opposed to the same services possibly provided by each of the Parties in a standalone scenario. With regard specifically to 4G services, the combination of the Parties' complementary spectrum holdings will lead to (a) faster 4G network roll out and a better coverage for E-Plus customers; and (b) higher maximum speed for Telefónica's customers. As regards 2G and 3G services, the Notifying Party claims that the merged entity will ensure additional coverage and capacity compared to each of E-Plus and Telefónica on a stand-alone basis.
- (868) The claimed supply-side efficiencies stem from (a) a reduction in the costs of the 4G roll-out by the merged entity compared to the scenario of a parallel 4G roll-out by each of E-Plus and Telefónica; (b) savings deriving from the consolidation of each of the parties' 2G and 3G networks and (c) savings due to the reduction of network dedicated staff.
- (869) According to the Notifying Party, the claimed efficiencies (a) are verifiable; (b) benefit the consumers and (c) are merger specific.

Verifiability

Demand side efficiencies

- (870) To date E-Plus has only access to spectrum of 1800 MHz band and no spectrum holding in the 800 MHz band (see Table 2). The Notifying Party submits that, in the absence of the merger, E-Plus would roll out 4G only using 1800 MHz spectrum, which would allow it to cover, according to the information submitted by the Notifying Party, mainly urban areas and to provide total population outdoor coverage of [...] in 2015 and of [...] in the long run. Consequently, in this scenario,⁶⁵⁷ roughly [...] of the German population would still not be covered by 4G at the end of 2020.
- (871) Telefónica has access to the 800 MHz band spectrum and to a limited amount of spectrum in the 1800 MHz band (see Table 2 set out in recital ((146))). The Notifying Party submits that, in the absence of the merger, Telefónica would roll out 4G using primarily the 800 MHz band and would possibly use the 2600 MHz bands to solve possible capacity constraints that could arise especially in more densely populated areas. Telefónica's 4G network coverage will not change with the merger, given that the 4G LTE800 roll out is equivalent in the stand-alone scenario as well as in the case of the merger.
- (872) In the merger scenario, the merged entity would carry out the 4G roll out using both [...] . The population coverage of 4G of the merged entity would be [...] by 2015 and [...] by 2020.⁶⁵⁸

⁶⁵⁷ Annex A of the Form CO.

⁶⁵⁸ Annex A to Form CO, p.23-24.

- (873) To summarise, according to the Notifying Party, the combination of E-Plus's and Telefónica's complementary spectrum portfolio will provide:
- (a) E-Plus's customers with a faster 4G roll out and with better 4G coverage (by 2015, the merged entity's 4G coverage will be 30% larger than E-Plus provisional coverage);
 - (b) Both Telefónica's and E- Plus's customers with a better network quality in terms of improved higher maximum download speed for the merged entity's customers (the speed could reach up to [...] Mbit/s, once the 4G roll-out advanced is completed by the Parties and could reach [...] Mbit/s once the "LTE Advanced" is introduced⁶⁵⁹).
- (874) More precisely, according to the Notifying Party, Telefónica's customers would benefit from a higher speed due of the use of [...] in a Telefónica standalone scenario. Once carrier aggregation is available, there will be an additional benefit via [...].
- (875) In the Reply to the Statement of Objections, the Notifying Party sets out that whereas in the merger scenario about [...] LTE 1800 sites are planned to be rolled out by [...], Telefónica plans to [...] roll out [...] LTE 2600 sites by [...] in a stand-alone scenario.⁶⁶⁰ In addition, each LTE 1800 site offers a significantly larger coverage compared to a LTE 2600 site. By [...], [60-70]% of Telefónica's customers will be covered with [...] in the merger scenario, while in the absence of the merger only [20-30]% will have access to [...].
- (876) As regards speed the Notifying Party clarified that a significant number of Telefónica's customers, notably all customers of the areas where 4G roll out will be carried out post-transaction by using the complementary 1800/800 spectrum, will have the benefit of higher speed (which depending on the handset used could reach up to [...]. The Notifying Party considers that the speed advantage for this category of Telefónica's customers is merger specific because in the absence of the merger, Telefónica could only offer top speed [...] in the areas where 4G 2600 MHz is available.
- (877) However, the option of rolling out an LTE additional capacity layer using the 2600 MHz spectrum band, according to the Notifying Party, is not an efficient option. Similarly, the Notifying Party submits that it would be neither efficient nor technically possible to offer top speed by aggregating other frequency bands (such as 800 MHz, 900 MHz, 1800 MHz, 2100 MHz and 2600 MHz bands). According to the Notifying Party, the only carrier aggregation technology that could be used is [...] bands, which it is anticipated it will be available in Germany [...].
- (878) The Notifying Party further clarified that the fact that in the merger scenario a number of LTE 1800 sites would be removed compared to E-Plus' standalone roll out scenario will not reduce the quality of the merged entity's network. The Notifying Party explained that the higher number of 1800 MHz sites in the E-Plus's stand-alone scenario was merely aimed at ensuring coverage which the merged entity will ensure mainly by its 800 MHz spectrum and not at ensuring higher speed.⁶⁶¹

⁶⁵⁹ Annex A of the Form CO.

⁶⁶⁰ Reply to the Statement of Objections, paragraph 646,

⁶⁶¹ Reply to the Commission's RFI ("RFI") dated 19 November 2013, Document ID 1084, question 6.

- (879) In its Reply to the Statement of Objections, the Notifying Party submitted a technical study to further support its claim that the number of sites listed in the "synergy case", the study presented in Annex A to the Form CO, is sufficient to enable the merged entity to provide sufficient capacity to serve all 4G subscribers.
- (880) As regards 2G and 3G networks, the Notifying Party claims that whilst the merged entity will have [...]*. This will result in: (a) better 2G coverage in urban areas, highways and trains for both Telefónica's and E-Plus's customers, (b) additional 3G coverage and capacity for Telefónica's customers and (c) improved indoor and overall coverage for E-Plus's customers.
- (881) The Notifying Party further clarified that the merged entity will have fewer 3G sites, but the same capacity as the sum of the two standalone networks.⁶⁶² This is due to the fact that 3G sites will only be dismantled if (a) capacity is increased in neighbouring sites and (b) provided that their decommissioning does not lead to coverage losses. On this basis, the Notifying Party submits that the merged entity will not experience congestion problems notwithstanding the larger customer base compared to each of the Parties in the stand alone scenario.⁶⁶³
- (882) The technical study provided by the Notifying Party together with its Reply to the Statement of Objections sets out that the ratio between the 2100 MHz spectrum of the merged entity and the corresponding spectrum holding of [...] is likely to be higher than the ratio between the merged entity's subscribers and [...].⁶⁶⁴ Since the number of sites is assumed to be equal in both networks the number of available resources can be increased by spectrum only. Therefore, on the basis of the assumption that [...] is able to provide sufficient 3G capacity to its subscribers, the technical study concludes that the merged entity would also be likely to be able to serve its subscribers.

Supply-side efficiencies

- (883) The Notifying Party also submits that the merged entity will benefit from lower 4G roll-out costs compared to the parallel roll-out by each of the Parties on a stand-alone basis. The complementary 4G [...] roll-out plan in the post-transaction scenario will significantly reduce incremental roll-out CAPEX by [...] compared to the parallel roll-out in the stand-alone scenario (due mainly to the need for fewer 4G [...] sites in the merger scenario). Moreover, in all regions with a roll-out of only 4G LTE800 in the post-transaction scenario, incremental roll-out costs would decrease by [...], compared to the parallel roll-outs of 4G LTE800 MHz and 4G LTE1800 MHz in the stand-alone scenario (again mainly due to the need for fewer 4G [...] sites in the merger scenario).
- (884) The Notifying Party submits that the joint roll-out of 4G network, based on a [...] MHz complementary spectrum, will lead to a significant reduction in the number of required sites.⁶⁶⁵ The total costs savings related to the reduction in the number of

⁶⁶² Reply to the RFI dated 19 November 2013, Document ID 1084, question 6.

⁶⁶³ In its reply to the RFI dated 19 November 2013, Document ID 1084, question 8, the Notifying Party clarified that the calculations of the necessary number of sites have been done based on [...] would be similar to the merged entity's customer base, and Vodafone's current network. See also reply to the RFI dated 24 January 2014, Document ID 1581, question 29.

⁶⁶⁴ Reply to the Statement of Objections, paragraph 652 and Annex 3 to the Reply to the Statement of Objections.

⁶⁶⁵ By 2020, the number of planned sites to be deployed is [...] sites in the 800 MHz band and [...] sites in the 1800 MHz band for the merged entity. In the stand-alone scenario, E-Plus plans to deploy [...]

sites are evaluated at EUR [...] for the period 2014 to 2020 and a yearly run rate of EUR [...] as of 2019.⁶⁶⁶

- (885) In addition, the Notifying Party submits that the proposed transaction would also lead to merging the Parties' 2G and 3G networks, which will reduce 2G sites network elements by [...] and 3G network elements by [...]. The corresponding savings would be EUR [...] million in the period from 2014 to 2020 and the yearly expected run rate will be EUR [...] million from 2019 onwards.⁶⁶⁷
- (886) Finally, the Notifying Party claims that the merged entity will realise cost savings due to [...].⁶⁶⁸

Benefits to consumers

Demand-side efficiencies

- (887) The Notifying Party submits that the proposed transaction will create demand-side efficiencies stemming from a significant improvement of the quality of the merged entity's 2G, 3G and 4G networks compared to each of the parties' networks in the stand alone scenario.
- (888) According to the Notifying Party, network quality is of material importance to consumers and constitutes an important reason for Vodafone's and Deutsche Telekom's higher ARPUs. The estimation of the monetary equivalent of the demand-side efficiencies arising by an improved network quality has been derived by the Notifying Party mainly through a quantitative analysis based on the network quality test results (scores) carried out by the German telecommunications journal CONNECT. This analysis shows a positive average relationship between the network quality scores in relation to voice services in the annual CONNECT tests ("voice CONNECT test scores") and the voice Effective Price Per Minute (EPPM) level of each operator. The Notifying Party calculates the EPPM of an operator by dividing voice ARPU of the respective operator by its monthly minutes of use per users.
- (889) In order to derive a monetary quantification of the claimed demand-side efficiencies for the 2G and 3G networks, the Notifying Party considers that the quality of the merged entity's 2G and 3G networks will be [...] as [...] current 2G and 3G network.⁶⁶⁹ This will result in an improvement of the merged entity's CONNECT test score (compared to each of the Parties in the stand-alone scenario) which is mapped, through the econometric model provided by the Parties, into a monetary equivalent by relating test quality scores and the current prices. On this basis, the higher network quality of the merged entity would lead to an increased customer valuation

sites in the 1800 MHz band by 2020 while Telefónica plans to deploy [...] sites in the 800 MHz band, [...]. That means a reduction of circa [...] sites through the proposed transaction.

⁶⁶⁶ Annex A to Form CO.

⁶⁶⁷ Annex A to Form CO.

⁶⁶⁸ Annex A to Form CO.

⁶⁶⁹ This assumption is based on the fact that post-transaction the merged entity will have the same number of sites and a population outdoor coverage [...] one in 2013. However, it cannot be excluded that, especially following the 4G roll out by [...], the gap between [...] and the merged entity's one will increase in the future. The parties claim however that such gap will be more limited than the gap between [...]s network and the network of each of E-Plus and Telefónica in the standalone scenario. See reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 18, 19, 24 and reply to the Commission RFI dated 24 January 2014, Document ID 1084. In the reply to the Commission RFI dated 31 January 2014, Document ID 1581, question 51, the Notifying Party further clarified that, even if [...], the merged entity will have a much better coverage than [...]. Therefore the merged entity's covered can be considered [...] coverage in 2012.

of the merged entity's mobile services compared to the customer valuation of the mobile services offered by each of the Parties in the stand-alone scenario.

- (890) As regards 4G mobile services, the Notifying Party did not provide a monetary equivalent for the demand-side efficiencies stemming from an improved 4G network. The Notifying Party explained that, given that the 4G roll out has not yet been completed by any of the MNOs and that the 4G roll out plans can be changed by the MNOs depending on how competition evolves, it is more difficult to compare the quality of the 4G network of the merged entity with any of Vodafone or Deutsche Telecom (and identify a possible quality scores). However, the Notifying Party underlines that it can safely be presumed that the quality of the merged entity's 4G network will be superior to the 4G network possibly developed by the each of the Parties in the standalone scenario⁶⁷⁰. Moreover, the Notifying Party claims that, [...]*.⁶⁷¹
- (891) The Notifying Party submits that the methodology proposed for the quantification of demand-side network efficiencies does not overestimate customers' evaluation for network quality in particular in relation to Telefónica's and E-Plus' customers⁶⁷². The Notifying Party acknowledges the existence of customer heterogeneity as to the evaluation of network quality, but does not believe that it is possible to infer from their current subscription choice that E-Plus and Telefónica's customers have necessarily a lower valuation for network quality.
- (892) The Notifying Party acknowledges that, assuming that E-Plus and Telefónica's customers have a lower valuation for network quality, there are both theoretical and econometric reasons that could justify considering the monetary quantification approach proposed by the Notifying Party (based on the relationship between price and CONNECT quality score) as an overestimation of the evaluation of higher network quality by Telefónica's and E-Plus' customers. In particular, from a theoretical point of view, the Notifying Party recognises that if customers of the different MNOs are sorted exclusively in relation to one parameter, such as the valuation of network quality, the estimated values of the mean consumer benefit might overestimate the true value of customers that have chosen a network with a relatively low network quality such as E-Plus or Telefónica. For example, according to one theoretical framework the price difference between different products reflects the difference in the values that marginal consumers (that is to say those consumers who are indifferent between subscribing with an MNO that offers higher quality at a higher price or subscribing with another MNOs that offers lower quality of the product at a lower price) attach to each of these products.
- (893) However, it also considers that, even on the basis of such assumption, there are strong theoretic and econometric reasons that justify considering that the same approach might underestimate the monetary equivalent of the evaluation of higher network quality by Telefónica's and E-Plus' customers. The Notifying Party underlines that it is reasonable to assume that the marginal utility derived from an improved network quality to customers currently experiencing a lower level of quality will be higher than the marginal utility to customers already experiencing a high quality of the network. The Notifying Party has further substantiated these

⁶⁷⁰ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 12.

⁶⁷¹ See Annex A to Form CO, sections 2.1 and 2.2 of the efficiency report and revised Memorandum on the efficiencies arising from the merger of Telefónica Deutschland and E-Plus submitted on 14 December 2013, Document ID 1084, reply to Q18.

⁶⁷² Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 46.

claims by using customer survey data, that show that churn rates due to quality reasons among E-Plus' and Telefónica's customers are significant and are increasing⁶⁷³.

- (894) In addition, if consumers were also to differ in their taste as regards other dimensions than their valuation of network quality it cannot be excluded that among E-Plus' and Telefónica's customers there would also be customers with a relatively high valuation for quality. Moreover, the interaction of pricing and quality in a market with heterogeneous preferences for quality unambiguously understates the measured valuation estimates. Therefore, on balance, the Notifying Party submits that the proposed approach is a reasonable first estimate that should be considered for the assessment of this Case⁶⁷⁴.
- (895) According to the Notifying Party, on the basis of a brand perception survey (Millward Brown Brand Tracking 2012) the most meaningful values among the range of values resulting from the econometric study based on the voice CONNECT test scores have been selected.⁶⁷⁵ In particular the monetary equivalent of the customer valuation of the services offered by the merged entity would increase by roughly [...] compared to Telefónica and by roughly [...] compared to E-Plus in the standalone scenario⁶⁷⁶.
- (896) In addition, the Notifying Party has provided data on the comparison of the different tariffs plans of Service Providers to further substantiate its claim that even price-sensitive customers, such as the Service Providers' customers, attach value to the quality of the network. In particular, the Notifying Party underlined that Service Providers differentiate their tariffs according to the type of network offered. Their offers clearly indicate that a tariff plan is based on a "D" network or an "E" network. The Notifying Party claims that the fact that Service Providers are able to charge a higher price for tariff plans on "D" networks compared to tariff plans on "E" networks further indicates that even price-sensitive customers have a high valuation for network quality.
- (897) Furthermore, at the Commission's request, the Notifying Party has analysed whether the above mentioned conclusions as regards the quantitative analysis based on the CONNECT network quality test scores might be affected by the different handset subsidy policy pursued by each MNO, which leads to a different level of ARPU/EPPM⁶⁷⁷. In particular, sensitivity checks (that is to say analysing different scenarios with modified ARPU/EPPM to account for systematic differences in handset subsidies) have been carried out to correct the potential effects of systematic differences in handset subsidy policies across German MNOs⁶⁷⁸.

⁶⁷³ Reply to the Commission RFI dated 31 January 2014, Document ID 1581, question 46.

⁶⁷⁴ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 17.

⁶⁷⁵ Based on differences in brand perception between the main mobile operators, as published in the Millward Brown Brand Tracking 2012 study, the Notifying Party presented results indicating that that 24% (25%) of the price difference in voice EPPM between Telefónica (E-Plus) and Deutsche Telekom is attributable to network quality. However, the Notifying Party has explained that in its reply to the Commission RFI dated 19 November 2013, Document ID 1084 that this Report has been used not in isolation to infer the parties' conclusions on the existing correlation between quality and ARPU/EPPM, but merely as an additional piece of evidence of a broader and quantification effort.

⁶⁷⁶ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 12.

⁶⁷⁷ Reply to the Commission's RFI dated 19 November 2013, Document ID 1084, question 16.

⁶⁷⁸ Reply to the Commission's RFI dated 31 January 2014, Document ID 1581, question 49.

- (898) Concerning the reliability of the econometric analysis showing a positive relationship between ARPU/EPPM, the Notifying Party clarified that it cannot conduct a comprehensive similar analysis based exclusively on tariffs available at each point in time, due to the lack of available data. However, it provided alternative analyses to substantiate its claims by estimating the consumer benefit of network quality based on contemporaneous SIM-only tariffs (that is to say tariffs that do not contain a subsidised handset).⁶⁷⁹
- (899) In addition, at the Commission request, the Notifying Party has carried out sensitivity checks⁶⁸⁰ of its analysis to take into account the fact that [...]*, unlike the other German MNOs, does not report incoming voice minutes⁶⁸¹. Such sensitivity checks show that different ways of correcting for this issues yields similar results. Therefore, the fact that [...]* does not report incoming voice minutes appears not to distort the results.
- (900) In its Reply to the Statement of Objections, the Notifying Party questioned the Commission's assessment of its economic submissions. In particular, the Notifying Party criticises the concern expressed by the Commission that an improved network quality, if coupled with an increase in price, could actually negatively affect E-Plus' customers, who are more sensitive to price than to network quality. In this respect, the Notifying Party argues that the merger will not lead to a price increase and that the market is in any case highly differentiated, so that low price options are always available.
- (901) The Notifying Party also points out that the Commission, in its assessment of the evidence on consumers' evaluation of network quality, only identified isolated, if any, weaknesses in each piece of evidence; but it failed to appreciate how all the elements, taken as a whole, show how the merged entity's consumers would experience an improvement in network quality worth [...]*of the price currently paid.
- Supply-side efficiencies
- (902) The Notifying Party claims that the savings related to the development and the operation of the merged entity's 2G, 3G and 4G network, including some fixed costs savings, will likely be passed on to consumers as pre-defined profitability targets which are relevant for pricing take into account all costs, not only those which are variable in the short run.⁶⁸²
- (903) The Notifying Party underlines that the principles contained in the Horizontal Mergers Guidelines should be applied taking into account the specificities of the industry concerned given that it is not always true that the costs related to the production of single output units, such as the costs for the production of the goods sold (COGS) or the costs for the acquisition of additional subscribers (SACs), are the

⁶⁷⁹ Reply to the Commission's RFI dated 19 November 2013, Document ID 1084, question 20. The Notifying Party also explained in its reply to the Commission's RFI dated 19 November 2013, Document ID 1084, question 15, that the conclusions of their analysis would not impacted if voice EPPM (derived also on the basis of legacy tariffs) is related to lagged (and not only contemporaneous) CONNECT scores. (the positive and statistically significant correlation can still be observed).

⁶⁸⁰ Reply to the Commission's RFI dated 19 November 2013, Document ID 1084, question 23.

⁶⁸¹ See Annex A to Form CO, p. 50. According to the Notifying Party [...]* reports Minutes of Use (MOU) on the basis of "on-net and outgoing minutes alone". The Notifying Party therefore assumes that [...]* MOU is [...]* higher than reported. This appears to be a very low adjustment given that [...]* average ratio of incoming and outgoing voice minutes in 2012 was [...]*.

⁶⁸² See Section 4 of Annex A to Form CO.

only costs relevant for pricing decisions. In particular, due to the specificities of the mobile telecommunication sector, all OPEX and CAPEX are relevant for pricing -in addition to the (COGS) and (SACs)- given that these OPEX and CAPEX are adjusted and tied to revenue targets on a quarterly or at least annual basis.

(904) In order to further substantiate its claims on the likely pass on of supply side efficiencies the Notifying Party has explained how its tariffs are set. [...]*

(905) [...]*

(906) [...]*. Such [...]* of margins policy should indicate, according to the Notifying Party, that Telefónica requires [...]* tariff to contribute [...]* beyond covering marginal or incremental costs.

(907) Finally the Notifying Party has noted that the [...]* compensation is set taking into account the need to achieve the goals of the yearly budget, which is an indirect incentive for the [...]* to respect the financial targets included in this budget.

Double-counting

(908) In response to the Commission's observation in the 6(1)c Decision that double-counting of efficiencies must be avoided, the Notifying Party has clarified that efficiencies have not been double counted. The Notifying Party has considered as demand-side efficiencies the monetary equivalent of the improved network quality. Supply-side efficiencies correspond to the total costs savings brought about by the proposed transaction and mentioned in recitals (884) to (886). The overall quantification of the efficiencies that the Notifying Party proposes to take into account to offset the possible competitive harm of this Case is derived by adding both these efficiencies.

(909) The Notifying Party clarified that the incremental roll out costs savings have been used by the Notifying Party merely as a further evidence of its claims as regards the merged entity's strong incentives to invest to improve the quality of the network. The incremental costs savings have not been included in the final quantification of the efficiencies⁶⁸³.

Timeframe for the assessment of the efficiencies

(910) The Notifying Party submits that the demand-side efficiencies deriving from the improved quality of the 2G and 3G networks will be achieved by [...]*.⁶⁸⁴ The Notifying Party also clarified that the demand side efficiencies related to the 4G roll out will be gradually increasing starting from the implementation of the proposed transaction [...]* to the completion of the LTE roll out [...]*. The Notifying Party clarified that the monetary equivalent of these efficiencies calculated exclusively for the 2G and 3G efficiencies on the basis of the methodology referred to in recital (889) applies only in 2015. The Notifying Party submitted that such monetary equivalent could be presumed to increase in the following years due to the gradual roll out of 4G, but did not provide any quantification of such increase.⁶⁸⁵

(911) As regards supply-side efficiencies, the yearly total cost savings gradually increase over time, with cost savings of roughly [...]*. The Notifying Party submits that the fact that the claimed efficiencies will be achieved only after a longer period of time, compared to the timing considered by the Commission in previous merger cases, is

⁶⁸³ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 2.

⁶⁸⁴ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 14.

⁶⁸⁵ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 14.

due to the characteristics of the industry concerned and [...]*. However, according to the Notifying Party, such longer timing does not negatively impact the relevance and reliability of the efficiency quantification, which is based on a detailed and reliable internal study of the synergies that can be achieved by the proposed transaction.

Merger specificity

- (912) The Notifying Party considers that the efficiencies referred to in the preceding subsections are merger specific because they would not be achieved to the same extent through other reasonably practical and less anti-competitive alternative solutions. In particular, network sharing agreements are, according to the Notifying Party, unlikely to be realised for a variety of reasons, including commercial, strategic, technical and regulatory uncertainties and would not be able in any case to deliver the same level of significant demand-side and supply-side efficiencies that could be achieved by the proposed transaction.
- (913) The Notifying Party acknowledges that it has discussed about the possible conclusion of different kinds of network sharing agreements with [...]*, but submits that those discussions were interrupted at an early stage.⁶⁸⁶
- (914) [...]*⁶⁸⁷
- (915) In the Reply to the Statement of Objections, the Notifying Party clarified that [...]*
- (916) [...]*The Notifying Party clarified in its Reply to the Statement of Objections that whilst a number of network sharing options have been analysed internally [...]*.
- (917) In addition the Notifying Part explained that a number of internal analysis of a possible cooperation with [...]*were carried out, including with the help of external advisors and through the setting up of clean teams within the companies, also in the second half of 2010 ([...]* and in mid-2009 ([...]*)⁶⁸⁸.
- (918) The Notifying Party explained that all the negotiations with [...]*concerning a [...]* were suspended once [...]*. The options concerning a possible cooperation with [...]*that the Notifying Party analysed internally [...]*⁶⁸⁹.
- (919) [...]*
- (920) In relation to a network sharing agreement between the Parties, the Notifying Party clarified that a possible active sharing agreement including only the sharing of the radio equipment ("MORAN") for technical reasons is not possible due to Parties' asymmetric spectrum bands⁶⁹⁰. As regards a possible 2G and 3G spectrum sharing agreement between the Parties, the Notifying Party submits that the sharing of 2G and 3G spectrum is [...]*. Therefore for the 2G and 3G network sharing the Notifying Party assessed the different options only based on technical and financial criteria [...]*⁶⁹¹.
- (921) The Notifying Party explains that the Parties have examined the possibility of a 2G/3G network sharing [...]*, but have abandoned this option because it was creating low synergies and was not financially attractive. This was mainly due,

⁶⁸⁶ Reply to the 6(1)c Decision and reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 25 and reply to RFI dated 24 January 2014, question 4.

⁶⁸⁷ Reply to the Commission RFI dated 24 January 2014, Document ID 1512, question 4.

⁶⁸⁸ Reply to the Commission RFI dated 24 January 2014, Document ID 1512, question 4.

⁶⁸⁹ Reply to the Commission RFI dated 24 January 2014, Document ID 1512, question 4

⁶⁹⁰ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 25.[...]*

⁶⁹¹ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 27.

according to the Notifying Party, to the fact that each of E-Plus and Telefónica had different investment strategies. [...]*. In the Notifying Party's view, the Parties' misaligned investments incentives and strategies do not make such an option likely to materialise.

- (922) As regards a possible consolidation of the Parties' 2G/3G/4G networks ("Full NetCo"), Telefónica considers that this scenario is unlikely to materialise because: (a) such an agreement would require Telefónica to share with E-Plus its spectrum in the 800 MHz band, which is considered by the Notifying Party as a very valuable asset and [...]*; (b) this would translate in a loss of market share for Telefónica; (c) the Parties are unlikely to agree on future roll-out plans for the shared network, which will delay the roll-out of especially the LTE network; (d) Telefónica would suffer a major commercial downside from sharing its network with E-Plus due to the loss of market shares and to the delay in its LTE roll out plans and (e) the Parties have different views of the value of the assets that would be contributed to the possible NetCo and more generally of the considerations that should be paid to enter into such an agreement.
- (923) The Notifying Party explained that to enter into such an agreement with E-Plus it would require to be compensated for its commercial downside, that was estimated in 2012 to be of a magnitude of EUR [...]* and is estimated to be even greater now due to (a) a faster data usage increase; (b) the more significant roll out plans recently announced by both Vodafone and Deutsche Telekom and finally (c) increasing governance and decision making difficulties deriving from the different individual network and commercial strategies and [...]*.
- (924) However, E-Plus, according to the submission filed by the Notifying Party, values the 800 MHz spectrum in a different way and calculates [...]***⁶⁹².
- (925) Such different views would have not allowed the Parties to agree on the [...]* for entering into a network sharing agreement covering all the technologies. In the Notifying Party's view, similar reasons will also not allow the Parties to agree on a possible network sharing in the future.
- (926) In addition the Notifying Party considers that the 2G/3G/4G network sharing option would imply high transaction costs, lengthy negotiation and would raise very complex governance issues as well as regulatory issues. In particular, the Notifying Party considers that this option would be subject to the regulatory approval (which is uncertain).
- (927) Finally, the Notifying Party stressed that any network sharing options between the Parties would not lead to the same amount of network-related efficiencies as the proposed transaction and underlined [...]*.
- (928) In this context, the Notifying Party has indicated a number of success factors that in its view are essential for the conclusion of a network sharing agreement between two mobile operators such as: (a) symmetric spectrum allocation; (b) complementary assets or financial resources allocation; (c) high willingness to pay on one side due to the lack of other options and to renounce to a competitive advantage on the other side; (d) same technology partners and (e) same strategy related to network roll out. The Notifying Party claims that none of these factors is present in the present case for a network sharing between agreement Telefónica and E-Plus to materialise.

⁶⁹² Reply to the Commission RFI n. 9 dated 24 January 2014, Annex 2.

- (929) At the Commission's request, the Notifying Party has provided an estimate (based on its internal calculations) on the amount of synergies that could be achieved through a Full NetCo. Table 43 illustrates the comparison between the amount of supply-side efficiencies that could be achieved through a 2G/3G/4G network sharing and the merger.⁶⁹³ The values in brackets are those submitted by the Notifying Party in a more recent submission⁶⁹⁴ and take into account the correction done by the Notifying Party to account *inter alia* for the fact that, according to the Notifying Party, the 4G core network would need to remain separate under a network sharing scenario in order to preserve the Parties' competitiveness:

Table 43: Notifying Party's view on total network savings stemming from the merger and a full network sharing agreement

Area	Total cost savings (in Million Euros)			Run rate in Million Euros (as of 2019)		
	Merger	Full NetCo	Difference	Merger	Full NetCo	Difference
4G network efficiencies	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
2G/3G ⁶⁹⁵ network	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
FTE ⁶⁹⁶ savings	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Total network efficiencies	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source: The Notifying Party, Reply to the Commission RFI dated 19 November 2013, question 29

- (930) The Notifying Party has explained that the difference in terms of network supply-side efficiencies deriving from the full NetCo compared to the merger are due to the fact that [...]*. Furthermore, the full NetCo scenario would require the completion of additional [...]* LTE sites using the [...]* MHz band that would result into significantly fewer OPEX and CAPEX savings⁶⁹⁷. In addition, the Notifying Party claims that less staff, calculated in terms of Full Time Equivalents ("FTE"), can be saved in the Full NetCo scenario compared to the merger scenario, notably all the personnel dedicated to the operation of the core network, service platform, strategic evaluation and possibly corporate functions.
- (931) In addition, in response to a Commission's RFI⁶⁹⁸, the Notifying Party has provided its estimations of the incremental costs (in terms of both CAPEX and OPEX), related to serving an additional 1 million customers in both the scenario of a network sharing agreement encompassing 2G/3G/4G technologies and the merger scenario. In particular, the Notifying Party has provided these data in relation to an additional

⁶⁹³ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 29.

⁶⁹⁴ Reply to the Commission RFI dated 24 January 2014, Annex 2, Document ID 1583.

⁶⁹⁵ Costs savings in the network consolidation refer to the period 2014-2023 because the full consolidation would not be completed by 2020.

⁶⁹⁶ Full Time Equivalent ("FTE").

⁶⁹⁷ The Full NetCo will imply CAPEX reduced by [...]* Million Euros and OPEX reduced by [...]* million Euros each year.

⁶⁹⁸ Response to the Commission's RFI number 15 dated 6 May 2014.

number of 1 million subscribers having an average data usage of 300 MB per months as well as in relation to the same number of customers having an average data usage of 745 MB per month for 3G services and 1170 MB per month on LTE services.

- (932) Table 44 below contains the incremental OPEX and CAPEX savings that could be realised in each of the merger and network sharing scenario taking into account these two different usage patterns.

Table 44: Notifying Party's view on incremental costs savings stemming from the merger and a full network sharing agreement

Mobile data usage scenario (per subscriber)	Cost Type	Incremental costs savings (in Million Euros)		
		Merger	Full NetCo	Difference
300 MB per month	OPEX	[...]*	[...]*	[...]*
300 MB per month	CAPEX	[...]*	[...]*	[...]*
3G: 745 MB / LTE: 1770 MB per month	OPEX	[...]*	[...]*	[...]*
3G: 745 MB / LTE: 1770 MB per month	CAPEX	[...]*	[...]*	[...]*

Source: The Notifying Party, Reply to the Commission RFI dated 19 November 2013, question 25 and Reply to the Commission RFI dated 6 May 2014⁶⁹⁹

- (933) Finally, upon the Commission's request, the Notifying Party provided a comparison between the demand-side efficiencies that could be achieved through the merger and through the Full NetCo. The tables 45,46,47 and 48 below illustrate such comparison by reference to (a) number of 1800 and 800 sites roll out and (b) to the percentage of customers of each of the Parties covered by LTE roll out

Table 45: Comparison of roll out plans in the merger and FullNetCo scenario in 2015

Number of 4G sites rolled out	2015		
	Merger	Full NetCo	Difference
800 sites	[...]*	[...]*	[...]*
1800 sites	[...]*	[...]*	[...]*

Source: The Notifying Party, Reply to the Commission RFI dated 19 November 2013, question 25

⁶⁹⁹ The Notifying Party explained in its Reply to the RFI dated 6 May 2014 that network sharing, compared to a merger, would have significant disadvantages deriving from the fact that (a) no core network costs savings could be achieved given that in a 2G/3G/4G two separate core networks are required and (b) additional one-off costs of around EUR [...]* million are required mainly to upgrade the software used. However, given the non-incremental character of such costs, these costs are not taken into account for the calculation of the incremental costs savings in each of the merger and the network sharing scenario indicated in the table below.

Table 46: Comparison of roll out plans in the merger and FullNetCo secenario in 2020

Number of 4G sites rolled out	2020		
	Merger	Full NetCo	Difference
800 sites	[...]*	[...]*	[...]*
1800 sites	[...]*	[...]*	[...]*

Source: The Notifying Party, Reply to the Commission RFI dated 19 November 2013, question 25

Table 47: Comparison of population coverage in the merger and the NetCo scenario

Telefónica	2015		2020	
	Merger	NetCo	Merger	NetCo
LTE 800 customer coverage	[...]*	[...]*	[...]*	[...]*
LTE 1800 customer coverage	[...]*	[...]*	[...]*	[...]*
Overall LTE Telefónica customer coverage	[...]*	[...]*	[...]*	[...]*

Source: The Notifying Party, Reply to the Commission RFI dated 19 November 2013, question 25

Table 48: Comparison of population coverage in the merger and the NetCo scenario

E-Plus	2015		2020	
	Merger	NetCo	Merger	NetCo
LTE 800 customer coverage	[...]*	[...]*	[...]*	[...]*
LTE 1800 customer coverage	[...]*	[...]*	[...]*	[...]*
Overall LTE E-Plus customer coverage	[...]*	[...]*	[...]*	[...]*

Source: The Notifying Party, Reply to the Commission RFI dated 19 November 2013, question 25

- (934) The Notifying Party submits that the consolidation of the existing 2G/3G networks in the case of a Full NetCo would be the same as in the case of the merger. Therefore the demand-side efficiencies in relation to these networks will be the same in the Full NetCo as well as in a merger scenario.
- (935) As regards a possible network sharing agreement between [...] and Telefónica, the Notifying Party submits that this would be unlikely for reasons similar to the ones referred to in recital (923). [...].
- (936) The Notifying Party submits that such a network sharing agreement would not lead to the same amount of efficiencies [...].
- (937) Finally, the Notifying Party explains that E-Plus considered [...] a network sharing agreement [...] ⁷⁰⁰. [...].
- (938) Finally, the Notifying Party considers the scenario of [...] parallel network sharing agreements: [...]. The Notifying Party considers that this scenario is highly unlikely and that it would raise overwhelming regulatory issues. Moreover, the benefits deriving to consumers in this scenario would be more limited than the benefits achieved though the proposed transaction notably because 2G and 3G networks would not be shared.

6.9.1.2. Commission's assessment

Timeframe for the assessment of the efficiencies

- (939) The Commission considers, first, that any consumer benefit from efficiencies and the competitive harm arising from the merger must be assessed over the same time period. The Horizontal Merger Guidelines state that the later the efficiencies are expected to materialise in the future, the less weight the Commission can assign to them. This implies that, in order to be considered as a counteracting factor, the efficiencies must be timely. ⁷⁰¹
- (940) The Commission typically uses a period of two to four years for the assessment of the effects of a proposed merger. ⁷⁰² After a period of four years, the prediction of future market conditions becomes more speculative because a number of factors could evolve and make any such prediction less relevant and accurate: such as consumption patterns could change, new and different mobile services could emerge, players could adopt different strategies, there could be new mergers.
- (941) In this Case, the Commission notes that, as regards demand-side efficiencies, as explained in the recitals ((874) et seq.), the Notifying Party's estimations of the consumer benefits of the quality improvement brought about by the proposed transaction apply as of the year 2015. These estimates relate only to the quality improvements in the provision of 2G and 3G services. The Notifying Party stated that it expects higher level of efficiencies for 4G services, but it did not provide a sufficiently precise estimation of these efficiencies.
- (942) However, the Commission notes that, as further specified in recitals (955) to (984)), the quality improvements claimed by the Notifying Party are only likely to materialise to a limited extent. In addition, as further specified in recital ((987) to (1058)), it is not possible, on the basis of the methodologies proposed by the

⁷⁰⁰ Annex A to Form CO.

⁷⁰¹ Horizontal Merger Guidelines, paragraph 83.

⁷⁰² See for instance Commission Decision of 30 January 2013 in Case No COMP/M.6570 – *UPS / TNT Express*, paragraph 906.

Notifying Party, to reliably quantify such network improvements. Finally, as explained in recital (1182), such quality improvements are to a very large extent not merger specific.

- (943) Against this background and in the absence of any further quantification submitted by the Notifying Party, there are no efficiency claims which satisfy the criteria set out by the Horizontal Merger Guidelines (namely verifiability, benefit to consumers and merger specificity) and would therefore offset the consumer harm calculated over the same period in any of the four years following the proposed transaction. The Commission notes that the same conclusion would remain valid even if a longer period would be considered, given that the claimed efficiencies do not meet the required criteria. In particular, the verifiability of these efficiencies over a longer period of time would be even more difficult taking into account also the inconsistencies in the data submitted by the Notifying Party during the different stages of this procedure (see recital (948) to (954)).
- (944) As regards the supply side efficiencies, the Notifying Party claims that:
- (a) the joint roll-out of the 4G network will lead to total costs savings evaluated at EUR [...] million for the period [...];⁷⁰³
 - (b) the consolidation of the Parties' 2G and 3G networks will lead to costs savings of EUR [...] million in the period [...];⁷⁰⁴ and
 - (c) cost savings due to network dedicated staff reductions of EUR [...] million between [...] (which would equal a NPV of EUR [...] million). The expected yearly run [...].⁷⁰⁵
- (945) The Commission notes, first, that, as further specified in recitals (1060) et seq below, only incremental costs savings (and not total costs savings) would be potentially relevant because they would potentially be passed on to consumers. The Notifying Party provided estimations of incremental costs savings mainly for the year [...]. However, even if some incremental cost savings were to be passed on to consumers and were sufficiently verified, based on the considerations referred in recital (1193), such savings would not be merger specific to a very large extent (around [...] of incremental costs savings can be achieved by means of network sharing).
- (946) Against this background, considering the supply side efficiency claims that satisfy the criteria set out by the Horizontal Merger Guidelines (verifiability, benefit to consumers and merger specificity), the efficiency claims resulting from the proposed transaction do not offset the consumer harm in any of the four years following the proposed transaction. The Commission notes that the same conclusion would remain valid even if a longer period would be considered, given that the claimed efficiencies do not meet the required criteria.
- (947) The Commission will further assess in the following subsections whether the efficiencies claims advanced by the Notifying Party are (a) verifiable; (b) likely to benefit consumers; and (c) merger specific.

Verifiability

- (948) As a preliminary point, the Commission notes that there are significant contradictions between the information provided by the Notifying Party in its

⁷⁰³ Annex A to the Form CO.

⁷⁰⁴ Annex A to the Form CO.

⁷⁰⁵ Annex A to the Form CO.

submissions aimed at supporting its efficiency claims and the Notifying Party's replies to subsequent requests for information in the context of the discussions concerning the proposed commitments.

- (949) In particular, the Commission notes that, in response to certain requests for information sent by the Commission to assess Telefónica's remedy proposals, the Notifying Party stated that:

"[...] [...]*. The same applies to Telefonica's subscribers coming from the legacy Telefonica networks. The consolidation of both networks is a process that will take some year"⁷⁰⁶.

- (950) That statement contradicts the Notifying Party's previous estimations of the timeframe under which the claimed demand side efficiencies will materialise (see recitals (872) to (884)). In particular, it contradicts the Notifying Party claim that [...] (see, for instance, Table 48 set out in recital (933) which shows the estimations provided by the Notifying Party of [...] and offered to E-Plus customers as of [...]).

- (951) In the same response, the Notifying Party also stated that:

"[a]n assessment of both legacy networks and a detailed planning of the target network are required to be able to calculate the precise duration of the consolidation process. [...]"⁷⁰⁷

Furthermore, in response to a Commission's question on the evolution of E-Plus legacy network, the Notifying Party submitted that:

"it is confirmed that [...]"⁷⁰⁸

- (952) The Notifying Party also explained that the only official and reliable source that could be used for deriving the evolution of the capacity of Telefonica's network was Telefonica's network planning that covered, however, [...]. No other official network plan was available.⁷⁰⁹

- (953) In addition, the Notifying Party stated, in response to a Commission's RFI, that: "The consolidation of both networks is a process that will take some years. The estimate is that the whole network consolidation will take at least [...] years to be completed with a target to reach 70-80% after the [...] year".⁷¹⁰

- (954) These statements, both in isolation and in conjunction with other submissions, cast serious doubts on the verifiability of both the substance and the timing of the Notifying Party's efficiency claims based on network improvements and cost savings stemming from the integration of the two networks. Indeed, it is very difficult to understand how Telefónica's efficiency claims can be given any credit when Telefónica itself admits that: (a) it would take Telefónica [...] year post closing to devise a plan on how to integrate E-Plus' network; (b) Telefónica has not to date carried out any estimates of the capacity (or throughput) of the E-Plus legacy network from closing to full consolidation; and (c) Telefónica [...] has [...] official network plan, which covers only the consolidated network and runs up to [...] (while its network-related efficiency claims cover also former E-Plus

⁷⁰⁶ See Reply to RFI No. 18 dated 20 May 2014, Document ID 4034, question 3.

⁷⁰⁷ See Reply to RFI No. 18 dated 20 May 2014, Document ID 4034, question 3.

⁷⁰⁸ See Reply to RFI No. 19 dated 21 May 2014, Document ID 4034, question 2.

⁷⁰⁹ See Reply to RFI No. 19 dated 21 May 2014, Document ID 4034, question 3.

⁷¹⁰ See Reply to RFI No. 18 dated 20 May 2014, Document ID 4034, question 3.

subscribers and span well beyond [...] up until at least [...] and even beyond that date.

Demand-side efficiencies

- (955) **4G network coverage.** In relation to 4G network coverage, according to the Notifying Party, the merged entity will have [...] compared to E-Plus in the absence of the proposed transaction, but [...].⁷¹¹
- (956) The Commission notes that, as explained in recital (173) according to the information provided by E-Plus to the Commission, E-Plus has already started its 4G roll-out and, at the end of 2013, had [...] network elements installed. In the absence of the proposed transaction, E-Plus plans to roll out [...] network elements for its 4G network until end of [...] and to achieve [...] % outdoor population coverage with its 4G network by then.⁷¹² E-Plus intends to achieve an outdoor population coverage of [...] % at the end of [...], [...] % at the end of [...] and [...] % at the end of [...].⁷¹³ The Commission notes that these plans are more ambitious than the Notifying Party's assumption that E-Plus will achieve in a stand-alone scenario an 4G population coverage of [...] % by the [...] (see recital (873)).
- (957) The merged entity plans to achieve 4G population coverage of [...] by the end of 2015. Therefore, based on the E-Plus' most recent plans that envisage a 4G population coverage of [...] by 2015, the additional coverage brought about by the merger [...] would be [...].
- (958) However, Telefónica also submits that former E-Plus subscribers will largely be hosted by the E-Plus legacy network for [...] months after closing of the proposed transaction.⁷¹⁴ Since the post-paid contract duration is normally at most 24 months, it therefore appears likely that former E-Plus subscribers that have an on-going contract will benefit from an improved network in the short term only to a very limited extent. Therefore, even if Telefónica would not increase prices for on-going contracts in the short run, these customers are unlikely to benefit from any 4G coverage increase.
- (959) Consumers who would have subscribed with E-Plus in a stand-alone scenario will benefit from a higher 4G coverage to the extent that they are hosted by Telefónica's consolidated network or to the extent that they are allowed to roam on that network if they remain hosted on the E-Plus legacy network. The Commission further considers that consumers who would have subscribed with E-Plus in a stand-alone scenario are likely to consider 4G coverage to be of relatively low importance since their first choice would have been a cheaper product with a somewhat lower 4G coverage.
- (960) Based on the submitted estimations on E-Plus most recent roll out plans the Commission considers that compared to the stand-alone scenario, E-Plus customers in the merger scenario will likely enjoy an increased LTE population coverage of 21% by the end of 2015 to the extent that they will be able to access Telefónica's LTE network (for example by way of roaming).

⁷¹¹ This follows from Figure 1 of Annex A to Form CO and the explanations of Blue, Red and White areas provided therein.

⁷¹² See E-Plus' response to the Commission's RFI No 5 dated 24 January 2014, Document ID 1529, question 12 and response to the Commission's RFI No 6 dated 6 February 2014, Document ID 1691, question 2.

⁷¹³ Response to the Commission's RFI No 6 dated 6 February 2014, Document ID 1691, question 2.

⁷¹⁴ Reply to RFI No. 18 dated 20 May 2014, Document ID 4034, question 3..

- (961) In addition, taking into account the submitted evidence on Telefonica's roll out plans in the absence of the merger, Telefónica subscribers will also not experience a higher 4G coverage as a consequence of the merger.
- (962) **4G network speed.** In recitals (962) to (976), the Commission will discuss the implications of the proposed transaction, both as regards the maximum 4G download speed and the actual average 4G download speed in practice. The Commission considers that the average speed is particularly relevant as the theoretical maximum 4G download speed is unlikely to be reached if many customers in a cell download at the same time; more generally, the perceived quality of the service may depend substantially on the congestion of the merged network.
- (963) As regards maximum speed of 4G services, the Notifying Party did not sufficiently quantify the benefit stemming from the proposed transaction. As long as carrier aggregation is not available, the proposed transaction would allow Telefónica subscribers to benefit from a maximum speed increase from roughly [...] on LTE800 to [...] on LTE1800.
- (964) However, the Commission notes that the claimed top speed could also be achieved by Telefónica in a stand-alone scenario with the 2600 MHz band that it currently holds, that is to say in the absence of the proposed transaction. The Notifying Party indeed submits that its LTE2600 equipment can actually employ up to 20 MHz of spectrum for transmission and thereby provide a speed of up to approximately 100 Mbit/s.⁷¹⁵ Thus, the top speed increase brought about by the proposed transaction only applies to Telefónica customers in regions where the merged entity plans to roll out its LTE1800 network and in which Telefónica would not use its 2600 MHz spectrum in the absence of the proposed transaction. Originally, the Notifying Party submitted that in the standalone case, Telefónica planned at least [...] LTE2600 sites until 2020.⁷¹⁶ The Commission notes that in its Reply to the Statement of Objection, Telefónica submits that it intends to build [...] LTE 2600 sites by 2020, which is a much lower number compared to the estimations provided in Annex A to the Form CO. Based on the figures submitted in the Reply to the Statement of Objections, the difference in coverage of the planned LTE 1800 layer of the merged entity compared to Telefónica's LTE 2600 layer absent the transaction is 16% by 2015 and 48% by 2020. Only the additional maximum speed increase achieved by deploying LTE 1800 instead of LTE 2600 qualifies as a benefit of the proposed transaction.
- (965) In addition, the Commission notes that the possible speed increase deriving from the proposed transaction would not concern those E-Plus customers, who live in regions where E-Plus will roll-out its LTE services in a standalone scenario, given that E-Plus' LTE network would be based on 1800 MHz spectrum and hence offer higher speeds.
- (966) Higher maximum speeds would further derive, according to the Notifying Party, from the aggregation of different frequency bands. The Commission, however, notes that this is currently not possible with the network technology that is deployed in Germany and would require the deployment of the LTE advanced technology.⁷¹⁷ This technology is not likely to be used in the short or medium run as there are no compatible handsets at this stage which could take advantage of the higher speeds. Once it is deployed, this technology will allow MNOs to aggregate different

⁷¹⁵ Reply to Q19 of RFI No 9 to Telefónica - Updated version of 4 February 2014, Document ID 1581.

⁷¹⁶ Annex A to the Form CO, p.23.

⁷¹⁷ See Document ID 4170 for more details.

frequencies, up to a maximum of 40 MHz.⁷¹⁸ Based on this technology, Telefónica and E-Plus on a stand-alone basis could aggregate, in a similar way as the merged entity, this amount of spectrum from its spectrum portfolio including in particular the 800 MHz, 1800 MHz and 2600 MHz bands, in order to achieve similar maximum speeds as the merged entity.

- (967) Moreover, the Commission has analysed the implications for actual average speed from an increased traffic on the network of the merged entity due to the increased number of subscribers using the network. Based on Telefónica's internal financial planning, the number of [...] network elements will be reduced from [...] (of E-Plus in the stand-alone scenario) to [...] (of the merged entity) [...] even in traffic intense areas, where a combined roll-out of LTE [...] and LTE [...] will be made in the case of the merger.⁷¹⁹
- (968) Whereas the Notifying Party argues that the merged entity will roll-out LTE1800 as [...] so that any capacity issues can be avoided, this does not imply that the average speed that will be provided by the merged entity in these areas will be above that of E-Plus or Telefónica in the stand-alone scenario.⁷²⁰ The analyses of the available LTE data rates submitted by the Notifying Party show that, in the merger scenario, the cell load of the merged entity more than [increases] compared to the average cell load of Telefónica and E-Plus in a stand-alone scenario.⁷²¹ Moreover, these analyses are based on the assumption that the data traffic is distributed unevenly across cells, implying that some cells bear a much larger data traffic than others.⁷²² It is, therefore, likely that, even if the average cell load remains below a critical value, some cells may well be congested.
- (969) A higher average cell load therefore also indicates that there are more busy cells that suffer from congestion. Even for average cell loads below 50% (which is considered as a value that triggers an upgrade), an increase in the cell load may lead to more congested sites and therefore to lower average data rates.⁷²³ This reasoning also appears to be supported by the analyses submitted by the Notifying Party, stating that [...] .⁷²⁴ The report goes on to point out that customers that would subscribe with Telefónica in the absence of the merger would therefore only get a higher average data rate if the merged entity used at least [...] of the 1800 MHz spectrum in addition to the [...] spectrum of the 800 MHz. Given that the cell load of E-Plus in a stand-alone scenario is similar to that of Telefónica in a stand-alone scenario (see in particular Table 12 on page 23 of Annex 3 to the Reply to the Statement of Objections), a similar reasoning can be applied for E-Plus customers in the stand-alone scenario.

⁷¹⁸ Source: standardisation initiative 3GPP (<http://www.3gpp.org/technologies/keywords-acronyms/101-carrier-aggregation-explained>).

⁷¹⁹ See [...] Document ID 713-258, rows 22 and 35.

⁷²⁰ [...] Document ID 1084, p. 4.

⁷²¹ Annex 3 to the Reply of the Statement of Objections, table 12 on p.23

⁷²² The reply to Question 5b) of RFI 15 to Telefónica of 17 April, Document ID 3329 (and the submitted files [...] Doc ID 3333 – 3336. [...]

⁷²³ The Commission further points out that in the submitted analyses, the number of required capacity sites was determined by simply requiring that a capacity site be added if a coverage site has a cell load in excess of 50%. However, the applied model suggests that some of the coverage site would have to bear so much traffic that adding only one capacity site is insufficient. Accordingly, in principle more capacity sites would have to be added to guarantee less than 50% cell load for all sites.

⁷²⁴ Annex 3 to the Reply of the Statement of Objections, p.23.

- (970) Moreover, E-Plus would likely dedicate up to 2x20 MHz of spectrum in the 1800 MHz band for LTE whereas Table 12 on page 23 of Annex 3 to the Reply to the Statement of Objections is based on the assumption that in a stand-alone scenario Telefónica and E-Plus would use 2x10MHz of the 800 MHz band and 2x10MHz of the 1800 MHz band, respectively.⁷²⁵ As pointed out by the Notifying Party, the cell load will thus be increased by a factor of 5.07 in 2016 for the merged entity compared to E-Plus in a stand-alone scenario. This, by applying the same reasoning as put forward in recitals (967) to (969), would require the number of resources of the merged entity to be increased by a factor higher than 5. If less spectrum is used, there is even a risk that the average speed of the merged entity will be lower than that offered by E-Plus in a stand-alone scenario.
- (971) The Commission further points out that the difference in the cell load between the merged entity and the merging Parties in a stand-alone scenario may be higher than the one reported in Annex 3 to the Reply to the Statement of Objections. This is because the capacity layer based on the 2600 MHz spectrum apparently has not been taken into account by the Notifying Party to estimate the cell load of each of the Parties in the stand-alone scenario. According to Telefónica, the capacity layer based on 2600 MHz would be used in the stand-alone scenario for particularly busy areas and would reduce the risk of congestion in those areas.
- (972) In addition, the Commission considers that it should be taken into account that the merged entity plans to install a capacity layer [...] in [...] areas, [...].
- (973) The Notifying Party also appears to argue that less additional spectrum would be required to offset the higher cell load of the merged entity because the propagation characteristics of 800 MHz spectrum are better than the propagation characteristics of 1800 MHz spectrum. More precisely the Notifying Party argues that across a given distance, the signal strength transmitted by 800 MHz spectrum would decrease less than the signal strength transmitted via 1800 MHz spectrum. This would result in an increase of the spectral efficiency, that is, the data volume that can be transmitted by a given amount of spectrum, roughly by a factor of 2.⁷²⁶ The technical report submitted by the Notifying Party contains similar arguments with respect to 2600 MHz spectrum having worse propagation characteristics compared to 1800 MHz spectrum.
- (974) Whereas the Commission accepts that generally spectrum of a lower frequency has better propagation characteristics, at the same time the coverage of sites using higher frequency spectrum is usually smaller. This implies a smaller distance that has to be transversed and hence the signal strength deteriorates less. To the extent that sites are mainly installed for capacity purposes, the coverage of these sites can be expected to be even smaller. Therefore, it cannot be assumed that the spectral efficiency of low frequency spectrum is higher.[...]⁷²⁷
- (975) Furthermore, the Commission notes that the spectral efficiency of bit/s/Hz assumed in the technical report (both for the 1800 MHz and for the 800 MHz band) appears to

⁷²⁵ According to its replies to Questions 1 and 2 of RFI 15 to Telefónica of 17 April, Document ID 3329.

⁷²⁶ Reply to Question 2b) of the RFI No15 to Telefónica of 17 April, Document ID 3329.

⁷²⁷ Reply to Question 5 of the RFI No 15 to Telefónica of 17 April. See also Chen, Y., Walke, B.: Analysis of Cell Spectral Efficiency in 3 GPP LTE Systems. IEEE 24th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications, (PIMRC) 2013, Document ID 4388.

be too high. In other submissions on [...]*.⁷²⁸ Assuming a spectral efficiency of [...]*/bit/sec/Hz in the submitted analyses of the available LTE data rates of the technical report [...]*

- (976) Based on these considerations, the Commission acknowledges that the proposed transaction will increase the maximum speed in some areas. It appears, however, to be unlikely that the average 4G speed will increase as a consequence of the proposed transaction, in particular for consumers who would subscribe with [...]*. On the contrary, there is a risk that the average 4G speed may decrease in particular [...]*. In practice, average speed will be much more important than maximum speed from a consumer perspective as explained in recital (962). Therefore, the Commission considers that the maximum speed increases are of less importance than the risk that the average speed, [...]*, will be reduced. Overall, 4G speed improvements brought by the proposed transaction will thus be [...]* limited.
- (977) **2G/3G networks.** With respect to the efficiencies claims related to 2G/3G technology, the Commission considers that while the Notifying Party has shown that the 3G coverage will [...]* increase compared to the stand-alone scenario, it did not adequately substantiate its claim that the merged entity's network would lead to higher average speeds -or, more generally, to a higher network quality.
- (978) As regards 3G coverage, Annex 3 to the Reply to the Statement of Objections assesses three aspects: (a) number of sites, (b) coverage areas and (c) analysis of test drive data. Based on the data submitted by the Notifying Party and the technical report, the Commission accepts that the 3G outdoor coverage of the merged entity will reach at least [...]* % and therefore [...]* % higher than the 3G coverage of Telefónica in 2013.⁷²⁹ However, Telefónica would build roughly 350 3G sites per year in a stand-alone scenario. Thus, the coverage gain of the merged entity compared to the Telefónica network at a given point in time in the future is likely to be less than [...]*% for former Telefónica subscribers the absence of the proposed transaction. In addition, contrary to the claim of the Notifying Party and based on data obtained from [...]*, the 3G coverage will remain less [...]*.⁷³⁰ Moreover, E-Plus submitted information indicating that by [...]* it will even reach a 3G outdoor population coverage of [...]*% in a stand-alone-scenario.⁷³¹ Therefore, the 3G coverage gain for E-Plus subscribers will be minimal.
- (979) As regards 2G coverage, the Commission notes that the current coverage of Telefónica and E-Plus is already close to [...]* so that any improvement brought by the merger can only be marginal.
- (980) Based on the information submitted by the Notifying Party, the Commission considers that the cell load of 2G/3G sites will likely increase as the merged entity will operate [...]* fewer 2G transceivers and fewer 3G carriers than both the Parties plan to use on a stand-alone basis, whilst the merged entity will have to serve a large number of customers. Based on Telefónica's internal financial planning provided by the Notifying Party⁷³², the merged network will feature fewer 2G, 3G and 4G

⁷²⁸ Reply to Question 5 of the RFI No 15 to Telefónica of 17 April, Document ID 3329. See also Chen, Y., Walke, B.: Analysis of Cell Spectral Efficiency in 3 GPP LTE Systems. IEEE 24th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications, (PIMRC) 2013, Document ID 4388.

⁷²⁹ Reply of 12 December 2013 to the RFI No 5 to Telefónica, Document ID 1975, question 11.

⁷³⁰ [...]*

⁷³¹ Reply of 24 January 2014 to RFI No 5 to E-Plus, Document ID 1529, question 12.

⁷³² Reply to the RFI No 9 to Telefónica - Updated version of 04/02/2014, Document ID 1581.

network elements than the two stand-alone networks at any given point in time. According to Telefónica's internal financial planning, by 2020, the Parties (together) would build in total LTE [...] network elements in a stand-alone scenario, compared to [...] network elements in the merger scenario.⁷³³ Telefónica also confirms that the joint network would contain around [...] UMTS carriers (3G) and [...] GSM transceivers (2G) less than the networks of the two Parties together in a standalone scenario.⁷³⁴

- (981) Accordingly, post-transaction, whilst the merged entity's customer base would roughly double compared to each of the Parties on a stand-alone basis, the merged entity would only operate roughly 23% and 13% more 2G elements than E-Plus and Telefónica in a stand-alone scenario, respectively, as well as 18% and 21% more 3G network elements, respectively.⁷³⁵
- (982) The technical report submitted by the Notifying Party on capacity issues of the 3G layer of the merged entity's network compares the merged entity's 3G network to that of [...]. In doing so, it does not address properly the extent to which the 3G quality changes would compare to the stand-alone scenario. Moreover, the submitted "plausibility checks" are mainly based on comparing the number of sites, customers and the amount of available spectrum, but do not properly derive the expected 3G cell load. Since a similar reasoning as already set out in recital (968) applies also to 3G, a loss of 3G network elements compared to those of the Parties in the stand-alone scenario may decrease the average available 3G data rate. The submitted technical report does not adequately show that despite the loss of network elements the average available 3G data rate would remain unchanged or would even increase compared to the stand-alone scenario.
- (983) For the reasons mentioned in this subsection the Commission concludes that only the above identified 4G maximum speed improvements and the 3G coverage improvements for former Telefónica subscribers compared to the stand-alone scenario are sufficiently verified.

Supply-side efficiencies

- (984) The Commission notes that since, as explained in more detail at recitals (1059) to (1090), the Commission does not consider that the total cost savings would likely be passed-on to consumers, it is not necessary to take a view on the question of the verifiability of the network costs savings that have been indicated by the Notifying Party. Moreover, as also explained in more detail at recitals (1077) to (1089), the Commission also considers that the Notifying Party did not adequately substantiate its estimates of the possible incremental cost savings arising from the proposed transaction.

Benefits to consumers

- (985) The Commission identified a number of shortcomings in the approaches suggested by the Notifying Party to assess the claimed network efficiencies. The identified shortcomings relate to both the proposed method for quantifying the consumer benefit from an increase in network quality (demand-side efficiencies) and the pass-on of fixed cost savings (supply-side efficiencies). These shortcomings were set out in detail in the Statement of Objection.

⁷³³ See [...] Document ID 713-258, column L.

⁷³⁴ Reply of 31/01/2014 to RFI No 9 to Telefónica, Document ID 1581, question 29.

⁷³⁵ Based on [...] Document ID 713-258, rows 6 and 7.

- (986) The Notifying Party expressed its views on the Commission's preliminary assessment in its Reply to the Statement of Objections. In the same context, the Notifying Party provided some additional evidence aimed at addressing the assessment provided in the Statement of Objections. After a careful assessment of the additional evidence provided, the Commission concludes that this additional evidence and comments do not materially affect the conclusions reached in the Statement of Objections.

Demand-side efficiencies

- (987) In relation to the consumer benefit derived from increased network quality, the Notifying Party has submitted several analyses to quantify the consumer benefit of improved network quality as a consequence of the proposed transaction. In particular, it has submitted quantitative studies (a) measuring the effect of the MNOs' respective mobile network quality on effective prices per minute ("EPPM") for voice services, (b) assessing the relationship between ARPUs and scores of the MNOs across several dimensions based on a customer survey (Millward Brown brand study), (c) comparing data-only tariffs of different mobile operators, (d) comparing contemporaneously offered tariffs across MNOs, and, (e) comparing the prices of similar tariffs offered by service providers on different networks.

(i) Commission's assessment of the econometric study provided by the Notifying Party to measure the effect of the MNOs' respective mobile network quality on EPPM

- (988) As regards the study which infers the consumer benefit of network quality by econometrically relating EPPMs for voice services across MNOs to their respective mobile network quality, the Commission identified several shortcomings, and referred to them in detail in the Statement of Objections. In particular, the Commission found in the Statement of Objections that:

- (a) Using [...] network quality as a benchmark implicitly assumes that the network quality difference between [...] and the merging MNOs in a stand-alone scenario would remain unchanged in the future;
- (b) The assumption, relied upon in the study, that the quality of the merged entity's network will be [...] the quality of [...] network is not sufficiently justified;
- (c) Contrary to the Notifying Party's claims, the 2013 results of the CONNECT test scores should not be disregarded;
- (d) The reported results do not appear to be reliable, since they change considerably if the model is estimated focusing on recent years;
- (e) An alternative econometric model for the quantification of the quality improvements could be used in which the (voice) ARPU is used as dependent variable and the Minutes of Use ("MoU") is introduced in the regression as an additional explanatory variable;
- (f) The approach of inferring the overall user benefits of network quality (including quality of mobile data transmission) from the benefits of voice network quality only was not justified;
- (g) The model used by the Notifying Party does not account for customer heterogeneity as to the valuation for network quality;
- (h) In the model proposed by the Notifying Party, there is a risk that nominal differences in ARPU/EPPM may not reflect price differences of tariffs offered at a given point in time, since ARPU/EPPM is based both on legacy tariffs and

on contemporaneously offered tariffs, nor the differences related to different handset subsidy policies;

- (i) Finally, the model proposed by the Notifying Party fails to include the variable accounting for the differences in the EPPM/ARPU across MNOs that are stable over time, that is to say, MNO-specific effects.
- (989) The supplementary analysis provided by the Notifying Party in the Reply to the Statement of Objections, though presenting some additional insights, does not provide sufficient evidence for the Commission to alter its preliminary assessment set out in the Statement of Objections. The assessment of the overall analysis, including the arguments put forward in the Reply to the Statement of Objections, is presented in the subsections a) to i) below.
- a) Using [...] network quality as a benchmark implicitly assumes that the network quality difference between [...] and the merging MNOs in a stand-alone scenario would remain unchanged in the future
- (990) The Notifying Party did not carry out a proper comparison to identify the increase in CONNECT test scores that the proposed transaction is expected to bring about, compared to the CONNECT test scores of each of the Parties in the stand-alone scenario. The Notifying Party effectively assumes that each of the merging MNOs would continue to have the current CONNECT test score in the absence of the proposed transaction. At the same time, the Notifying Party argues that in relation to the 4G network, the quality difference between Deutsche Telekom and Vodafone, on the one hand, and E-Plus and Telefónica, on the other hand, would likely increase in the future in the absence of the proposed transaction, without providing a detailed analysis as to why this would be the case.
- (991) The analysis provided by the Notifying Party thus fails to sufficiently demonstrate that the entirety of the network quality improvement assumed in the analysis would exclusively stem from the proposed transaction, and merely assumes that no network improvement would materialise in the network of each of the merging parties absent the proposed transaction.
- (992) As set out in recital (981), a reduction in the number of 3G network elements in the merger scenario compared to those of both merging parties in the stand-alone scenario may decrease the average available 3G data speed. Accordingly, based on the submitted information it appears plausible that the average 3G data speeds may not increase as a result of the proposed transaction. As regards the claimed efficiencies derived from 4G roll-out, the Notifying Party has not provided sufficient evidence that would demonstrate that [...] b) The assumption that the quality of the merged entity's network will be [...] the quality of [...] network is not sufficiently justified.
- (993) The assumption, relied upon in the econometric study proposed by the Notifying Party, that the quality of the merged entity's network will be [...] the quality of [...] appears not to be sufficiently justified (see recital (889)).
- (994) The Commission notes that the Notifying Party not only expects that the merged entity will be able to achieve the same CONNECT network quality score as [...] in

categories where it currently lies [...]*, but that it will continue to [...]* in the categories where it already [...]* in 2012⁷³⁶.

(995) Furthermore, as set out in recitals (977) to (983), there are reasons to believe that the merged entity network may not reach the level currently held by [...]* for its 3G network, in particular as regards coverage.

c) The 2013 results of the CONNECT test scores should not be disregarded

(996) As regards the specific content of the econometric exercise proposed by the Notifying Party, the latter argues that the quality differences of the CONNECT test score 2012 should be used in order to identify the exact quality improvement brought about by the proposed transaction in terms of CONNECT test score points. The Notifying Party considers that E-Plus' quality improvement registered in the CONNECT test score 2013 would be only transitory and therefore not relevant for the purpose of the calculation of the exact quality improvement brought about by the proposed transaction.⁷³⁷ The Commission rejected this argument in the Statement of Objections, on the ground that an improvement in network quality (in particular in 3G) may still positively affect the network perception in the coming years.

(997) In its Reply to the Statement of Objections, the Notifying Party provided an update to its analysis based on the results of the CONNECT test for 2013. The results of the analysis based on 2013 CONNECT test score are roughly in line with those based on the 2012 scores, although they result in a higher increase in the quality for Telefónica network, and a slightly lower one for E-Plus'.

(998) d) The reported results do not appear to be reliable, since they change considerably if the model is estimated focusing only on recent years.

(999) The reported results, which are based on data covering the period from 2003 to 2012, do not appear to be reliable, since they change considerably if the model is estimated focusing on recent years. The aim of the analysis in this Case is to draw conclusions on current consumers' evaluation of network quality. Therefore, it would add to the reliability of the results that the latter remain valid if the considered sample is restricted to recent years (that is to say that the analysis would be based on data sets covering only recent years). This is particularly important in the present case, given the significant transformation the mobile telecommunications industry went through over the period from 2003 to 2013 in terms of availability, type of use, overall network quality. For these reasons, the Commission, in the assessment set out in the Statement of Objection, checked how the results of the analysis would change if the time period that is used to estimate the benefits of network quality is restricted to the periods from 2005 to 2012 and from 2008 to 2012. Based on this calculation, the consumer values of voice network quality estimated for the specification, which does not control for MNO brand effects⁷³⁸, vary significantly, as set out in Annex B to the Statement of Objections. If MNO brand effects are taken into account, the estimated consumer values of voice network quality vary even more.

(1000) The Notifying Party, in its Reply to the Statement of Objections, questions the approach taken by the Commission on the ground that, first, results that are based on larger samples should generally be more reliable than those based on smaller ones

⁷³⁶ See Annex A to Form CO.

⁷³⁷ See Annex A to Form CO, p. 56.

⁷³⁸ Econometrically, this is referred to as fixed effects at the MNO level.

and, second, there is no economic justification to restrict the sample to concentrate on recent years.

- (1001) In the face of this criticism, the Commission acknowledges that, in abstract, exercises carried out on larger data sets tend to increase the precision of estimates. However, at the same time, the Commission reiterates that, in general, the fact that the results of an analysis remain valid even when the analysis is focused only on part of all the data adds to the reliability of any econometric exercise; this is the case provided that the sample of data is selected (sample restriction) in an economically meaningful way. In this Case, the fact that the analysis is robust to reasonable sample restrictions, as the one resulting from focussing on data sets related to recent years, would generally point in favour of its reliability. Conversely, if the results do not hold once the sample is restricted to cover only recent years, this implies, provided that the restriction leads to sufficiently large sample to make a meaningful inference, as it is the case here, that the results are not equally valid for those years.
- (1002) A result based on a larger sample, but primarily driven by data referring to years prior to 2005, is likely to be less informative of consumers' preferences for network quality in 2014, than one based on a smaller but more recent sample. In the context of an assessment of the competitive impact of mergers the current and future consumers' preferences to network quality are of particular importance. Furthermore, current consumers' preferences are particularly important in the markets for mobile telecommunications services, which are subject to significant changes of consumers' preferences over time. For this reason, the Commission rejects the Notifying Parties' argument and reiterates the relevance and importance of the robustness tests based on the restriction of the sample.
- e) The need to take explicitly into account usage and to use therefore an alternative econometric model containing MoU as an additional explanatory variable
- (1003) In the Statement of Objection, the Commission proposed an alternative econometric model for the quantification of the quality improvements in which the (voice) ARPU is used as a dependent variable and MoU is introduced in the regression as an additional explanatory variable. Indeed, when using the MoU as an explanatory variable instead of using it to derive the voice EPPM, the econometric model allows for a more flexible modelling of the ARPU as compared to the model proposed by the Notifying Party.⁷³⁹ The Commission has therefore estimated the relationship between the voice network quality as measured by the CONNECT voice test core and the voice ARPU through a model taking into account also voice usage by using the MoU. Whereas the estimates of the econometric model that takes into account MNO brand effects are relatively stable to this modification, the estimated values of the model that does not take into account MNO brand effects drop by roughly factor four.
- (1004) In its Reply to the Statement of Objections, the Notifying Party pointed out that this alternative model is (a) inconsistent with the view, expressed by the Commission in the Statement of Objections⁷⁴⁰, that ARPU represents a "single measure of price" and "usage needs are exogenous"; in addition, the Notifying Party argues that (b) the inclusion of MoU as an additional independent variable would lead to biased

⁷³⁹ The Commission considers that regressing the voice EPPM on the voice CONNECT test score effectively amounts to imposing an additional restriction compared to the model based on the voice ARPU and the MoU.

⁷⁴⁰ Annex 1 to the Statement of Objections, paragraph 67.

estimates given that MoU that is included in the model by the Commission as a factor affecting ARPU, would be at the same time a function of the price portion embedded in ARPU, as usage would tend to reduce as price increases. This so called "endogeneity problem" implies that the estimates are biased.

- (1005) In light of the criticisms raised by the Notifying Party, the Commission would like to stress the following arguments. Contrary to the Notifying Party's claim in (a), the model proposed by the Commission is consistent with the idea expressed in the Statement of Objections⁷⁴¹ that usage needs, as identified by MoU, are exogenous to the price expressed in the ARPU, given that a change in ARPU is not expected to affect the usage at the single consumer level, but rather to affect the number of users subscribing to a certain tariff.
- (1006) With respect to the criticism in (b), the Commission acknowledges that an endogeneity problem as the one identified by the Notifying Party can arise to the extent the assumption of the exogeneity of MoU with respect to prices is not tenable. In other words, to the extent that MoU, and not only the subscription choice, depend on prices, this may imply that the obtained estimates are biased. The Commission notices that, even considering this possibility, this would not have a direct impact on the estimate for the CONNECT test score. This issue is further discussed in Annex B to this Decision.
- (1007) More generally, the Commission notices that the results of the model proposed by the Commission differ substantially from those obtained by the Notifying Party only when the general, underlying differences between the different MNOs are not accounted for in the regression. Once MNO specific effects are taken into account, the two models do not differ substantially in terms of results.⁷⁴² This strongly suggests that, regardless of the model used, MNOs specific effects should be included; this translates into a significantly lower estimated effect of the CONNECT test score on EPPM/ARPU.

f) Inferring the overall user benefits of network quality (including the quality of mobile data transmission) exclusively from the benefits of voice network quality is not justified

- (1008) The Commission argued in the Statement of Objections that inferring the overall user benefits of network quality from the benefits of voice network quality only was not justified; in fact, the quality of data transmission is also an important component of the users' assessment of network quality, and it is likely to become even more so in the near future (see also recital (396)). Due to missing information of historic data traffic, the Notifying Party had focused the analysis on estimating the user benefit from voice network quality. In doing so, the Notifying Party argues that the user benefit deriving from better data quality was likely to be higher than the one for voice services; this is the case because voice services rely more and more on data services (such as Skype, Viber) and features such as music and video streaming will be judged by similar standards as voice services in the past (uninterrupted and steady connection).⁷⁴³ The Commission considered that mobile data applications

⁷⁴¹ Annex 1 of the Statement of Objections, paragraph 67.

⁷⁴² In both cases, in fact, the estimated coefficient of the CONNECT test score is around 0.4%, once this is estimated on the sample including the period 2003 to 2012. The Commission points out that the MNO specific effects report highly significant coefficients, and that the overall explanatory power of the regression increases once these controls are included

⁷⁴³ See Annex A to Form CO, p. 55.

significantly differ from mobile voice and mobile data quality is defined differently than mobile voice quality. Therefore, the results from mobile voice could not be reliably used to predict user benefits from increased mobile data quality.

- (1009) As part of its investigation that lead to the assessment presented in the Statement of Objections, the Commission has asked German MNOs for information on historic mobile data and SMS traffic and has conducted a similar analysis to the one submitted by the Notifying Party. The Commission has estimated the value of an increase in the total CONNECT test score (that is, the sum of the voice and the data test score) when considering the total ARPU and accounting for data usage, SMS usage and MoU. This estimation yields much lower estimates of the consumer benefits compared to the specification that focuses on voice. The estimated results, when the time horizon is restricted, find no relationship between ARPU and the CONNECT test score.⁷⁴⁴ The Commission has also analysed by how much the data ARPU increases for each additional point of CONNECT Data test score when at the same time accounting for SMS usage, as suggested by the Notifying Party.⁷⁴⁵ The estimated values of this specification are even negative, suggesting a negative value of (improved) network quality.⁷⁴⁶ These results suggest that the total consumer benefit of mobile network quality is significantly lower than that estimated by the Notifying Party when focusing on voice and possibly even non-existent.
- (1010) In its Reply to the Statement of Objections, the Notifying Party argues that the positive relationship between test scores and users' evaluation derived for voice service should be valid also for data and SMS service. To support this claim, it shows that the relative difference in the CONNECT test score between the Parties and Vodafone is actually higher for data services than it is for voice; this would indicate that the merger, by bringing the Parties' data services up to the level of Vodafone's, would likely generate a quality improvement in data services that is presumably more than proportional to the one identified in voice services.
- (1011) In addition, the Notifying Party raises the following criticisms to the econometric analysis carried out by the Commission on SMS and data ARPU. First, most of mobile revenues in the period 2003 to 2008/2009 stem from voice services, so data only play a marginal role in the composition of ARPU. Second, as data usage started to increase substantially in the period 2008/2009, a relationship between test scores and data ARPU cannot be correctly identified using a sample encompassing the period 2003 to 2012. Third, the Commission's model leads to implausible results for what concerns SMS and data usage. Finally the definition of data ARPU might not be consistent over time and across providers. For all these reasons, the Notifying Party considers that the model would only be suited for the identification of a relationship between ARPU and the CONNECT test scores for voice services, and it would not be suited for the inclusion of SMS and data services.
- (1012) The Commission objects to the interpretation given by the Notifying Party to the difference in the CONNECT test score between Telefónica and E-Plus and [...] for data and voice respectively. The fact that this difference is higher for data than it is for voice provides in itself no indication that the Parties will be "catching up" (sic) with [...] in data quality. In addition, even assuming that such catching up would

⁷⁴⁴ In statistical terms, the resulted coefficient is not statistically different from zero. For further details see Annex B.

⁷⁴⁵ See reply to RFI No 9 of 24/01/2014 to Telefónica, Document ID 1581, question 45.

⁷⁴⁶ This result, which appears to be counterintuitive, may be in parts due to methodological inconsistencies in splitting the total ARPU into voice and data ARPU across MNOs.

actually take place post-merger, the question of whether a relationship between data test score and data ARPU can be found remains open. It is only if these two missing elements could be shown, that any results found for voice services could be deemed to be conservative with respect to the quantification of the total consumer benefit brought about by the proposed transaction.

- (1013) As to the contribution of data to the total ARPU of MNOs,⁷⁴⁷ the Commission notices, contrary to the Notifying Party's claim, that this is far from being negligible. The share of data in the total ARPU of each of the different MNOs, ranges between [...] and [...] in 2003, between [...] and [...] in 2007 and above [...] for all the MNOs in 2012. It seems therefore clear that omitting information on data, and simply assuming that the same pattern observed for voice should apply for data, as the Notifying Party seems to suggest, would deprive the analysis of a substantial part of its value.
- (1014) The Commission agrees that data usage has experienced a sharp increase in the period from 2008 to date; this happened to different extents for the various MNOs during that period, and translated into a visible increase in data ARPU during the recent years. However, this is, in itself, not a sufficient reason to dismiss an analysis on total ARPU or data-only ARPU, especially given that (a) the regression allows, through the inclusion of year fixed effects, for controlling for the overtime development in ARPU that is independent from usage and from quality improvements. In addition (b), the Commission estimated the model on different time-spans, also restricting the sample to include only recent years.
- (1015) As already pointed out in the Statement of Objections,⁷⁴⁸ the Commission reiterates that the model provides non clear-cut and possibly counter-intuitive results once SMS and data usage are included in the analysis. This is particularly the case once the analysis is focussed on data ARPU, where, when the estimation is carried out on the full time-span, a negative and significant relationship is found between ARPU and the CONNECT test score. This would be a counter-intuitive result, as it would imply that higher ARPU would be associated to lower quality networks as accounted for by the CONNECT test score. While it cannot be excluded that such counter-intuitive results may be linked to anomalies in the data, as the Notifying Party suggests, the Commission has not found any clear-cut evidence of such issues being present in the data. In addition, the Notifying Party has not provided, either before or after the issuing of the Statement of Objections, any substantial economic reason why the model proposed by the Notifying Party itself should not be used for data usage, while it should be suitable for voice usage.
- (1016) For the reasons outlined in the preceding recitals, and in the absence of a clear reason why data usage may not be included in the analysis, the results of the additional work carried out by the Commission expanding the original analysis provided by the Notifying Party should not be disregarded. The results suggest that no discernible positive relationship can be found between the CONNECT test score and ARPU as regards SMS and data usage (that is to say, that there is no evidence that higher quality scores for data and SMS services would correspond to higher ARPUs).
- g) The approach used by the Notifying Party does not account for customer heterogeneity as to the valuation for network quality

⁷⁴⁷ See paragraph 683 of the Reply to the Statement of Objections.

⁷⁴⁸ See paragraph 704 of the Statement of Objections and paragraph 18 of Annex II to the Statement of Objections.

(1017) In the Statement of Objections, the Commission had pointed out that the approach used by the Notifying Party does not account for customer heterogeneity as to the valuation for network quality. As Deutsche Telekom and Vodafone have a higher general network quality and achieve higher prices than E-Plus or Telefónica, it would be expected that generally consumers with a high valuation for quality tend to join them as having a relatively higher network quality. Customers of E-Plus and Telefónica, on the other hand, have likely expressed by their subscription choice a preference for lower prices at the expense of a possibly better quality of service. These customers therefore may have a significantly lower valuation for network quality than subscribers of Deutsche Telekom or Vodafone. In its submissions, the Notifying Party, however, also argues that (a) heterogeneity in consumer benefits induces firms to set prices below the price that would reflect the actual network quality as perceived by consumers, and, (b) due to differences in dimensions other than network quality (such as for example brand preferences) also consumers with a relatively high valuation for quality may sign up with MNOs that have a rather low network quality.⁷⁴⁹ This, in turn, would lead to underestimate the benefit for the Parties' customers of network quality.

(1018) Overall, there appear to be arguments indicating that the estimated values overstate the actual valuation for network quality of E-Plus and Telefónica subscribers and other arguments indicating that the estimated values understate their actual valuation. It is therefore unclear whether these countervailing effects can be expected to offset each other or whether the estimated values will be biased in one particular direction. In the absence of a valid indication as to which effects would prevail, the Commission does not exclude the possibility that the estimated average consumer benefit of network quality may still exceed the average valuation of network quality of E-Plus and O2 customers. As a result, it cannot be concluded that the estimated average consumer benefit results from the model should not be considered as conservative for what concerns the different value attached to network quality by consumers.

h) Risks deriving from the fact that ARPU/EPPM is based both on legacy tariffs and on contemporaneously offered tariffs and from the need to take in due account handset subsidies

(1019) In the Statement of Objection, the Commission highlighted the risk that nominal differences in ARPU/EPPM may not reflect price differences of tariffs offered at a given point in time, since ARPU/EPPM is based both on legacy tariffs and on contemporaneously offered tariffs. As Deutsche Telekom and Vodafone entered the German retail market for mobile telecommunications services earlier, there is a risk that Deutsche Telekom and Vodafone have relatively more consumers which are still using old mobile tariffs than the other operators. This might be one of the cause of Deutsche Telekom and Vodafone having typically higher EPPM/ARPU. As the Notifying Party claimed not to possess the required information to address this problem,⁷⁵⁰ the Commission took the view that the distortive effect from legacy tariffs could be at least mitigated by accounting for MNO specific effects (that

⁷⁴⁹ See revised Memorandum on the efficiencies arising from the merger of Telefónica Deutschland and E-Plus submitted on 14 December 2013, Document ID 1084, reply to Q17. The Notifying Party also argues based on an econometric model that estimating the consumer benefits of quality at a consumer level may be downwards biased. However, this reasoning is not relevant in light of the aggregated data used by the Notifying Party to estimate the consumer benefit of quality.

⁷⁵⁰ See [...] *Document ID 1084, reply to Q20.

essentially capture differences in the EPPM/ARPU across MNOs that have been stable over time) in the econometric model.

- (1020) The Commission also noted in its 6(1)(c) Decision that a large part of the nominal differences in ARPU or in the EPPM may be due to asymmetries in the handset subsidy policy across MNOs. Telefónica does not offer any handset subsidies and E-Plus has very low expenses for handset-subsidies⁷⁵¹ whereas Deutsche Telekom as well as Vodafone offer subsidised handsets linked predominantly to 24-month contracts.⁷⁵² Typically, higher handset subsidies are coupled with higher monthly fees, since MNOs recoup the initial handset subsidies by charging higher monthly fees.
- (1021) The Notifying Party has submitted several versions of their original analysis which purports to take into account the different handset subsidies. The results indicate that the estimated consumer benefits of network quality does not change materially if different assumptions are used to correct the handset subsidy imbalances –especially in the model where MNO specific effects are included.⁷⁵³
- (1022) The estimated values of the consumer benefit somewhat decrease as a higher correction of the voice ARPU to account for different handset policies is applied. In order to justify that a (material) correction for different handset subsidy policies would not be necessary, the Notifying Party pointed out that Deutsche Telekom and Vodafone are charging a higher total cost of ownership (defined as the initial price of the handset plus the tariff fees over the minimum contract duration) than Telefónica or E-Plus which shows that the former two MNOs are not using systematically higher handset subsidies.⁷⁵⁴ However, the Commission disagrees with the proposition that a higher total cost of ownership indicates that the handset subsidies of Deutsche Telekom or Vodafone would not be higher than those of Telefónica and E-Plus. In fact, the total cost of ownership does not change if the handset price is lowered and instead the same amount is charged additionally through higher monthly fees. On the basis of the ARPU evolution of the MNOs, the Commission considered in the Statement of Objections that it would be more appropriate to increase the initial handset correction by another [...]*.
- (1023) In its Reply to the Statement of Objections, the Notifying Party provided additional information showing that both the initial upfront payment as well as the monthly subscription cost are generally higher for Deutsche Telekom and Vodafone than for Telefónica and E-Plus.
- (1024) However, Telefónica has apparently included in its estimates the costs of the voluntary myHandy component, whereby Telefónica offers subscribers to purchase a handset in monthly instalments.⁷⁵⁵ As previously submitted by Telefónica, the myHandy component is voluntary and not a genuine handset subsidy as well as not included in the ARPUs.⁷⁵⁶ The Commission expects that significantly fewer subscribers actually chose to buy a handset via the myHandy offer, which is merely an option, compared to a bundled offer that automatically includes a subsidized

⁷⁵¹ Based on E-Plus' reply to data RFI of 4 October, [...]*, Document ID 670.

⁷⁵² Paragraph 182 of Form CO.

⁷⁵³ See [...] *Document ID 1084; RFI No 9 of 24/01/2014 to Telefónica, Document ID 1581, replies to questions 16 and 49.

⁷⁵⁴ RFI No 9 of 24/01/2014 to Telefónica, Document ID 1581, reply to question 49.

⁷⁵⁵ See Table 20 of the Reply to the Statement of Objections.

⁷⁵⁶ See updated reply of 12 December 2013 to Q16 of RFI 5 to Telefónica.

handset. Therefore, the Commission maintains its view that a correction to account for systematic differences regarding the handset subsidies across MNOs is required.

(1025) As regards the level of the required handset correction the Commission notes that the results of the analysis do not substantially differ for different levels of handset subsidy correction. Therefore, it can be left open whether a correction of [...] as proposed in the Statement of Objections or a somewhat lower or higher level of handset subsidy correction should be applied.

i) The model proposed by the Notifying Party fails to consider the need for a variable accounting for MNO-specific effects

(1026) Finally, the Commission reiterates that variables accounting for the different MNOs, that is to say, MNO-specific effects, should be included into the regression for the reasons mentioned in the preceding subsections a) to g). Therefore, contrary to the Notifying Party's claims, the results provided in Table 17 of Annex A to the Form CO should be considered as obtained from the most appropriate model and cannot be regarded as a "lower bound" of the value of the consumer benefit of network quality; by the same token, the estimated values of consumer benefits based on a model that does not account for MNO specific effects should be considered as not correct, and therefore should not be regarded as an "upper bound".⁷⁵⁷

Conclusions

(1027) In light of the above and for the additional reasons referred to in Annex B, the Commission considers that the econometric study submitted by the Notifying Party, which relates voice EPPM across MNOs to their respective mobile network quality, has not proven to be sufficiently robust to be considered suitable for a proper quantification of the benefit brought about by the proposed transaction in terms of improved network quality. In particular, the Commission notes that, as far as voice service is concerned, the effect found in the study submitted by the Notifying Party is significantly reduced once MNO-specific effects are taken into account. In addition, the same conclusion, namely that a positive and significant relation exists between price and network quality (that implies that higher prices correspond to higher network qualities), is not reached once the scope of the exercise is expanded to include also SMS and data usage.

(ii) Commission assessment of the study assessing the relationship between ARPUs and scores of the MNOs across several dimensions based on the Millward Brown brand study

(1028) An additional piece of evidence aimed at measuring the demand side efficiencies provided by the Notifying Party draws on the Millward Brown brand study, a survey in which respondents rate the MNOs according to several predefined criteria by agreeing or not agreeing to a statement. Using the results from this survey and the EPPM of MNOs, the Notifying Party makes inferences concerning the willingness of consumers to pay for network quality; it does so by deriving the monetary equivalent in terms of voice EPPM of the difference in network quality between the Parties and their competitors as resulting from the survey.⁷⁵⁸

⁷⁵⁷ See Annex A to Form CO, p. 55.

⁷⁵⁸ See section 2.3.6 of Annex A to Form CO.

- (1029) As noted in the Statement of Objections, the Commission considers that the study that assesses the relationship between ARPUs and scores of the MNOs across several dimensions based on the Millward Brown brand study has serious shortcomings.
- (1030) First, the Commission considers that the underlying Millward Brown brand study itself suffers from methodological shortcomings and it is therefore unreliable. This study is based on a sample of modest size, only 300 to 400 respondents. In addition, the fact that the survey is carried out as an online-panel potentially triggers a certain selection bias; in fact, by addressing participants who are presumably particularly active on the internet, the survey might gather a sample of respondents that is not representative of the overall population. Furthermore, given the subjective character of many of the questions, many categories lack an objective definition and may not be interpreted by participants in a uniform way. For instance, the exact definition of categories such as "Likeable Brand" "Emotional" and "Makes my life easier" are unclear. This lack of precision, with the room for interpretation that accompanies it, is more pronounced in some categories than others and this may drive the willingness of participants to agree or not agree with certain statements, leading to more clear cut results in some categories and less in others. Moreover, the results do not appear to be credible. For example, in the dimension "Reliable Network", Vodafone scored 41 points and 1&1, which is hosted on the Vodafone network (and therefore should be rated with a similar quality) scored only 18 points in 2012.⁷⁵⁹
- (1031) Second, in inferring a relationship between the differences in scores across MNOs and the differences in EPPM, the Notifying Party makes the implicit assumption that all dimensions are equally important for customers and therefore equally reflected in their willingness to pay for a product. The Commission notices that the Notifying Party simply added up the scores the respective MNOs obtained across several dimensions such as "Likeable Brand", "Makes my life easier" or "Reliable Network", where the last dimension was interpreted as network quality. However, it is by no means clear that these dimensions would be equally important to customers and therefore play the same role in determining the EPPM. Moreover, by applying the relative significance of the differences in perceived network quality to the differences in the EPPM, the Notifying Party assumes that the set of categories included in the survey can fully explain the differences in prices. This is something the Notifying Party has not substantiated and it appears to be particularly important in light of the sensitivity of the results to a change in the set of included criteria.⁷⁶⁰
- (1032) Third, the analysis appears highly non-robust when comparing E-Plus and Telefónica to Vodafone and Deutsche Telekom. For example, when comparing the Parties to Vodafone, the fraction of the sum of all differences attributable to network quality is considerably smaller than when comparing to Deutsche Telekom.⁷⁶¹ In addition, the analysis is to a certain extent non-robust over time because the results change significantly over different years.⁷⁶² The results are also highly sensitive to corrections of the handset subsidies.⁷⁶³ This is particularly problematic in light of the systematic differences in handset subsidy policies across MNOs as discussed in recitals 0 to (1024). Furthermore, the Commission considers that the results are also sensitive to the voice EPPMs of Deutsche Telekom, which, in turn, depend on the

⁷⁵⁹ See Annex A to Form CO, p. 45.

⁷⁶⁰ See Reply to the Commission's RFI of 19 November 2013, Document ID 1084, Question 13d

⁷⁶¹ See [...] *Document ID 1084, reply to question 13d.

⁷⁶² See [...] *Document ID 1084, reply to question 23.

⁷⁶³ See reply of 31/01/2014 to RFI No 9 to Telefónica, Document ID 1581, question 50.

MoUs of Deutsche Telekom. As pointed out by the Notifying Party, Deutsche Telekom [...] ⁷⁶⁴ Since [...] ^{*} it is particularly important that the results are not sensitive to changes of Deutsche Telekom's voice EPPM.

- (1033) In its Reply to the Statement of Objections, the Notifying Party reiterates that the shortcomings identified by the Commission do not substantially alter the reliability of the analysis. The Notifying Party also states that in any case this analysis should not be read in isolation but instead as one of several pieces of evidence pointing in the same direction. In addition, the Notifying Party provided the results for the additional analysis taking into account the different level of the MoU correction for Deutsche Telekom.
- (1034) The additional checks provided by the Notifying Party confirm that the estimated percentage increase of valuation taking Deutsche Telekom as a benchmark is consistently positive for the different levels of correction applied. Nevertheless, the Commission notices that the results obtained show that the magnitude of the increase varies substantially, from 7% and 18% to 13% and 27%, when different levels of correction for Deutsche Telekom's MoU are used. ⁷⁶⁵ Also in light of the methodological shortcomings identified in the preceding subsections, the extent to which the correction in MoU impacts the valuation difference attributable to the merger casts doubts over the overall reliability of this empirical exercise.
- (1035) In light of the considerations set out in the preceding recitals, the Commission confirms the conclusion reached in the Statement of Objections and considers that no reliable inferences can be drawn based on the study submitted by the Notifying Party that relates ARPU differences to different scores of the MNOs across several dimensions based on the Millward Brown brand study.
- (iii) Commission's assessment of the study submitted by the Notifying Party comparing contemporaneous data-only tariffs
- (1036) In addition, the Notifying Party submitted a study that compares contemporaneous data-only tariffs to demonstrate that (a) compared to the Parties, Deutsche Telekom or Vodafone can charge a premium for better network quality; and (b) customers are willing to pay more for higher download speed and data volume. More precisely, the Notifying Party grouped the contemporaneous data-only tariffs of all four MNOs according to the included mobile data download volume, and then compared the monthly fees within each group, including information on the maximum speed of each tariff.
- (1037) The Commission made an assessment of the analysis and, as set out in the Statement of Objections, came to the preliminary conclusion that price differences attributable to network quality between the market leaders and the two other MNOs cannot be clearly quantified on the basis of the analysis submitted by the Notifying Party.
- (1038) From a methodological standpoint, the Commission notices that the analysis does not allow for taking into account in a systematic way the differences in the maximum speeds across tariffs when comparing differences in monthly fees. Moreover, it does not take into account how many subscribers the analysed tariffs attracted and therefore also the relative importance of these tariffs, which is the result of consumer

⁷⁶⁴ See Annex A to Form CO, p. 50. According to the Notifying Party Deutsche Telekom reports Minutes of Use (MoU) on the basis of "on-net and outgoing minutes alone". The Notifying Party therefore assumes that [...] ^{*} MoU is [...] ^{*} than reported.

⁷⁶⁵ See reply of 14/03/2014 to the Statement of Objections, Document ID 2251 par.702

choice. In addition, the Commission questions the assumption, used in the analysis, that the price offered would reflect the quality of the network. If an MNO in fact decides to offer a more expensive tariff, this does not necessarily reflect higher network quality, but may simply reflect the MNO's choice to achieve higher margins on a possibly reduced group of subscribers.

- (1039) It follows from the above reasoning that there is no clear indication in the analysis suggesting that any of price differences identified are in fact related to network quality. As discussed in recitals (990) to (1027)(1035), there are multiple other factors that could drive price differences across different network operators. In addition, the Commission notices that in the results of the study submitted by the Notifying Party a higher download speed, considered by the Notifying Party as "one of the main quality characteristics of a mobile network"⁷⁶⁶, is only seldom associated with higher prices. This suggests that the higher prices charged by Deutsche Telekom and Vodafone may be due to multiple aspects of the offer made by these providers (and not exclusively linked to differences in network quality), as compared to Telefónica and E-Plus.
- (1040) Moreover, in the Statement of Objections the Commission pointed out that the Notifying Party had failed to take into account the effects of promotional prices, at least in order to test the robustness of the methodology proposed.
- (1041) In its Reply to the Statement of Objections, the Notifying Party provided results from a comparison that took into account Deutsche Telekom's promotional offers, where Deutsche Telekom and Vodafone still offered higher prices than the Parties, even including these offers.
- (1042) The Commission considers that the analysis submitted by the Notifying Party does not explain why these differences may be due to differences in network quality, rather than to other aspects of the MNOs' offers. For the reasons set out in the preceding recitals of this subsection, the Commission believes that this analysis is not suited at all to reliably quantify the consumer benefit of increased network quality as regards mobile data.
- (iv) Commission's assessment of the study submitted by the Notifying Party comparing contemporaneously offered flat rate tariffs across MNOs
- (1043) The Notifying Party submitted an additional study that compares contemporaneously offered flat rate tariffs across MNOs.⁷⁶⁷ The study uses a data set containing 32 tariffs featuring an all-net flat-rate, an SMS flat-rate and a data flat-rate offered by all four MNOs, as well as Freenet, Drillisch and 1&1. The Notifying Party estimated a model where the monthly price of the bundle is considered as a function of its distinctive features (in terms of data volume allowance, maximum download speed and commitment period) as well as the CONNECT test score and MNO fixed effects.
- (1044) The Commission acknowledges that the study mentioned in the preceding recital found a positive and significant relationship between the tariff rate and the maximum download speed of the associated services; the download speed arguably constitutes one component of network quality. However, the Commission also sets out in the following recitals (1045) to (1050) its doubts with regard to the validity of the results of this study and its suitability to reliably quantify the consumer benefits of network quality

⁷⁶⁶ See Annex A to Form CO, p. 61.

⁷⁶⁷ See [...] *Document ID 1084, reply to question 20.

- (1045) First, as acknowledged by the Notifying Party, the estimated effect of the CONNECT test score does not significantly differ from zero from a statistical point of view (that is to say, it does not permit to make any inference) once the specification accounts for MNO-specific effects such as brand valuation etc.⁷⁶⁸ In its Reply to the Statement of Objections, the Notifying Party argues that the MNO fixed effects may capture part of the effect of network quality.⁷⁶⁹ If this is the case, then the model of the Notifying Party fails to disentangle the effect that network quality has on prices from the effects that other dimensions (such as brands) have on prices. This would be particularly needed, as the aim of the analysis is exactly to identify the value of any network quality improvement brought about by the merger. In the context of its regression relating a measure of price to the CONNECT score and discussed above, the Notifying Party argued that the measured effects of network quality using brand fixed effects can be seen as a lower bound of the real relationship.⁷⁷⁰ In this respect, the Commission would like to point out that given the results of the study at hand the lower bound of the measurable effect of network quality on prices is in fact zero.
- (1046) Second, the fact that the analysis does not take into account additional services, such as international calls and special discounts such as online discounts may systematically bias the results. More specifically, if it is true that a certain MNO offers more additional services than others and these services have an impact on price, this can in principle distort the results. For instance, as mentioned by the Notifying Party, two of the eight Deutsche Telekom tariffs in the study include allowances for international calls. The Commission takes the view that excluding these features from the analysis could lead to an omitted variable bias; this would be particularly the case in the specification without MNO fixed effects. Finally, the low number of observations per MNO on which the exercise is based is an additional source of concern as regards the reliability of the results.
- (1047) Third, as acknowledged by the Notifying Party in their Reply to the Statement of Objections,⁷⁷¹ the analysis is subject to the same criticism as already set out in recital (1038) as the number of subscribers that chose a certain tariffs is not taken into account.
- (1048) Fourth, as already pointed out in the Statement of Objections, the econometric analyses contained in this study generate consistently implausible results. As acknowledged by the Notifying Party, the estimated results suggest that a contract with a longer commitment period would be on average more expensive than one with a shorter (or no) commitment period, which appears implausible.
- (1049) In its Reply to the Statement of Objections, the Notifying Party conducted a robustness check of these results based on the 2013 CONNECT scores. Those results suggest that the relevance of the test score in identifying network quality differences across MNOs is even more doubtful than it was in the original model.⁷⁷²

⁷⁶⁸ See [...] *Document ID 1084, reply to question 20.

⁷⁶⁹ See reply of 14/03/2014 to the Statement of Objections, Document ID 2251 par.707

⁷⁷⁰ See Annex A to Form CO, p. 53

⁷⁷¹ See Reply of 14/03/2014 to the Statement of Objections, Document ID 2251 par.709

⁷⁷² See Reply of 14/03/2014 to the Statement of Objections, Document ID 2251 par.713. While in fact the coefficient of the CONNECT score in a specification without brand effects is then only statistically significant at a confidence level of 10%, the coefficient with brand effects remained insignificant and is visibly reduced.

- (1050) For all those reasons , the Commission confirms the preliminary conclusions set out in in the Statement of Objections that this analysis is unsuitable to identify a clear relationship between flat rate prices and quality of the network.
- (v) Commission's assessment of the study submitted by the Notifying Party comparing the prices of similar tariffs offered by Service Providers on different networks
- (1051) As an additional piece of evidence, the Notifying Party submitted a study drawing a comparison of the prices of similar tariffs offered by Service Providers on different networks. The comparison is made on small screen tariff plans that contain identical features but are offered on different networks; in this context, tariff plans on Deutsche Telecom and Vodafone networks are generally sold at a higher price than those on Telefónica's network. This study , in the Notifying Party's view, shows how Service Providers serve substantially more customers and generate substantially more revenues through Deutsche Telecom's and Vodafone's networks than through the Parties' networks.
- (1052) In the Statement of Objections the Commission identified one major shortcoming in the study submiyted by the Notifying Party, namely that it did not take into account how many subscribers the analysed tariffs attracted and therefore also the relative importance of these tariffs (see recital (1038)). Accounting for the number of people who subscribe to one or the other tariff is important in order to determine whether the average customer of the service provider in question is willing to pay a surcharge to use a better network. In order for a similar study to show that consumers are generally willing to pay higher prices for an improvement in the network quality, it would need to establish that a substantial majority of consumers choose high quality and more expensive tariff over lower quality and cheapertariffs.
- (1053) Following the Reply to the Statement of Objections, in which the Notifying Party prompted the Commission to make further enquires on this issue, the Commission used the data on tariff plan characteristics and subscriber numbers available from the Market Investigation to carry out an assessment of the analysis. The Commission evaluated tariffs offered by Freenet between January 2010 and July 2013 that exhibit an identical tariff structure (that is to say allowances, out of bundle prices) but differ in terms of the underlying network. The Commission then compared the number of new subscribers of the respective tariffs over the time mentioned above. Within this group of tariffs the Commission distinguished between two groups: one group where the identical tariff is more expensive when offered on the network of Deutsche Telekom or Vodafone than on the network of Telefónica or E-Plus; and a second group where the different network is not offered at a different price.
- (1054) The Commission has identified six tariffs of the first group targeted at consumers in the relevant time frame and hosted on at least one "high quality network" (Deutsche Telekom, Vodafone) and one "low quality network" (Telefónica, E-Plus). After having inspected the tariffs selected, the Commission observes the following: for three of the tariffs, which have a price difference of more than [...]*, the number of subscribers is substantially higher for the cheaper tariff. For two tariffs, where the price difference is below [...]* - and for one tariff actually below [...]* - there is only a negligible difference in the number of new subscribers between the "high" and the "low" quality network. Only for the remaining tariff, the cheaper E-Plus tariff is dominated in terms of subscribers by a more expensive Deutsche Telekom and a more expensive Vodafone tariff. Finally, for the second group of tariffs that are priced the same on each network, and therefore it could be expected that the majority

of consumers take advantage of a higher quality network, the Commission observes no systematic differences in the number of subscribers.

- (1055) It follows from the above that, once the number of subscribers is taken into account, only in one out of the six identically structured tariffs that differ in prices the majority of subscribers would choose to pay a premium for a better network, thereby demonstrating that they value this feature. For all the others, users seem to select with equal likelihood different tariff options; also, when the price difference is more substantial, the majority of users actually prefer cheaper tariffs on lower quality networks. In addition, even when the prices are the same, a non-negligible number of new subscribers still choose low quality networks, thereby indicating indifference to the underlying network used by their provider.
- (1056) Both the exercise provided by the Notifying Party and the extension to it carried out by the Commission show that some service providers' subscribers may be willing to pay a premium for using Deutsche Telekom's and Vodafone's network; at the same time, they fail to show convincingly that the majority of such subscribers actually chose higher network quality, even when higher quality network is offered only with a small increase in price. In addition, the evidence suggests that some subscribers still choose lower quality networks even as regards tariffs where no additional fee is envisaged for switching to other networks. This suggests that this exercise does not permit any firm conclusion to be drawn as regards consumers' willingness to pay for using Deutsche Telekom's or Vodafone's network.

(vi) Conclusions

- (1057) For all the reasons listed above, the Commission reiterates the view set out in the Statement of Objections that, while it may be the case that at least some consumers derive a certain benefit from a possibly higher network quality, each of the studies provided by the Notifying Party with a view to quantifying any such benefit contains serious methodological shortcomings. The Notifying Party has failed to convincingly show by how much its network quality will increase compared to the network qualities in the stand-alone scenarios (other than in relation to a limited increase in 3G network coverage (see recital (978) and to the limited increases in 4G maximum speed referred to in recitals (963) to (966)). In addition, the Notifying Party has failed to reliably establish and quantify a significantly positive consumer benefit from increased network quality arising from the proposed transaction. Consequently, the Commission concludes that the Notifying Party's claim is not adequately quantified.
- (1058) Furthermore, even if the Notifying Party had successfully verified and quantified the claimed network demand-side benefits, it should be noted that part of these benefits are likely to be clawed back by the merged entity through higher prices. This is confirmed by the analysis submitted by the Notifying Party which balances anti-competitive harm with efficiencies and considers that a quality increase would also be likely to trigger a price increase.⁷⁷³

Supply-side efficiencies

- (1059) In relation to supply side efficiencies, the Commission considers that they are unlikely to be passed on to consumers for the following reasons:

⁷⁷³ See Appendix 2 to Annex C of Form CO, Document ID 418.

- (a) these efficiencies include fixed cost savings and there is no evidence that fixed costs matter for pricing decisions;
 - (b) the empirical findings of literature cited by the Notifying Party are not relevant for the assessment of the present case; and
 - (c) the Commission does not agree on the quantification of network incremental costs submitted by the Notifying Party.
- a) the claimed efficiencies include fixed costs savings and there is no evidence that fixed costs matter for pricing decision
- (1060) 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"⁷⁷⁴ since the former are in principle more likely to result in lower prices for consumers. Whereas fixed costs have an impact on a firm's profitability and therefore possibly on the number of firms that are active in a market, these have to be incurred irrespective of the sold volumes. In contrast, in pricing decisions firms generally trade-off selling higher volumes at the expense of achieving a 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.⁷⁷⁵
- (1061) The Notifying Party has not submitted sufficient evidence which would warrant departing from this general approach in this Case.
- (1062) In particular, the Commission rejects the Notifying Party's claim that fixed costs should be deemed relevant to pricing decisions because of Telefónica's internal regime of tariff pricing and its [...] incentive scheme.
- (1063) As regards its internal pricing mechanism, [...].⁷⁷⁶ The Notifying Party has submitted a number of internal documents it deems particularly important to support its claim that even fixed costs will be passed on to consumers.⁷⁷⁷ More precisely, the Notifying Party has submitted long-term business planning documents in which fixed costs are also recorded. It has further submitted documents showing how the long term financial targets are further refined, broken down to a segment level and how they are finally broken down to constitute [...]. [...]. However, the Commission notes that while some of the submitted internal documents contain cost figures based on OPEX and CAPEX, these documents do not give any indication whether and to what extent differences in the level of these costs would influence the level of the budgeted mobile service revenues [...].
- (1064) To the contrary, internal documents related to the budgeting process, do not indicate that fixed costs would be systematically taken into account. [...].⁷⁷⁸
- (1065) Moreover, the Notifying Party's pricing decisions suggest that the contribution margin, which excludes significant (fixed) costs, plays a major role in pricing

⁷⁷⁴ Horizontal Merger Guidelines, paragraph 80.

⁷⁷⁵ 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 German MNOs and in particular E-Plus (see recital (411)), can be expected to remain profitable.

⁷⁷⁶ [...] Document ID 1084, reply to Question 43.

⁷⁷⁷ RFI No 9 to Telefónica - Updated version of 4 February 2014, Document ID 1581, reply to question 58.

⁷⁷⁸ See the table in the [...], Document ID 1596-221.

decisions. To the contrary, [...]*, fixed costs are not even mentioned in any of these examples.⁷⁷⁹

- (1066) The Commission also considers that the existence of hurdle [...]* ratios [...]* does not necessarily indicate in itself that the Notifying Party would deviate from taking only short-run marginal costs into account in its pricing decisions. In particular, there are many alternative explanations for hurdle rates that are set significantly above [...]*. For example, as the Notifying Party offers several tariffs, [...]* hurdle rates could be set [...]* so that the profit maximizing price from the perspective of an MNO is adopted and cannibalisation between the MNO's own tariffs is prevented. Therefore, a [...]* level of hurdle rates does not necessarily imply that CAPEX and OPEX are automatically reflected in the pricing.⁷⁸⁰ This interpretation is also in line with the following description of E-Plus' pricing policy: [...]*.⁷⁸¹ E-Plus pricing policy is relevant in this context to illustrate the pricing mechanisms that are normally followed by MNOs and will be likely followed by the merged entity, as MNOs face similar business decisions so that some degree of similarity as regards pricing mechanisms and policy can be expected. Therefore, E-Plus' pricing policy suggests that cannibalisation effects (that arise whenever tariffs offered by one MNO are substitutes to each other) play a major role in the pricing decisions of MNOs, whereas fixed costs may play a less pronounced role.
- (1067) Moreover, it appears that the internally imposed constraint that tariffs have to be [...]* above the hurdle rates appears not to constitute an important constraint in practice. Telefónica has submitted a list of pricing decisions [...]* and that most approved tariffs satisfy this threshold.⁷⁸² [...]*. Therefore, the Commission considers that pricing was in almost all cases not constrained by the need to meet the hurdle rate as there could be other reasons (such as cannibalisation with existing tariffs or market power of Telefónica) why the hurdle rates were significantly exceeded in any event. [...]*. Therefore, the Commission considers that it is unlikely that many tariffs that do not meet the hurdle rates would have been implemented if the hurdle system was not present.
- (1068) As regards the Notifying Party's claim that fixed costs are relevant for pricing decisions because of Telefonica's internal [...]* incentive scheme, the Commission considers, in line with the Notifying Party, that pricing decisions are likely driven by different criteria than investment decisions.⁷⁸³ Even if the Notifying Party's general incentive scheme is linked to measures that include OPEX and CAPEX, these would be in theory only relevant for pricing decisions to the extent that CAPEX and OPEX would be affected by pricing decisions. In other words, to the extent that CAPEX and OPEX are already determined by past investment decisions, they cannot be affected by pricing decisions and would therefore not be relevant for pricing decisions even if the management incentive scheme rewarded lower CAPEX and OPEX. In contrast, investment decisions are often directly linked to CAPEX and OPEX and therefore it is plausible that changes to CAPEX and OPEX may affect investment decisions.

⁷⁷⁹ See Annex 27 to Form CO. According to Telefónica's reply to Question 43 of the RFI No 5, these examples show in the bottom right hand corner of the "Financial Implication" Section, there is a box which reports the expected Customer Life Time Value (CLTV) of the tariff. The formula provided by Telefónica clearly shows in its reply that OPEX or CAPEX are not reflected in the CLTV.

⁷⁸⁰ See Reply to the Article 6(1)(c) Decision, p.154.

⁷⁸¹ Reply to the RFI No 4 to E-Plus dated 24 January 2014, Document ID 1527, question 3.

⁷⁸² See reply to the RFI No 9 to Telefónica - Updated version of 4 February 2014, Document ID 1581, question 59.

⁷⁸³ [...] * Document ID 1084, reply to Question 44.

Therefore, whereas it appears plausible that efficiencies that decrease CAPEX and OPEX affect investment decisions, this is much less clear as regards pricing decisions, despite the Notifying Party's general incentive scheme.

- (1069) In this context, the example put forward by Telefónica, [...]*. ⁷⁸⁴ [...]*. ⁷⁸⁵
- (1070) The Commission does not dispute that investments may be correlated with sales, as investments may be required in order to create the basis for sales. ⁷⁸⁶ The Commission, however, does not accept that the price of the production assets would materially impact the pricing of products.
- (1071) Moreover, the fact that OPEX and CAPEX may be adjusted and tied to revenue targets on a [...]*. ⁷⁸⁷ basis does not imply in itself that these costs should be automatically considered variable. The Commission considers that “variable costs should be viewed as those costs that vary with the level of production or sales over the relevant time period”. ⁷⁸⁸ The observation that certain cost elements are quarterly or annually reviewed or tied to revenue targets by no means implies that these costs vary with the level of sales and are affected by pricing decisions, *inter alia* for the reasons referred to in the preceding recitals.
- b) The empirical findings of the literature cited by the Notifying Party are not relevant for the assessment of the present case
- (1072) The Commission rejects the claim of the Notifying Party that empirical academic evidence on price elasticities in Germany would show that in the mobile telecommunications industry fixed costs would be reflected in the prices. First, as further discussed in Section 4.4.6 of Annex A to this Decision, the overall level of the margins implied by an estimated demand model depends on the *potential* market size assumption used. Since the level of demand that could be potentially achieved (for example, if telecommunication products were offered for free) is difficult to estimate, any assumption on the potential market size is inherently unreliable. Therefore, the Commission considers that in particular the paper of Doganoglu and Grzybowski (2007) to which the Notifying Party points cannot reliably identify the margins in the German mobile telecommunication sector. Second, the Commission has carried out its own demand estimation of the German market for mobile telecommunications services based on much comprehensive and more recent data than the study submitted by the Notifying Party. However, as explained in Section 4.4.6 of Annex A to this Decision, also the Commission's estimation does not permit any reliable conclusion to be drawn as to whether MNOs include fixed costs when determining the prices for their mobile telecommunications products.
- (1073) Second, the Commission considers that the empirical findings of the management literature cited by the Notifying Party ⁷⁸⁹ are only of very limited relevance for the assessment of this Case, particularly taking into account the specific evidence on how the Parties usually take pricing decisions. This issue is particularly relevant given that the articles referred to are not specific to the mobile telecommunication industry.

⁷⁸⁴ Presentation by Telefónica: [...]*, Document ID 1596-135.

⁷⁸⁵ Presentation by Telefónica: [...]*, Document ID 1596-135.

⁷⁸⁶ See Reply to the Statement of Objections, Document ID 2251, paragraph 729.

⁷⁸⁷ See Reply to the Article 6(1)(c) Decision, p.154.

⁷⁸⁸ Horizontal Merger Guidelines, footnote 106.

⁷⁸⁹ Annex A to Form CO, p. 103 and 104.

- c) The Commission does not agree with the Notifying Party on its quantification of incremental costs
- (1074) The Notifying Party argues that theoretically certain network costs would be reflected in the prices: (a) due to capacity constraints of the network at the time pricing decisions are made; and (b) because additional traffic (for example, induced by cheaper prices) would require subsequent costly modifications of the mobile network. However, the optimal network size depends on the "*incremental*" (as opposed to average) costs of network expansion, as clearly emerges from the formal model by Kreps and Scheinkman which the Notifying Party refers to.⁷⁹⁰ Therefore, the Notifying Party's theoretical reasons for which network costs should be relevant for pricing decisions if anything suggest that incremental network costs, as opposed to average costs, would be relevant for pricing decisions. This seems in line with the Notifying Party's view that the [...]*.⁷⁹¹
- (1075) Furthermore, the Commission disagrees with the Notifying Party's claims that firstly, the annual OPEX and CAPEX costs are a good measure for measuring incremental network costs and secondly, that the percentage cost savings due to the merger represent a plausible approximation of the percentage cost savings for incremental costs. The first claim would mean that incremental costs could be reasonably well approximated by average costs. This would appear to contradict the Notifying Party's claim that the cost structure exhibits strong economies of scale. In other words, if the merger yields (average) network cost savings per subscriber because the subscribers of both Parties can be hosted more efficiently by a single large network, this indicates that the incremental costs of a single MNO would also be below the average network cost per subscriber. This observation would also be correct if investment costs were to increase in the future, for example due to an upcoming 4G rollout.⁷⁹²
- (1076) As regards the second claim referred to in recital (1075) that savings of annual OPEX and CAPEX due to the merger appear to be a plausible approximation of the percentage cost savings that occur on future expansions, the Commission considers that such an approximation would lead to misleading results, mainly for the following two reasons:
- (a) It appears that each MNO has to bear significant (network) fixed cost elements in order to offer competitive mobile telecommunication products. For example, the CAPEX and OPEX of running a minimum number of sites to offer an acceptable geographic coverage and the associated transport network seem to be fixed cost elements. If some of the relevant fixed cost elements of one of the merging party were to be saved through the merger, the average costs of the merged entity will decrease but the resulting reduction in fixed costs would per se not affect incremental costs.
- (b) Focusing on the percentage savings of costs does not take sufficiently into account any differences in the total capacity of both merging networks and the planned network of the merged entity. Based on Telefónica's internal financial planning, the merged network will have [...]* fewer 2G, 3G and 4G network elements than the two stand-alone networks at a given point in time (see

⁷⁹⁰ Kreps, D. M., J. A. Scheinkman (1983) "Quantity Precommitment and Bertrand Competition Yield Cournot Outcomes." The Bell Journal of Economics 14 (2) 326–337, Document ID 4399.

⁷⁹¹ [...]*reply to question 47b, Document ID 1084.

⁷⁹² See Reply to the Statement of Objections, Doc ID 2251 paragraph 732.

recital (980)). Therefore, simply comparing the cost differences does not give sufficient weight to the fact that there are significant differences in the resulting network capacity, which affects network quality and according to the Notifying Party's own argument may induce the merged entity to compete less aggressively.⁷⁹³

- (1077) At the Commission's request, the Notifying Party submitted incremental cost estimates, in particular for 2016, both for the stand-alone scenario as well as for the post-transaction scenario on 4 February 2014, and following a later request from the Commission further submitted information on 25 April 2014. However, the estimates submitted by the Notifying Party suffer from serious shortcomings as further explained in recitals (1078) to (1090). As a result, the Commission considers that the Notifying Party has not adequately explained how its estimates for the 2G/3G layer have been calculated.
- (1078) As regards the Notifying Party's 4G incremental cost estimates to host an additional one million subscribers, the Commission identified several methodological shortcomings.
- (1079) For example, in its submission on incremental costs, the Notifying Party assumes that in addition to the current coverage, Telefónica would require [...] additional LTE sites, since an acceptable LTE coverage of at least 50% outdoor pop is required in order to be able to attract one million additional customers.⁷⁹⁴ However, Telefónica submits that its LTE network would already cover [...] of its customers [...].⁷⁹⁵ Moreover, adding the costs of [...] LTE sites that are not required to maintain the current network quality (but rather to increase it) runs counter to the concept of incremental costs (see also recital (1093)) and inflates the incremental cost estimates. In contrast, only the costs of sites that are needed to provide additional capacity that may be required to avoid a degradation of quality should be included in the incremental cost estimates.
- (1080) In addition, the Notifying Party did not use any capacity model (such as the one discussed in recitals (968) et seq.) to calculate how many additional LTE sites would be needed if 2600 MHz spectrum [...] times more LTE capacity sites would be needed compared to a scenario where 1800 MHz spectrum would be used for additional capacity. However, the Notifying Party has not justified its assumption as to why [...] times more 2600 MHz sites would be needed. Given that the capacity sites are intended to provide additional capacity and not additional coverage (where such a factor would reflect the inferior propagation characteristics of the spectrum bands), applying such a factor does not appear to be justified.
- (1081) Furthermore, when estimating the number of incremental sites, the Notifying Party has apparently assumed that the amount of LTE traffic at the RAN level would be [...] as high as the "total LTE traffic" without providing sufficient justification for this assumption.⁷⁹⁶
- (1082) For these reasons, the Commission considers that the number of incremental 4G sites which according to the Notifying Party would be needed to host additional subscribers is not reliable.

⁷⁹³ See Annex A to Form CO, p. 103.

⁷⁹⁴ See file "[...]", as submitted as part of Telefónica's reply to RFI 15 of 17. April 2014, Document ID 3337.

⁷⁹⁵ Reply to Q 14 of RFI 5 of 19.11.2013, Table 10, Document ID 1975.

⁷⁹⁶ Files "[...]" Document IDs 3334 and 3336.

- (1083) The Commission further notes that the Notifying Party's 2G/3G incremental cost estimates are fundamentally flawed and therefore have to be rejected. The Notifying Party estimated the amount of additional required 2G/3G equipment to host incremental subscribers based on Telefónica's business plan. [...]*.⁷⁹⁷ [...]*
- (1084) The Commission considers that the planned 2G/3G capacity expansions in the considered stand-alone business plan are linked to a large extent to an increase in the expected mobile data traffic per subscriber (which may result from upgrading the handset to 3G or LTE) as opposed to an increased number of subscribers. In the incremental cost estimates, network costs incurred in order to accommodate additional usage from existing subscribers should be excluded. Therefore, simply estimating the amount of additional 2G/3G RAN equipment based on the foreseen expansions in the business-plan that are based on an increased data usage per subscriber, tends to yield inflated estimates of incremental costs even if it is adjusted to take account of the number of additional subscribers. The Commission has, therefore, pointed out this problem to the Notifying Party and requested corrected estimates.
- (1085) The Notifying Party, however, replied to the Commission's requests for clarification by explaining that its estimates for incremental costs do not need to be reconsidered if a monthly mobile data usage of [...]* (as opposed to a higher mobile data usage) is assumed. In this context, the Commission does not accept that the submitted estimates based on an assumed monthly data usage of [...]* per subscriber would not be affected by this shortcoming.⁷⁹⁸ According to the explanations provided by the Notifying Party these estimates have also been calculated on the basis of the business plan. These estimations therefore include network costs implied by increasing data traffic of existing subscribers over time for the same reasons as set out in the recital (1084). Therefore, these estimates contain the same shortcoming referred to in recital (1083).
- (1086) Despite the Commission's requests, the Notifying Party has neither submitted supporting documents to explain how the RAN equipment incremental costs figures mentioned in its business plan have been calculated, nor explained in detail how its technical experts have estimated the additional 2G/3G RAN equipment necessary to host an additional one million subscribers.⁷⁹⁹ Despite the Commission's request to the Notifying Party to corroborate its estimates relating to the additional 2G/3G RAN equipment based on technical models, the Notifying Party has not submitted any such analysis.
- (1087) In addition, as the costs of the transport network are based on the number of incremental 2G/3G/4G sites at the RAN level, also the incremental cost estimates for the transport network are also inherently unreliable and therefore have to be rejected.
- (1088) In relation to the core network, the Commission considers that the incremental cost savings estimated by the Notifying Party are not sufficiently verified. Upon request, the Notifying Party submitted incremental cost estimates at the level of the core network both for the merger scenario and for the stand-alone scenario. According to the Notifying Party, the proposed transaction will reduce the incremental costs related to the core network by [...]* % due to the ability to leverage existing capacities in a more efficient way and by a further [...]* % because of a significantly

⁷⁹⁷ See file [...]*, Document ID 2349-22.

⁷⁹⁸ Reply of 24. April 2014 to Q 7 of RFI 15, Document ID 3329.

⁷⁹⁹ Reply of 24. April 2014 to Q 7 of RFI 15, Document ID 3329.

improved bargaining position vis-à-vis equipment vendors.⁸⁰⁰ In its Reply to the Statement of Objection and in its reply of 25 April 2014 to the RFI No 15, the Notifying Party submitted further explanations as to how the estimates were calculated. The Commission rejects any claim related to the merged entity's alleged improved bargaining position as the Notifying Party has not provided any meaningful supporting document for this claim. As regards the alleged more efficient use of assets, the Commission notes that the Notifying Party has for most cost elements estimated the incremental costs by multiplying a cost per subscriber (based on existing contracts) by the number of additional subscribers.⁸⁰¹ However, this approach suggests that for those elements the incremental costs incurred by hosting additional subscribers are similar to the average costs per subscriber. This, in turn, suggests that substantial scale economies and thus incremental cost savings for those elements are entirely implausible. As regards certain components that are not priced on a per subscriber basis (such as costs for Media Gateways, Mobile Switching Centres, SGSN etc.) the Notifying Party has not properly shown to what extent economies of scale could be realised, and instead simply submitted a number of reasons as to why these elements could be used more efficiently.⁸⁰² Therefore, the claim related to a more efficient use by the merged entity of existing capacity is not supported by sufficient evidence.

(1089) Finally, the Commission considers that additional information provided by the Notifying Party in relation to transport network costs that may not constitute incremental costs but have been included in the Notifying Party's estimates of incremental network costs is insufficient and not suited to address the shortcomings set out in the preceding paragraphs.⁸⁰³ The Notifying Party has not provided any information as to how it calculated the estimates submitted by it concerning possible non-incremental transport network costs. Therefore, the Commission is not in a position to scrutinise these estimates. In any event, given that, as set out in recitals (1078) to (1087), the Commission considers that the Notifying Party has considered costs at the RAN level that are not incremental, the total network incremental cost estimates remain inflated even if possible corrections of the incremental costs estimates of the transport network were taken into account.

(1090) For these reasons, the Commission concludes that, while it appears plausible that the incremental costs in the merger scenario are below those in the stand-alone scenario (due to savings in particular at the RAN level), the Notifying Party has failed to provide the required information to properly identify the level of any incremental cost savings. All the necessary information is in the possession of the Parties and it is for the Notifying Party to provide it in due time to demonstrate the claimed efficiencies.⁸⁰⁴ Therefore, supply side efficiencies linked to incremental network cost savings cannot be acknowledged.

e) Conclusions

(1091) As regards supply-side efficiencies, the Commission therefore rejects the Notifying Party's claim that all network cost savings are eligible to be passed on to customers. To the extent network cost (savings) were relevant for pricing decisions, the

⁸⁰⁰ Reply to Q 25 of RFI 9 of 24. January 2014, Document ID 1581.

⁸⁰¹ See file [...] * Document ID 2349-23.

⁸⁰² Reply of 25 April 2014 to Question 9 of the RFI 15 to Telefónica, Document ID 3345.

⁸⁰³ Reply to the Statement of Objections, Document ID 2251 paragraph 735.

⁸⁰⁴ Horizontal Merger Guidelines, paragraph 87.

Notifying Party has failed to submit reliable estimates of incremental cost savings as a consequence of the proposed transaction.

Double Counting

- (1092) Finally, the Commission notes that double-counting of efficiencies must be avoided for the efficiencies to be taken into account in accordance with paragraphs 76 to 88 of the Horizontal Merger Guidelines. In particular, the Notifying Party claims that the proposed transaction would bring about cost savings and claims that economies of scale would result in a better network quality, from which customers would potentially directly benefit. The quality increase would be partially due to higher investments of the merged entity in network improvements (compared to each of the networks in the absence of the proposed transaction).
- (1093) To the extent that [...] (see recital (1059)), accepting cost savings in particular on investments and accepting the quality improvements brought by additional investments could amount to double-counting the resulting efficiency effects. The Notifying Party appears to argue that demand-side efficiencies should be interpreted as efficiencies arising through better quality, (at given costs of provision) and supply-side efficiencies should be interpreted as efficiencies arising through lower costs (for a given quality level). Under this interpretation of demand- side and supply side efficiencies, double-counting of efficiencies of the merger is avoided. However, the Commission notes that, when quantifying demand- side efficiencies and supply- side efficiencies, the Notifying Party appears to deviate from the definitions described in this recital.
- (1094) As regards demand-side efficiencies, the approach suggested by the Notifying Party would require to take into account only quality improvements that are not generated by additional investments (since the investment costs should remain unchanged), compared to the stand alone scenario (such as potential immediate gains from allowing subscribers to roam on each other's network). As regards supply-side efficiencies, when calculating the (incremental) cost savings, the network quality and capacity would have to be held constant. However, the approach currently suggested by the Notifying Party appears to ignore the likely changes in the total network capacity (and therefore quality) as described in recital (1076)(b). Therefore, the approaches suggested by the Notifying Party to quantify efficiencies do not appear to properly address the issue of double-counting.
- (1095) In the Reply to the Statement of Objections, the Notifying Party argues that the concern of a reduced capacity as a consequence of the proposed transaction is unfounded as pointed out in the technical report contained in Annex III to the Reply to the SO.⁸⁰⁵ However, this argument is flawed since the cell load of the merged entity increases as a consequence of the proposed transaction, thereby suggesting that there is a capacity loss.
- (1096) In this context, the Commission notes that the Notifying Party agrees that lower rollout costs for the 4G and 2G/3G network, as specified in Sections 2.1.3 and 2.2.3 of Annex A to the Form CO, respectively, "are not additive, to neither the demand- nor the supply side".⁸⁰⁶

⁸⁰⁵ Reply to the Statement of Objections, Document ID 2251, paragraph 746.

⁸⁰⁶ Reply of 12 December 2013 to the RFI No 5, Document ID 1084, question 2; see also Reply to the 6(1)c Decision, p.155.

Merger specificity

- (1097) The Commission considers that network sharing agreements are relevant for the assessment of the proposed transaction as they could constitute less anti-competitive alternatives to achieve similar efficiencies. The fact that the Parties have entered into the proposed transaction in itself does not exclude that network sharing is a realistic and attainable alternative to the proposed transaction for achieving the claimed efficiencies.⁸⁰⁷
- (1098) [...] ⁸⁰⁸ [...] ⁸⁰⁹ The Commission also found evidence in the Market Investigation that network sharing agreements are widespread in markets for mobile telecommunications services within the European Union and do not involve any insurmountable obstacle⁸¹⁰.
- (1099) Accordingly, the Commission analyses in the following recitals whether a network sharing agreement would constitute a reasonably practical alternative to the proposed transaction leading to similar efficiencies with a less anti-competitive outcome.

Network Sharing Between the Parties

A. Network Sharing would permit the claimed efficiencies to be achieved

- (1100) In the following recitals, the Commission explains why it considers that alternative network sharing agreement between the Parties would lead to similar network efficiencies as the proposed transaction.
- (i) Supply-side efficiencies
- (1101) The internal documents submitted by the Parties show that they have actively considered, until very recently, different types of network sharing agreements [...]*. As set out in recital (914), these agreements include [...]*.
- (1102) Among the various network sharing agreements [...]*. For example, Telefónica's internal documents analyse under the code name [...]* a [...]* network sharing agreement which would: [...]*⁸¹¹. In such network sharing agreement, all network assets, including the passive and active layers as well as the spectrum holdings would be shared. In addition, dedicated network staff, calculated in terms of FTEs would be shared in the newly create entity and related savings would also be likely to be achieved.
- (1103) A similar network sharing scenario, involving the consolidation of the [...]*⁸¹² (see recital (933)).
- (1104) [...]*, in relation to 2G and 3G networks consolidation, the Notifying Party indicates that savings are identical in an alternative network sharing scenario and in the merger (see Table 43 set out in recital (929) on the Notifying Party's view of savings

⁸⁰⁷ The Commission notes that this view is shared by the German Monopolkommission. See the opinion of the Monopolkommission "Stellungnahme der Monopolkommission zu COMP/M.7018 – Telefónica/E-Plus", Document ID 1685, p. 8.

⁸⁰⁸ See for instance [...] of [...]*, Document ID 713-206, and presentation [...] dated [...]*, Document ID 1528-43.

⁸⁰⁹ Notifying Party's response to the Commission's RFI No 9 of 4 February 2014, Document ID 1581, Table 2.

⁸¹⁰ See replies to the Commission's RFI No 1 to MNOs outside of Germany of 20 January 2014, question 7.

⁸¹¹ Presentation [...] dated [...]* [...] Document ID 1596-114, p. 14.

⁸¹² Response to the Commission's RFI dated 19 November 2013, Document ID 1084, question 29.

stemming from a network sharing agreement). 2G and 3G are established networks which have been already deployed by Telefónica and E-Plus. [...]*

- (1105) The 2G and 3G network cost savings (derived either from the merger or from the NetCo), according to the Notifying Party, account for around [40-60]% of all network supply side efficiencies arising from the proposed transaction, that is to say: [...]*. The total costs savings for the 2G and 3G network in case of a network sharing including FTE (and assuming that these savings would be equally split between 2G/3G and 4G networks) would be EUR [...]*. ⁸¹³.
- (1106) In relation to 4G networks, given that this network has not yet been fully deployed by any of the Parties, potential savings stemming from a network sharing agreement or a merger would encompass not only OPEX, but also CAPEX. The total network savings related to 4G networks, as illustrated in Table 43 set out in recital (929), amount to at least EUR [...]*
- (1107) However, as the Commission explained in recital (1060), the only savings that would be relevant for assessing the efficiency claims are those related to incremental costs savings. In this respect, the Commission notes that, as explained in recitals (1078) et seq, it does not agree with the estimation of incremental costs savings presented by the Parties. However, the Commission notes that even if such estimates were to be considered reliable (*quod non*), Table 44 clearly shows that a most (around [...]*) % of the incremental costs savings arising from the proposed transaction would be achieved also by a network sharing agreement encompassing all technologies.
- (1108) [...]*. Through a roaming agreement, Telefónica would give access to E-Plus' customers to its LTE sites using the 800 MHz band. This would complement E-Plus' 4G network in terms of coverage and capacity, thus enabling E-Plus' customers who are not covered by E-Plus' network to automatically switch to Telefónica's network. [...]*. On that basis, the Notifying Party concludes that such a solution would not give rise to similar savings as the proposed transaction. The Commission considers that the savings that could be achieved by a roaming agreement would be significant at least for one of the Parties (E-Plus), whilst the other Party (Telefónica) would profit from the roaming fees. In addition, if the roaming agreement were also to include the possibility for Telefónica's customers to benefit from an access to E-Plus' 4G network based on 1800 MHz band for additional capacity, the resulting savings would be significant. [...]*. ⁸¹⁴ [...]*. ⁸¹⁵

(ii) Demand-side efficiencies

- (1109) With respect to demand-side efficiencies, a 2G/3G/4G spectrum sharing agreement would have most probably led to a network quality largely equivalent to that of the merged entity's network. This is due to two main reasons: (a) the shared network would have benefited from the spectrum holdings of both Telefónica and E-Plus and (b) the shared network would have benefited from the consolidation of existing mobile sites of both Parties leading to potential benefits in terms of capacity and coverage. Accordingly, the network sharing partners are likely to benefit from equivalent quality increases to those described in the Form CO such as additional capacity in urban areas, additional coverage in rural areas.

⁸¹³ See Notifying Party's response to the Commission's RFI No 9 of 4 February 2014, Document ID 1581, table 29, [...]*

⁸¹⁴ For example: Presentation [...]*. Document ID 991-15596, slide 5.

⁸¹⁵ Notifying Party's response to the Commission's RFI No 5 of 12 December 2013, Document ID 1084, p. 72.

- (1110) This is confirmed by the Notifying Party's submission, whereby in the Full NetCo scenario a similar 2G/3G network as planned in the proposed transaction would be built.⁸¹⁶ As regards 4G, in the Full NetCo scenario [...] additional LTE [...] sites would be built compared to the number of sites that would be built following the completion of the proposed transaction. [...] ⁸¹⁷. In Telefónica's internal presentation of July 2013 "A leading Digital Telco"⁸¹⁸, the combined network is considered to lead to the "Best network quality with the roll-out of one common LTE network [...]".
- (1111) In this respect, the Commission notes that, according to the data provided by the Notifying Party, in particular in the FullNetCo scenario (see table (45, 46 47 and 48) set out in recital (933)), to a large extent the same demand side efficiencies in terms of coverage could be achieved as would be brought by the proposed transaction. As regards the limited verified quality improvements in terms of possible 4G speed increases, which are in any event not quantifiable (see recitals ((962) to (976), the Commission notes that the Parties did not provide sufficient evidence enabling the Commission to conclude that these limited improvements could only be achieved by the proposed transaction and not by a network sharing agreement or other alternative solutions.
- (1112) In a 4G roaming scenario, possibly including access for E-Plus to Telefónica 800 MHz bands and access to Telefónica on the 1800 MHz bands currently belonging to E-Plus, it seems likely that the level of efficiencies that could be achieved is similar to those that could be achieved by the proposed transaction.

B. Network sharing is a realistic and reasonably practical alternative to the proposed transaction

- (1113) The Commission considers that a 2G/3G/4G network sharing between the Parties constitute a realistic and reasonably practicable alternative to the proposed transaction within the meaning of paragraph 81 of the Horizontal Merger Guidelines. The Notifying Party reiterated in its Reply to the Statement of Objections that any consideration about the merger specificity must be in line with the general principle concerning the counterfactual of the case as set out in paragraph 9 of the Horizontal Merger Guidelines⁸¹⁹. The Notifying Party concludes from the above that, given that the Commission considered in the Statement of Objections, that in the absence of the proposed transaction, each of the Parties would remain a MNO with independent 2G, 3G and 4G networks, it implicitly considered that the network sharing agreement was not a realistic and reasonably practical alternative to the merger.
- (1114) In this respect, the Commission notes that the fact that one or more types of network sharing agreement are likely to constitute a realistic and reasonably practicable alternative to a given transaction, does not mean that these agreements are necessarily to be viewed as the situation that would have likely prevailed in the absence of the merger, when assessing the likely anti-competitive effects of the proposed transaction.
- (1115) The wording of footnote 108 of the Horizontal Merger Guidelines merely requires that the alternative solutions considered to assess the merger specificity of the

⁸¹⁶ Notifying Party's response to Commission's RFI No 5 of 12 December 2013, Document ID 1084, question 25.

⁸¹⁷ Presentation [...]*, Document ID 258-6956, slide 9.

⁸¹⁸ Presentation [...]*dated [...]*Document ID 990-8626, p. 10.

⁸¹⁹ Footnote 108 Horizontal Merger Guidelines.

efficiency claims are consistent with the circumstances considered likely to prevail in the absence of the merger, but does not require that these alternative solutions correspond to the same circumstances that would have likely prevailed in the absence of the merger. Paragraph 85 of the Horizontal Merger Guidelines further specifies that the Commission only considers alternatives that are reasonably practical in the business situation faced by the merging parties having regard to established business practices in the industry concerned.

(1116) Network sharing agreements constitute, common business practice in the telecommunications industry and have been implemented successfully in a number of Member States. The fact that each of the Parties has devoted financial and human resources to analyse different options of network sharing agreements [...] and that the Commission found evidence that Telefónica was [...] show that these agreements are reasonably practical also taking into consideration the business situation faced by the Parties.

(i) Network sharing adds value to the participating MNOs

(1117) Telefónica considers that if it had entered into a 2G/3G/4G network sharing agreement with E-Plus it would have lost a strategic differentiator from E-Plus and would have suffered from a commercial downside. The commercial downside for Telefónica would have allegedly been of the order of magnitude of EUR 1.4 billion according to the Notifying Party⁸²⁰, according to Telefónica's calculation of 2012. In its reply to the Commission's RFI dated 24 January 2014, the Notifying Party further explained that an updated evaluation of such commercial downside would lead to higher estimations [...] than it was estimated in [...]. This would be due to a number of factors such as (a) the faster rate of increase in data usage; (b) the recently announced more significant roll out plans by Vodafone and Deutsche Telekom and (c) an increasing gap between the Parties' network roll out and commercial strategies and (d) the difficulties arising from the fact they use different suppliers.⁸²¹

(1118) In addition, in the context of the same submission referred to in recital (1117), the Notifying Party claimed that the conclusion of a network sharing agreement with E-Plus would need to be assessed taking into account the high execution risks linked to the fact that the network sharing cooperation would be very difficult to undo and to the risks linked to the [...] financial reliability of E-Plus/KPN as a partner. The latter risks have not been quantified by the Notifying Party.

(1119) The Commission first notes that, as shown in Table 43 set out in recital (933), the Parties expect that the discussed forms of network sharing, in particular the Full NetCo variant, will achieve significant savings of up to EUR [...] in total during the period from 2014 to 2020 (or EUR [...] according to the Parties previous calculations). As a result, the Parties could achieve, through a network sharing agreement covering all technologies, at least [70-80]% of the total costs savings that would be achieved by the proposed transaction.

(1120) Internal documents of E-Plus indicate that network sharing options were expected to have a significant value on top of the network savings. According to E-Plus' estimates of May 2013, the total joint deal value of a network joint venture between E-Plus and Telefónica across all technologies would be roughly EUR 3.3 billion. Of

⁸²⁰ Annex 2 to answer to Q10 of RFI 9, Document ID 1583.

⁸²¹ Reply to the Commission RFI n. 9 Annex 2, Document ID 1583.

this total value, around Euro [...] would derive from network savings. In particular, according to E-Plus' internal documents⁸²² and the documents submitted by the Notifying Party in its reply to the Commission's RFI,⁸²³ a network sharing agreement limited to 2G and 3G would lead to savings of EUR [...] ⁸²⁴. An extension to 4G communications would lead to total savings of EUR [...] ⁸²⁵. In addition, roughly EUR [...] would be due to an assumed better market positioning of E-Plus and Telefónica and EUR [...] would be due to expected savings in upcoming spectrum auctions.⁸²⁶

- (1121) As regards the breakdown of the positive value that each of the Parties could derive from a possible network sharing, E-Plus estimated that, through a network sharing agreement with Telefónica covering all technologies, it could achieve: (a) network costs savings derived from the limitation of its roll out obligation [...]; (b) auction savings in the next auction [...]; (c) top-line effect [...]. E-Plus estimated that Telefónica would achieve: (a) network costs savings [...]; (b) top-line effect [...]; (c) savings for the upcoming 900/1800 auctions and for the new digital dividend auctions [...].⁸²⁷
- (1122) In addition, there are further positive effects that are usually taken into account when MNOs decide on whether to enter network sharing agreements. The Notifying Party –at least initially- considered that a full NetCo would enable Telefónica to earn an additional amount of around EUR [...] leveraging additional [...] opportunities as well as [...].⁸²⁸ In further submissions, the Notifying Party clarified that such opportunities would not materialise in the NetCo scenario but did not explain the reasons of this statement.
- (1123) The Commission therefore notes that there seems to be a high value accruing to both MNOs from the Full NetCo network sharing. This is evident, at least, according to E-Plus' evaluations. The internal documents of Telefonica discussed below predominantly focus on the value to Telefónica, assuming certain payments from E-Plus to Telefónica. These documents therefore do not capture the significant value E-Plus would derive from network sharing. However, the Commission considers that the joint value created for both sharing partners is relevant to assess the likelihood that network sharing would occur in the absence of the proposed transaction.
- (1124) The Notifying Party contests that E-Plus' estimations should be considered indicative of the Parties' concrete incentives and abilities to enter into a network sharing agreement.
- (1125) The Notifying Party submits that the significant commercial downside that Telefónica would incur by entering the network sharing agreement with E-Plus would outweigh any savings that could be achieved through this agreement. Telefónica explained that as a result of the network sharing agreement, E-Plus would get access to better 4G services and enter the 4G market earlier than on a standalone scenario. This would have translated into [...] market shares losses from Telefónica

⁸²² Presentation [...] Document ID 258-6956.

⁸²³ Annex 1 of the Notifying Party's response to the Commission's RFI No 9 of 4 February 2014, Document ID 1582.

⁸²⁴ [...].

⁸²⁵ Presentation [...] Document ID 258-6956, slide 13.

⁸²⁶ See document "Annex 1 to Q10, RFI No 9", Document ID 1582, p. 2.

⁸²⁷ Presentation [...] dated [...] Document ID 1528-43, slide 7.

⁸²⁸ Notifying Party's response to Commission's RFI No 5 of 12 December 2013, Document ID 1084, question 29.

to E-Plus. In addition, the Parties' different network roll out strategies would have caused significant delays in the joint LTE roll out compared to Telefónica's standalone scenario. The loss of market shares and the delays in the roll out plans would lead, according to Telefónica, to a commercial downside of EUR [...] NPV over ten years, which would result into a total negative NPV of the network sharing agreement of EUR [...] over ten years. Telefónica further estimated that, due to the reasons mentioned in recital (1117), the downside estimates of 2012 should be updated and increased by 20 to 30%, which would further reduce the value of the network sharing options.

- (1126) In the Statement of Objections the Commission underlined that Telefónica's calculation of the commercial downside of the network sharing agreement relied on the assumption that, in the absence of network sharing between the Parties, E-Plus would exert only limited competitive pressure in particular as regards 4G services. However, as the Commission set out in its Statement of Objections, in view of the developments described above in recital (386) et seq. and the commercial launch of 4G by E-Plus in March 2014, this assumption appears not to be accurate.
- (1127) In its Reply to the Statement of Objections, the Notifying Party explained that Telefónica's calculations of its commercial downside did take into account E-Plus announcement that it would try to roll out LTE only based on 1800MHz and in urban areas. The Notifying Party also explained that compared to the current status of LTE roll out by E-Plus, Telefónica's estimates of December 2012 would have overestimated E-Plus ability to offer 4G services.
- (1128) However, the Notifying Party also explained that in its view what matters is not E-Plus' ability to offer 4G services, but rather its ability to offer 4G services based on the 800 MHz band. This is because the Notifying Party considers that access to 800 MHz band is a key differentiator as it allows the development of a significantly better LTE network characterised by higher quality and larger coverage (compared to a LTE network based on 1800MHz). As a result, Telefónica submits to have assessed its market shares developments and, more generally, the value of its network sharing agreements against two scenarios: (i) the possibility of E-Plus having access to LTE 800 (due to the network sharing) and (ii) the possibility of E-Plus not having access to 800 MHz for the roll out of LTE (E-Plus stand-alone scenario).
- (1129) In this regard, the Commission, notes, first that a 4G offer built exclusively on 1800 MHz, even if potentially of an inferior quality in comparison to a 4G offer based on the combination of 800 MHz and 1800 MHz spectrum, can still be very attractive and therefore exercise a significant competitive pressure on the market. This is in line with the views expressed in Telefónica's strategic plan of [...] that confirms that E-Plus is going to exert a [...] pressure on LTE prices as of the end of 2014: [...] ⁸²⁹. In addition, another document points out that [...] ⁸³⁰. These documents show that Telefónica considered E-Plus' 4G offers, even in a standalone scenario and irrespective of E-Plus having access to 800 MHz bands spectrum, as attractive, credible and as a threat to its commercial strategy and market position even in the absence of the network sharing agreement.
- (1130) Secondly, the Commission notes that, even assuming that Telefónica would have suffered a more significant commercial downside should E-Plus be enabled to access 800 MHz, the conclusion of a network sharing with Telefonica did not constitute the

⁸²⁹ Presentation [...] dated [...] Doc ID 991-11204.

⁸³⁰ Presentation dated [...] Doc ID 991-15959.

only way for E-Plus to access 800 MHz band and to offer LTE on this band. E-Plus could have gained such access and strengthened its 4G services by signing a network sharing agreement with Vodafone or Deutsche Telekom.⁸³¹ In particular, in the absence of the merger, considering that Vodafone holds as much spectrum as Telefónica in the 800MHz bands and it has a more limited spectrum holding than Telefónica in the 1800MHz band, it seems that Vodafone would have had a strategic interest, at least equal to Telefónica's interest, in combining E-Plus' 1800 MHz spectrum holdings with its 800 MHz band in particular for use for 4G. [...]*

- [...]*⁸³²
[...]*⁸³³.
- (1131) If E-Plus had signed this network sharing agreement with [...]*, Telefónica would have suffered two major disadvantages: (a) it would have received no financial compensation from E-Plus and (b) would have still been exposed to E-Plus' competition on LTE offers and prices. This scenario has been identified by Telefónica in its internal analysis: [...]*.⁸³⁴ This document seems to indicate that, if faced with the risk of E-Plus concluding an agreement with Vodafone or Deutsche Telekom, Telefónica would be likely to enter into a network sharing agreement with E-Plus.
- (1132) In its Reply to the Statement of Objections, the Notifying Party reiterates that such possibilities appear remote and unlikely given that (a) E-Plus acknowledges in its internal documents to have received a negative feedback [...]* on a possible network sharing option⁸³⁵ and because (b) [...]* stated that it sees no reason to enter radio access network (RAN) sharing because network quality is a key differentiator.
- (1133) In this respect, the Commission notes, first, that in the absence of the proposed transaction and the access to E-Plus internal documents that Telefónica was granted in this context, Telefónica would not have been in a position to know about [...]*, it would have had no reason to exclude the feasibility of a network sharing agreement between these players. Telefónica's internal documents rather show that Telefónica considered such a possibility as likely. [...]*.⁸³⁶
- (1134) In addition, as regards [...]*, the Commission notes that [...]* statement in response to the Commission Request for Information is a general statement [...]*. In addition, Telefónica's internal documents reveal a completely different perception [...]*.⁸³⁷
- (1135) Against this background, the Commission considers that the risks of E-Plus gaining access to 800 MHz by signing an alternative network sharing agreement are not properly reflected in Telefónica's calculations of the commercial impact of a network-sharing agreement with E-Plus and should, if anything, increase the value of this network-sharing agreement for Telefónica and, thus, its incentives to conclude it.
- (1136) Whereas Telefónica submits that there is a large negative impact on *its* business, E-Plus estimated that the *joint positive* commercial value of E-Plus and Telefónica together would be around EUR [...]*.⁸³⁸

⁸³¹ Presentation [...] dated [...] Document ID 1528-43, slide 6. See also, [...]*, Document ID 259-3530.

⁸³² [...] internal document [...]*, Document ID 258-6956.

⁸³³ E-mail from [...] to [...] dated [...] Document ID 1528-54.

⁸³⁴ Presentation [...] dated [...] Document ID 991-15596, slide 5.

⁸³⁵ Presentation dated [...] Document ID 1528-43, slide 6.

⁸³⁶ Presentation [...]*, dated [...] Document ID 991-15596.

⁸³⁷ [...] dated [...] Document ID 991-15900.

⁸³⁸ See document "Annex 1 to Q10, RFI No 9", Document ID 1582, p. 2.

- (1137) In general, the Commission notes that, for an alternative solution to be considered reasonably practical, it is sufficient that it brings positive added value to the Parties, taking into account the business case faced by each of them. The Commission does not consider relevant how such value is distributed between the Parties, following the commercial negotiations between them nor if the Parties could have achieved higher values through other options. In particular, the Commission considers that the mere fact that the Parties have opted for the proposed transaction instead of entering in a network sharing agreement is not sufficient in itself not to consider network sharing as a realistic and attainable alternative to the proposed transaction for achieving the claimed efficiencies.
- (1138) The Notifying Party also claims that E-Plus did not duly take into account in its estimation of the value of the network sharing agreement the downsides related to (a) regulatory high risks and (b) the higher transaction and implementation costs related to the need to agree on a common network and requiring each of the Parties to modify its internal network roll out plans and strategy⁸³⁹. In relation to this claim, the Commission notes that none of these risks has been quantified by Telefónica or E-Plus in the documents provided by the Commission by the Notifying Party or in the internal estimates contained in the Parties' internal documents reviewed by the Commission. [...] ⁸⁴⁰.
- (1139) As regards the other risks pointed out by Telefónica, the Commission considers that execution risks exists in any network sharing cooperation and that other players in other countries have found means to control or mitigate such risk by the contractual conditions negotiated prior to the conclusion of the agreements. As regards the risks related to E-Plus not being financially sound, the Commission has already explained in recitals (411) to (423) why it does not share the Notifying Party's view on E-Plus' and KPN's alleged financial problems.
- (1140) Finally, the Commission notes that the Parties negotiated a network sharing agreement for long time and dedicated significant financial and human resources to these projects. Negotiations were still on-going until very recently and were only interrupted shortly before the proposed transaction was announced. The Commission found evidence of these discussions in E-Plus internal documents dated June 2013⁸⁴¹, while Telefónica's most recent internal documents analysing the different network sharing options are dated December 2013.⁸⁴² The Commission interprets in particular the fact that the Notifying Party was still analysing in December 2013 (following the announcement of the proposed transaction) possible network sharing options as confirmation that the failure of the previous discussions does not have an impact on the feasibility of network sharing.
- (1141) The Notifying Party contests the Commission's findings in the Statement of Objections that Telefónica's evaluation of the value created by a network sharing agreement with E-Plus appears to be influenced or rather based on the need to weaken E-Plus in view of a future merger. Telefónica considers that there is no evidence in its internal documents supporting such findings and that, [...] ⁸⁴²the talks about the proposed transaction did not start until a few weeks before signing the relevant contracts.

⁸³⁹ Annex 2 to the Reply to the Commission RFI n. 9, Document ID 1583.

⁸⁴⁰ Presentation [...] ⁸⁴⁰dated [...] ⁸⁴⁰Document ID 259-2400.

⁸⁴¹ Presentation [...] ⁸⁴¹dated [...] ⁸⁴¹Doc ID 258-5940.

⁸⁴² Presentation dated [...] ⁸⁴², Doc ID 991-15439.

- (1142) As regards the latter argument, the Commission notes that the internal and joint discussions about different possibilities of mergers and network sharing proceeded in parallel or in alternation [...]*. As a consequence, and as shown by both Parties' internal documents, the advantages and disadvantages of the different types of network sharing agreements have always been assessed by each of the Parties in relation to their impact on the attractiveness and the feasibility of a merger. In this context, the following quote taken from Telefónica's internal documents shows Telefónica's interest in denying access to E-Plus in view of a future merger: [...]***⁸⁴³ [...]***.
- (1143) The Notifying Party explained in its Reply to the Statement of Objections that the document referred to in the preceding recital should be interpreted as showing that, [...]*. However the Commission notes that other internal documents show that the consolidation was clearly seen as an alternative to network sharing and that such a possibility did play a significant role in preventing network sharing options⁸⁴⁴. In this context, the Commission notes that another internal document explicitly states that Telefónica's objective was [...]***⁸⁴⁵ [...]***.
- (1144) E-Plus, on the other hand, in its internal documents expressly evaluates the advantages of concluding a deal [...]*** against the impact that such a deal would have on possible future consolidation with Telefónica⁸⁴⁶.
- (1145) Overall, for the reasons set out in recitals (1117) to (1144), the Commission concludes that there appears to be a significant positive value to both Telefónica and E-Plus from engaging in network sharing, in particular when engaging in a network sharing agreement covering 2G/3G/4G technologies. This, in turn, indicates that, in the absence of the proposed transaction, the Parties, in light of their business situation, had a concrete interest in concluding network sharing agreement(s), which should therefore be considered a realistic alternative to the proposed transaction.

(ii) Spectrum asymmetry is not an obstacle to a network sharing agreement

- (1146) As regards a 4G spectrum sharing agreement, the Notifying Party notes that any such agreement would have led to an asymmetric situation, in which Telefónica would have granted access to the 800 MHz band, that has, according to the Notifying Party, a higher value than E-Plus' spectrum holdings.
- (1147) In its internal documents, Telefónica considered that it could have asked E-Plus to pay a consideration of around EUR [...]*** million to enter into this agreement. This amount is calculated taking into account [...]***.
- (1148) According to the Notifying Party, E-Plus would have not been willing to pay such consideration because it had a different view on the value of Telefónica's spectrum holding. As explained by the documents submitted by the Notifying Party in response to the Commission's RFI, E-Plus based its evaluation on different parameters from those considered by Telefónica and, [...]***⁸⁴⁷ [...]***. According to the Notifying Party, such different views and the difficulty to agree on a consideration prevented the Parties from entering into a network sharing agreement

⁸⁴³ Presentation [...]*** dated [...]***, Doc ID 991-15670, [...]***.
⁸⁴⁴ Presentation [...]*** dated [...]*** Document ID 713-206).
⁸⁴⁵ Presentation [...]*** dated [...]***, Doc ID 991-15670, [...]***.
⁸⁴⁶ See Presentation [...]*** dated [...]*** Document ID 258-5940.
⁸⁴⁷ See Reply to the Commission's RFI dated 24 January 2014.

and render therefore such agreement not reasonably practical in the business case faced by the Parties.

- (1149) However, as explained in recitals (1117) to (1144) , the Commission considers that the network sharing agreement had a positive value for both the Parties and that the fact that the Parties did not agree on an adequate consideration does not imply that network sharing is not a realistic alternative. Once the Parties would have agreed that a network sharing agreement would be jointly profitable, there is no reason why reaching an agreement on a consideration would have been not feasible.⁸⁴⁸
- (1150) As regards the Notifying Party's claim that an asymmetric spectrum holding renders it significantly more difficult if not impossible to agree on the terms and conditions of entering into a network sharing agreement, the Commission notes that, while the respondents to the Market Investigation seem to attach different degrees of importance to the "spectrum symmetry" factor in relation to the different types of network sharing agreement, none of the respondents considers spectrum symmetry as indispensable for the conclusion of a network sharing agreement.⁸⁴⁹
- (1151) In addition, empirical evidence clearly shows that such agreements are possible even when the MNOs hold asymmetric spectrum. An example is for instance the network sharing agreement existing between Tele2 and TeliaSonera in Sweden. This agreement was constituted by the two companies following TeliaSonera's failure to acquire the 2100 MHz spectrum in the beauty contest organised by the Swedish regulator ("PTS") in 2000. Tele2 contributed [...] into a common joint venture (Sulab) [...]. This case is similar to the proposed transaction, given that whilst one partner held spectrum in a band crucial for the launch of UMTS services, the other one did not have any spectrum in this band. However, the companies found terms and conditions that were acceptable to each of them and entered in a network sharing agreement.
- (1152) The Notifying Party in its Reply to the Statement of Objections quoted [...] reply to the Commission questionnaire to support its claim that "a bargaining solution is highly unlikely in case of an asymmetric spectrum allocation"⁸⁵⁰.
- (1153) The Commission notes that, in its reply to the Commission questionnaire [...] stated that:

"[...] has never failed a network sharing negotiations however believes that the following example could be a reason for a failure:

In case there is a large imbalance of the value of assets (network assets) each operator is to move into the joint venture, a difficult situation arises. The operator that provides more assets than the other to the joint venture will experience a market share loss –this will potentially result in a speedy build out process for the competing operator. The gap between what the operator that has provided more assets (network assets) wants as financial compensation and what the operator which provides less assets to the joint venture wants to pay, can be hard to agree on and could likely become a reason for failed negotiations."⁸⁵¹

⁸⁴⁸ See also recital (1154) below.

⁸⁴⁹ Commission questionnaire to MNOs active outside Germany, question 10.

⁸⁵⁰ Reply to the Statement of Objections, paragraph 787.

⁸⁵¹ [...] Reply to the Commission Questionnaire to MNO outside Germany, dated 27 January 2014, question 9, Document ID 1328.

- (1154) The Commission considers that the wording of this reply, and the fact that [...] has entered into a network sharing agreement with [...]*, despite the asymmetries in their respective spectrum holdings, merely shows that it is more difficult to agree on the terms, conditions and consideration of a network sharing agreement if the MNO have asymmetries in their spectrum holdings or generally assets of different values, but do not show that concluding a network sharing agreement is not reasonably practical.
- (1155) Finally, on a more general note, the Notifying Party takes the view that the results of the Market Investigation confirmed the importance of a symmetric spectrum allocation for the conclusion of a network sharing agreement, given that most of the respondents have rated the factor "willingness to make compensation payments" as the most important or the second most important factor leading to the success of a negotiation in the framework of a network sharing agreement. According to the Notifying Party, the willingness to make compensation payments should be considered as "directly related to the (potential) existence of spectrum asymmetries". Therefore, the respondents to the Market Investigation may, according to the Notifying Party, be pointing to the willingness to make compensation payment as the appropriate mechanism to correct possible spectrum asymmetries.
- (1156) The Commission does not consider that the "willingness to make compensation payments" factor should be uniquely interpreted as a corrective mechanism for spectrum asymmetries as it could relate more generally to the willingness of each party to agree on the compensations for the contributions of any kind of assets by the other party in the context of the network sharing agreement or more generally to the willingness to agree on the terms of the agreement. Therefore, the Commission does not consider that the fact that the respondents have rated this factor as very important automatically and unequivocally confirms that a network sharing in the presence of spectrum asymmetries is not reasonably practical. However, even if it were to be considered that the feasibility of network sharing agreements in the presence of network sharing agreements depend on the willingness to make compensation payments, this does not mean that it is impossible for the parties, in a case where both can derive a significant joint value from the conclusion of a network sharing agreement, to make reciprocal concessions and agree on the final considerations.
- (1157) Moreover, the Commission notes that each party's willingness to make such compensation payments, its willingness to contribute the assets in question, as well as more generally its negotiating position, depend on the options that are open to it. In this Case, each of the Parties seems to have assessed the opportunity of concluding a network sharing agreement against the background of the upcoming consolidation between Telefónica and E-Plus. As pointed out, the internal documents show that for each of the Parties the impact of the network sharing on a possible consolidation always constituted an important factor to be taken into account when deciding whether to enter into a network sharing agreement. In particular, as further set out in recitals (1141), it appears that the Notifying Party after assessing the two alternatives of network sharing and the merger, has considered the latter more profitable and has decided to interrupt the negotiations on network sharing primarily in order to push forward the proposed transaction.

(iii) Complexity and misaligned LTE roll-out plans are not an obstacle to network sharing

- (1158) The Notifying Party submits that the complexity of a network sharing agreement would constitute an obstacle.
- (1159) The Commission disagrees with this view for two reasons: (a) these alleged complexities have been solved in a number of Member States, where there are

extensive network sharing agreements and (b) the Parties' internal documents show that the level of complexity was manageable and that negotiations on network sharing were rather advanced.

- (1160) Based on available information, it appears that in thirteen Member States there are passive network sharing agreements⁸⁵² and in ten Member States there are active network sharing agreements and spectrum sharing agreements or extensive roaming sharing agreements.⁸⁵³ In particular in Sweden, the joint venture Net4Mobility was created between Telenor and Tele2 in order to operate a single 2G and 4G network with spectrum sharing⁸⁵⁴. This joint entity acquired 2 x 10 MHz spectrum in the 2011 spectrum auction for 800 MHz spectrum⁸⁵⁵. In Denmark, a spectrum sharing agreement, which cover all technologies⁸⁵⁶, has been concluded between Telia Denmark and Telenor.
- (1161) The Notifying Party considers that the fact that network sharing agreements are a common practice in the industry is not relevant to conclude that these agreements would be reasonably practical in the business case faced by the Parties. In particular, according to the Notifying Party, the different network strategies followed by E-Plus and Telefónica would have caused particular problems in this Case in terms of prioritisation of the regions for completing the roll out. In particular, the Notifying Party considers that such difficulties could not be addressed by solutions similar to the ones that Vodafone indicated in its reply to the Commission's questionnaire.
- (1162) Vodafone, which is part of a number of network sharing agreements, including, in particular, a nationwide active network sharing with Telefónica in the United Kingdom, explained that in its experience, [...]*. Vodafone explained that in its experience [...]*.⁸⁵⁷
- (1163) The Commission considers that generally the prioritisation of the network roll out can be set out in advance through contractual provisions setting adequate governance mechanisms and decision making processes. In addition, it is the Commission's understanding that the solutions indicated by Vodafone, are largely used in the industry to address the problems related to different network roll out strategies.
- (1164) [...]*.⁸⁵⁸ [...]*.
- (1165) Similarly, another internal presentation quoted by the Commission in the Statement of Objections and that was presumably prepared by both Parties in 2013 to set out governance mechanisms for a NetCo, is not relevant, [...]*.⁸⁵⁹ The Commission considers that, while this presentation clearly indicates that the Parties found ways of addressing the alleged complexity of engaging in network sharing for 2G/ and 3G, they also considered how to solve the issues related to differences in the 4G network roll out should 4G not be included in the network roll out plan.

⁸⁵² Belgium, Germany, Denmark, Spain, France, Ireland, Italy, the Netherlands, Poland, Portugal, Romania, Sweden and the United Kingdom.

⁸⁵³ Austria, Denmark, Spain, France, Ireland, the Netherlands, Portugal, Romania, Sweden and the United Kingdom.

⁸⁵⁴ Document ID 4188.

⁸⁵⁵ Document ID 4176.

⁸⁵⁶ Document ID 4175.

⁸⁵⁷ Minutes of the meeting between the European Commission and Vodafone of the meeting held on 23 January 2014, Document ID 1680.

⁸⁵⁸ See presentation [...]*, Document ID 262-4729, [...]*.

⁸⁵⁹ See presentation [...]*, dated [...]*, Document ID 1528-57.

- (1166) In addition, the Commission considers that agreeing on a network roll out strategy when a significant number of sites still have to be built might be, in some instances, less problematic compared to the consolidation of existing networks. Through its contacts with national regulators, the Commission verified that problems related to the different network roll out strategies are very common in network sharing agreements and are commonly addressed by leaving each of the parties the possibility to extend coverage in areas (on their cost) in order to meet a specific demand.
- (1167) Similarly, as regards the Notifying Party's claim concerning the alleged problems related to the use of different suppliers, the regulators confirmed that such problems are very common in the industry and are normally dealt with by splitting the areas covered by the network sharing agreements between its partners, which would each be responsible for one area and would be able to use its own supplier in this area.
- (1168) Accordingly, the Commission concludes that the complexities that may exist in relation to the various network sharing agreements available to the Parties do not undermine the fact that these network sharing agreements constitute a realistic and reasonably practical alternative to the proposed transaction.

(iv) Regulatory barriers are not an obstacle to network sharing

- (1169) The Notifying Party submits that a spectrum sharing agreement would not be feasible because of alleged regulatory barriers due to the regulatory framework and competition law. The Commission disagrees with this view. Article 9b(1) of the Directive 2002/21/EC of The European Parliament and of the Council provides that "Member States shall ensure that undertakings may transfer or lease to other undertakings in accordance with conditions attached to the rights of use of radio frequencies and in accordance with national procedures individual rights to use radio frequencies". Accordingly, the relevant regulation does not oppose in principle, the sharing of spectrum holdings between MNOs. However, network sharing agreements would likely be subject to an approval by the national regulatory authority.
- (1170) The Commission notes that, under the German telecommunication regulation, the BNetzA must approve in any event a merger between the Parties. Therefore the Commission does not consider the network sharing approval procedure and requirements as materially more complex to fulfil than the regulatory procedures and requirements of the approval of the proposed transaction. Moreover, if the network sharing agreement were to be limited to the active or passive elements of the radio access network (but would not include the spectrum frequencies) sharing, BNetzA's approval, under certain conditions, may not even be required.
- (1171) The Notifying Party, in its Reply to the Statement of Objections, considers that the fact that the regulatory procedures are equally complex in the case of a merger as in the case of a network sharing agreement, and that they have decided to carry out such regulatory procedures in the context of the proposed transaction, is not relevant to conclude that network sharing agreements are reasonably practical. In this respect, the Notifying Party explains that whilst the "regulatory efforts" might be considered justified in the case of a merger due to the larger efficiencies achievable, they could not be considered adequate for a network sharing agreement due to the lower efficiencies achievable.
- (1172) The Commission considers, first, that the merger specificity test requires that the alternatives to the merger are reasonably practical, taking into account the business case faced by the parties and the industry practice. The fact that the Notifying Party has decided to initiate such proceedings (in the context of the proposed transaction)

shows in concrete terms that the complexity of the regulatory procedure is manageable. The test does not require the Commission to assess whether the alternative solutions are more or less reasonably practical than the merger, taking into account the higher profitability of the merger, nor to compare the Parties' incentives to execute the alternative solutions, provided that such solutions would provide a value to the merging parties, as they do in this Case (see recital (1146) to (1157)) with the incentives of the Parties to execute the merger. The Commission reiterates that the fact that the Parties have chosen the most profitable option does not automatically render the other options that were examined by the same Parties to achieve synergies as unrealistic.

- (1173) The same reasoning applies to the possible complexities and delays related to a procedure under the applicable competition rules. The Commission notes that should the network sharing agreement be constituted through a joint venture, such joint venture may have to be notified either to the European Commission, under the merger Regulation, or, under national law, to the Bundeskartellamt. The level of complexity of these procedures would be similar to the one that the Commission is carrying out in the present case. Alternatively, if the agreement were not to be construed as a joint venture, it may even not require any notification.
- (1174) As regards the Notifying Party's argument that merger proceedings, under competition law, provide ex-ante comfort to the Parties, the Commission notes that if the Parties had implemented their network sharing agreement through a joint venture (which seemed to have been their preferred governance structure according to their internal documents), they would also have benefited from ex-ante legal certainty given that such a joint venture would have been notified to the European Commission (if full-function) or to the Bundeskartellamt, under German competition law (if not full-function⁸⁶⁰). If the Parties had not decided to implement a joint venture, any such network sharing agreements would have required an assessment of the likely anti-competitive and pro-competitive effects, under Article 101 of the Treaty on the Functioning of the European Union, taking account of the economic context in which the parties operated, the products and services covered by the agreement and the structure of the market concerned and the actual conditions in which it functioned.
- (1175) Finally, in its Reply to the Statement of Objections, the Notifying Party submits that a major regulatory complexity that arises in the case of a network sharing and does not arise in the context of a merger concerns the renewal of the spectrum holdings possibly pooled in the context of a network sharing agreement. The Notifying Party submits that, even if BNetzA were to approve the initial transfer of the frequency licences from the partners to the NetCo, in the context of a network sharing agreement, it would then subsequently not allow the NetCo to participate to the auction for the renewal of these licences, due to the rules on bid rigging. Such rules explicitly provide that each bidder must be independent from the others. This would translate into a significant execution risk for the network sharing agreement.
- (1176) In this respect, the Commission considers, following an exchange of information with BNetzA, however, that a participation of the joint venture managing the network sharing agreement (NetCo) to a possible auction would not infringe the rules on bid rigging as long as the parent companies of the NetCo (that is to say the

⁸⁶⁰ See Articles 35, 37 of the German Act Against Restraints of Competition ("Gesetz gegen Wettbewerbsbeschränkungen").

network sharing partners) do not participate in the same bid at the same time as separate bidders.⁸⁶¹

- (1177) The large majority of the respondents to the Phase II Market Investigation⁸⁶² also confirmed that they do not view regulatory hurdles as an obstacle to the conclusion of network sharing agreements. In particular, [...] states that: "We believe there are no major regulatory obstacles to network sharing in Germany. The Commission is familiar with the competition law considerations relating to the German market since its decision in Case COMP/38.369: T-Mobile Deutschland/O2 Germany: Network Sharing Rahmenvertrag. Many more network sharing agreements have been entered into in other European countries delivering significant cost savings that have been passed on to consumers".⁸⁶³

C. A network sharing agreement would have led to a less anti-competitive result

- (1178) The Notifying Party states that in some cases, whilst a consolidation is permitted under merger control rules, a cooperation among the same parties can be incompatible with Article 101 of the Treaty on the Functioning of the European Union. In addition, it points out that a "deep" joint venture, as the one which would be required to implement the network sharing in question, would very likely raise competition concerns. The Notifying Party indicates that, whilst passive sharing is permissible, active sharing (including spectrum sharing) leading to the harmonisation of key differentiators such as quality, coverage and capacity would lead to competition problems.
- (1179) First, the Commission reiterates that any network sharing agreements, including a possible spectrum sharing, would not be restrictive of competition by object, but would require an assessment under Article 101 of the Treaty of the likely anti-competitive and pro-competitive effects that such agreement would generate in the market concerned and of the actual conditions in which it functions⁸⁶⁴.
- (1180) Second, the Commission notes that, given the very limited degree of integration between the participating undertakings, network passive sharing agreements are in most cases unlikely to give rise to competition concerns, in particular where there are no bottlenecks in the access to passive infrastructure, and are widely used by MNOs in a number of Member States.
- (1181) As regards active network sharing agreements, including spectrum sharing agreements, the Commission notes that, while these types of agreements entail a greater degree of integration between the participating undertakings' network compared to passive sharing agreements, they could, in principle, also lead to significant cost savings for the parties involved, which could ultimately benefit consumers. While these agreements would have to be reviewed on a case-by-case basis under Article 101 of the Treaty on the Functioning of the European Union taking into account, among other things, the nature of the cooperation, the market positions of the participating undertakings and their competitors, their network situation and roll-out plans, prevailing market conditions, the Commission does not consider that, given the possible efficiencies stemming from these agreements (such as cost savings), they are in all cases unlikely to meet the requirements laid down in

⁸⁶¹ Doc ID 4419.

⁸⁶² See Commission Questionnaire to MNOS outside Germany, question 11.

⁸⁶³ [...] response to the Commission's RFI of 20 January 2014, Document ID 1866, question 61.

⁸⁶⁴ See Judgement by the General Court of 2.05.2006, case T-328/03 (O2 (Germany) vs. Commission), paragraphs 65 to 71.

Article 101(3) of the Treaty. To the contrary, given the specificities of the case at hand, it is possible that the pro-competitive effects arising from a network sharing agreement may offset its anti-competitive effects.

Network sharing agreements between each of the Parties and other MNOs

A. E-Plus/[...]*

(1182) [...]*⁸⁶⁵ [...]*.

(1183) As explained in recital (937), the Notifying Party considers that a network sharing agreement between E-Plus and [...]* would be unlikely [...]*. In addition, the Notifying Party underlines that such an agreement would not result in any benefits to E-Plus customers in relation to 2G and 3G networks [...]*, and would not lead to any benefits at all for Telefónica's customers.

(1184) In this respect the Commission notes that the Parties did not provide sufficient evidence to conclude that a network sharing agreement between E-Plus and [...]* would not be realistic. On the other hand, it appears from the internal documents (see recital (1133)) that the Notifying Party considered such an agreement to be likely [...]*.

(1185) [...]*

(1186) [...]*

(1187) The reasoning set out above in relation to (i) spectrum asymmetries, (ii) regulatory barriers and (iii) less anti-competitive outcome are still valid also when analysing a possible cooperation between E-Plus and [...]*.

(1188) As regards the ability of an alternative network sharing agreement between [...]* and E-Plus to deliver the same level of efficiencies, the Commission considers that such an agreement is likely to produce a similar level of 4G demand-side efficiencies as the proposed transaction, given that the combination of complementary spectrum in the two scenarios would be similar. [...]*⁸⁶⁶ [...]*.

(1189) [...]*⁸⁶⁷ [...]*

B. Telefónica/[...]*

(1190) [...]*⁸⁶⁸ [...]*

(1191) This would have led to costs savings for Telefónica, in terms of reduced CAPEX.⁸⁶⁹ [...]*.

(1192) Contrary to the claims of the Notifying Party, in the Statement of Objections the Commission did not consider this cooperation to be unlikely nor does consider it in the present decision. [...]*. [...]*⁸⁷⁰ [...]*.

Conclusion

(1193) For all those reasons, the Commission concludes that the claimed demand-side and supply-side network efficiencies are to a very large extent not merger-specific as

⁸⁶⁵ Presentation [...]*, Document ID 258-6956, [...]*.

⁸⁶⁶ [...]* presentation [...]*, dated [...]*, Document ID 258-5940.

⁸⁶⁷ See the Document [...]*, Document ID 258-2178, annexed to the reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 4.

⁸⁶⁸ See Telefónica's presentation dated 5 December 2013, Document ID 991-15439.

⁸⁶⁹ Presentation [...]*dated [...]*Document ID 991-15439.

⁸⁷⁰ Presentation [...]* dated [...]*, Document ID 991-15616.

they could be achieved by less anti-competitive means, namely several alternative or cumulative forms of network sharing, which constitute realistic and practicable alternatives to the proposed transaction.

6.9.2. *Distribution network efficiencies*

6.9.2.1. Notifying Party's view

- (1194) The Notifying Party submits that the proposed transaction would create both demand-side and supply-side efficiencies in relation to the distribution networks, which comprises the network of retail shops and customer service.
- (1195) In particular, as regards demand side efficiencies, the Notifying Party notes that, post-transaction, customers will benefit from higher shop density: the number of available retail shops will increase by about [...] and [...] for Telefónica's and E-Plus' customers respectively compared to the stand alone scenario⁸⁷¹. The Notifying Party clarified that the fact that some shops will be closed is not relevant given that only duplicated shops will be closed and the remaining shops will offer both Telefónica and E-Plus products. According to the Notifying Party, apart from the benefits arising to consumers due to a higher shop density, consumers (and in particular E-Plus customers) will also benefit from a better customer service.
- (1196) The Notifying Party submits that it would be difficult to exactly quantify the benefits consumers would possibly derive from a better shop distribution in terms of time savings and the avoidance of other inconveniences. However, it submits that a large number of consumers still prefer physical outlets to on-line distribution channels.
- (1197) As regards supply-side efficiencies, the Notifying Party submits that savings of around EUR [...] are foreseen for the period between 2014 and 2020 from the closure of [...] of Telefónica's own retail shops [...] and the closure of [...] E-Plus and Telefónica franchise retail shops [...]. The yearly run rate of all commercial efficiencies as of [...] will be EUR [...]. Therefore there will also be a decrease in the distribution and customer service costs per customer due to the merger. The Notifying Party also anticipates that the absolute advertising budget of the merged entity will be considerably larger than the individual stand-alone budgets and will allow the merged entity to react more quickly and more effectively to competitor advertising.
- (1198) At the request of the Commission, the Notifying Party also submitted that the incremental costs of Telefónica for hypothetically hosting an additional 1 million subscribers will be roughly EUR [...] million of additional OPEX and EUR [...] million of additional CAPEX in a stand-alone scenario.⁸⁷² The incremental costs of the merged entity for hosting additionally 1 million subscribers would be only roughly EUR [...] million of additional OPEX and no additional CAPEX.⁸⁷³ The merged entity would not require opening additional shops in response to the increase of subscribers as the merger would in any case change the channel sales mix to more digital sales channel to attract more digital new customers. It would therefore require fewer incremental costs to host additional subscribers. Moreover,

⁸⁷¹ Reply to the Commission RFI to Telefónica dated 19 November 2013, Document ID 1084, question 35.
⁸⁷² Telefónica's response to the Commission's RFI No 8 dated 24 January 2014, Document ID 1524, question 64.

⁸⁷³ Telefónica's response to the Commission's RFI No 8 dated 24 January 2014, Document ID 1524, question 65.

the incremental costs of several categories, such as commissions to partner shops, marketing or advertising, would decrease as a consequence of the merger.

- (1199) For the same reasons referred to in recital (1059) , the Notifying Party submits that such costs savings will be passed on to consumers.
- (1200) According to the Notifying Party, these efficiencies are merger-specific because the Parties could not operate a single distribution network without the proposed transaction.

6.9.2.2. Commission's assessment

- (1201) As regards the demand-side benefits to consumers related to the existence of a larger distribution network, the Commission notes, firstly, that, given the growing importance of on-line shops for the purchase of mobile services, and in the absence of a more accurate analysis from the Notifying Party, it is not clear what would be the consumer benefit derived from a denser distribution network. Secondly, the Commission considers that the overall number of retail shops will be reduced ([...])* following the proposed transaction and therefore, consumers might be even negatively affected in that shops that are not closed may be more crowded than in the stand-alone scenario. The claim of the Notifying Party that the customer- to -store ratio will be designed in such a way as to make sure that the store service to the customer will not deteriorate, has not been sufficiently supported by further evidence. In the absence of such further evidence, the Commission cannot exclude that customers would be negatively affected by more crowded shops, or that, in any event, would not benefit from greater density of shops. As such, substantial demand-side benefits as a consequence of the proposed transaction have not been sufficiently verified.
- (1202) As regards supply side efficiencies, the Commission notes that the Notifying Party did not sufficiently demonstrate that fixed costs savings stemming from a reduction of the retail distribution network would be passed on to consumers. In particular, for the same reasons as set out in recitals (1059) to (1090), the Notifying Party has failed to demonstrate that fixed costs related to a distribution network would, in any way, be relevant for price setting decisions by the merged entity or any other strategic decision related to the retail offers.
- (1203) Moreover, the likelihood and magnitude of incremental distribution cost savings is not sufficiently verified. The Commission recalls that there must be a reasonable degree of certitude that claimed efficiencies will materialise and efficiency claims should be verified ideally on the basis of the internal documents that were used by the management, historical examples of efficiencies or pre-merger external experts' studies on the type and size of efficiency gains.⁸⁷⁴
- (1204) The Notifying Party has not submitted any information as to whether the proposed transaction will save any (short-run) variable cost. In relation to incremental costs the Notifying Party has merely submitted an estimate of incremental costs savings, but has not provided internal documents that would justify its efficiency claims. For example, the Notifying Party considers that an improved negotiation position and a channel mix moving to "cheaper" channels will lead to [...]* reduction of incremental commission fees⁸⁷⁵ compared to the status quo.⁸⁷⁶ Similarly, the

⁸⁷⁴ See paragraph 88 of the Horizontal Merger Guidelines.

⁸⁷⁵ Commissions are paid to external sales agents for acquired subscribers.

Notifying Party assumes that there will be roughly [...] lower unit costs for point of sale material compared to the standalone case due to the increased purchasing power of a larger base. However, no internal documents or factual evidence has been submitted to support these estimates of cost savings.

(1205) In the Statement of Objections, the Commission pointed out that without the submission of further documents supporting these efficiency claims, it cannot be reasonably certain about the magnitude and the certainty of any reduction in incremental distribution costs. This is of particular importance in the context of distribution channels as there do not appear to be convincing reasons why significant economies of scale would be achieved.⁸⁷⁷ However, the Notifying Party has failed to present any further evidence to substantiate its claims. In light of the absence of internal documents or other evidence that would support the submitted claims concerning the savings at the distribution level brought about by the proposed transaction, the Commission considers that the submitted incremental cost savings are not sufficiently substantiated.

(1206) The Commission therefore considers that the claimed distribution network efficiencies do not appear to benefit consumers and are not sufficiently verified.

6.9.3. Synergies in selling general and administrative expenses

6.9.3.1. Notifying Party's view

(1207) The Notifying Party submits that the proposed transaction will lead to considerable savings in overhead functions, in particular IT and overall administrative expenses. Total savings in selling, general and administrative expenses ("SG&A") are estimated to be about EUR [...] for the period from 2014 to 2020 net of restructuring costs (NPV of EUR [...] or EUR [...] annually ([...] run rate). The Notifying Party considers that, in the absence of a merger, these cost savings would not be achieved. In addition, it considers that, while the proposed transaction will lead to savings relative to the combined stand-alone IT expenses, the merged entity will have a larger IT budget than each of the Parties on a stand-alone basis. This larger budget will allow the merged entity to develop new services more rapidly and enable the consumers to access those services earlier.

(1208) For the same reasons set out in recital (902) to (907), these cost savings would influence the pricing decisions and that they would fulfil the timeliness requirement contained in the Horizontal Mergers Guidelines⁸⁷⁸. Thus, the Notifying Party argues that these cost savings would be passed on to the consumers.

6.9.3.2. Commission's assessment

(1209) In the Commission's view, IT and overall administrative expenses are generally considered as part of the fixed costs; as such, these costs do not normally contribute to the price setting decisions. The Notifying Party failed to demonstrate that, in this particular case, the fixed costs affected by these efficiencies would be, in any

⁸⁷⁶ Telefónica's response to the Commission's RFI No 8 dated 24 January 2014, Document ID 1524, question 65.

⁸⁷⁷ In this regard, the Commission notes that the Notifying Party derived most of the elements of its incremental cost estimates for the stand-alone scenario by effectively assuming that the incremental costs per subscriber would equal to the average distribution costs per subscriber. This indicates that costs are roughly proportional to the number of subscribers, and therefore the absence of significant economies of scale.

⁸⁷⁸ Reply to the Article 6(1)(c) Decision.

manner, relevant for the merged entity's price setting decisions or any other strategic decision related to retail offers. Also, the Parties' internal documents do not provide any indication as to how these generic cost factors would influence Telefónica's pricing decisions after the proposed transaction. For this reason the Commission takes the view that the Notifying Party failed to demonstrate that they are likely to be passed on to consumers.

- (1210) The Notifying Party submits that up to [...] of Telefónica's standalone administration costs can be saved in the merger scenario. In its computation, the Notifying Party assumes similar costs for Telefónica and E-Plus. This implies that the merger could lead to a reduction of about [...] of the combined cost, while the size of the customer base would be doubled. It also indicates that this cost factor is essentially fixed and does not depend to a material extent on the size of the customer base. Additionally, some savings are clearly fixed and unrelated to the size of the customer base, such as the facility savings which would result from the closure of one of the two headquarters following the merger, or the IT savings due to platform/vendor consolidation. As explained earlier, these savings would appear fixed in nature and therefore they would be unlikely to be passed on to consumers.
- (1211) In this context, the Notifying Party has also submitted estimates as to the impact of the merger on the incremental SG&A costs when hosting one million additional customers.⁸⁷⁹ For the purposes of calculating the estimates, Telefónica has essentially departed from the SG&A costs (expressed as a percentage of the mobile service revenues) both in the stand-alone and in the merger scenario and has assumed that the saving in terms of incremental SG&A costs would be the same as the decrease in the SG&A costs per euro of revenues resulting from the proposed transaction. This amounts to assuming that the incremental cost savings would be of the same magnitude as the total SG&A cost savings. In light of the important reasons set out in the previous recital that essentially contradict this approach the Commission considers that the incremental SG&A cost estimates are not sufficiently verified.
- (1212) An E-Plus' internal presentation to the Board in 2013⁸⁸⁰ shows that a reduction of [...] % of non-commercial OPEX [...]. This indicates that, in the absence of the merger, a large reduction would have been implemented, without any apparent corresponding change in the size of the customer base. In the Commission's view, this indicates that selling general and administrative costs primarily depend on other factors than the size of the customer base.
- (1213) In its Reply to the Statement of Objections, the Notifying Party claims that this savings are highly speculative and, in its understanding, not yet achieved. Also, the Notifying Party points out that this does not contradict the fact that substantial savings would arise due to the proposed transaction, but only that these savings would need to be assessed in comparison to a smaller cost base in the standalone scenario.
- (1214) The Commission accepts the argument put forward by the Notifying Party that the fact that a significant reduction in costs was planned by E-Plus does not contradict the possibility that further savings could be generated by the proposed transaction. The Commission nevertheless points out that such reduction in costs, which is very similar in nature to the ones that should stem from the proposed transaction, is

⁸⁷⁹ Telefónica's response to the Commission's RFI No 8 dated 24 January 2014, Document ID 1524, question 70.

⁸⁸⁰ Presentation [...] Document ID 258-6211, Slide 6.

presented in E-Plus' internal documents without any reference to impacts on prices or any other strategic variable. This confirms the Commission's preliminary view that these costs are fixed and therefore very unlikely to be passed on to consumers, regardless of their ultimate magnitude. In addition, the fact that at least one of the Parties was considering to reduce costs in S&G, casts some doubts on the merger specificity of these claimed cost savings.

- (1215) Finally, similar considerations to those developed at recital (939) concerning the time horizon for the achievement of these efficiencies apply.
- (1216) The Commission therefore concludes that the claimed general and administrative efficiencies are unlikely to generate any benefit for consumers. However, even if this were to be the case, and if at least part of the claimed savings were passed on to consumers, the fact would remain that the Notifying Party has not sufficiently demonstrated that such claims are verifiable and merger specific.

6.9.4. *Additional business opportunities*

6.9.4.1. Notifying Party's view

- (1217) The Notifying Party submits that the following business development opportunities will result from the proposed transaction: (a) again of an additional market share of up to [...] * in the segment [...] * due to the improved 2G/3G and LTE network quality ("[...] *"); (b) a reduction of the churn rates of both Telefónica and E-Plus due to the higher network quality and enhanced customer service of the merged entity ("Churn Reduction") and (c) the possibility to offer Telefónica's VDSL⁸⁸¹ services to E-Plus' post-paid subscribers ("VDSL Cross-selling"). These improvements will lead to about EUR [...] * million in additional operating income before depreciation and amortisation ("OIBDA") during the period from 2014 to 2020 (NPV of about EUR [...] * million) and EUR [...] * million run rate from 2019 onwards.
- (1218) The Notifying Party explained that E-Plus' customers service, that currently lags behind Telefónica's⁸⁸², would be improved as a consequence of the proposed transaction. This would be obtained not by expanding E-Plus' sales forces, but rather by making the current ones more efficient.
- (1219) The Notifying Party claims that the [...] * and VDSL Cross-selling generate direct consumer benefits (output expansion either due to additional demand or switching customers being better off than previously). A lower churn rate, too, indicates improved customer satisfaction and therefore is linked to direct consumer benefits. However, according to the Notifying Party, these benefits can best be interpreted and are related to the other efficiencies in terms of their OIBDA impact: the positive OIBDA impact of additional business development is equivalent to the negative Opex and Capex impact on total costs (that is to say positive OIBDA impact).
- (1220) The Notifying Party considers that the efficiencies related to lower churn and additional business opportunities relate to new customers and may be considered, thus, additive to those deriving from a better network quality.
- (1221) The Notifying Party considers that the [...] * and the lower churn rates are merger specific because they result from higher 2G/3G network quality that is a consequence

⁸⁸¹ Very-high-bit-rate digital subscriber line is a digital subscriber line ("DSL") technology providing fast data transmission over fixed telephony networks. Depending on the length of the line, last generation VDSL connections can provide data rates exceeding 100 Mbit/s.

⁸⁸² Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 38.

of the proposed transaction. In addition, VDSL Cross-selling is merger specific because it would be commercially unattractive for E-Plus in the stand-alone scenario due to the high set-up costs and the low retail margins of fixed products.⁸⁸³

6.9.4.2. Commission's assessment

- (1222) First, the Notifying Party's claims concerning [...] and reduced churn due to higher network quality rely on the claimed network efficiencies. As explained in section 5.8.1 on network efficiencies, the Commission considers that the Notifying Party has failed to demonstrate that the proposed transaction is required in order to achieve network efficiencies. Accordingly, the Commission concludes that these efficiencies are not verifiable.
- (1223) The Notifying Party claims that the efficiencies due to lower churn and additional business opportunities can be considered as relating to new customers and therefore additional to the efficiencies achieved for the existing customer base.⁸⁸⁴ The Commission disagrees with this claim as existing customers will presumably decide to stay (instead of churning to another MNO) as a consequence of benefitting from improved network quality. Reduced churn due to an improved network quality would therefore not constitute additional consumer benefits in addition to those discussed in Section 6.9.1 on network efficiencies above. The Notifying Party, in its Reply to the Statement of Objections, objected to this argument, stating that a reduction in churn, for example switching subscribers, would indeed increase the customer base. In this respect, the Commission reiterates that if a contestable customer remains with its current provider, rather than switching to another provider, because of improved network quality, then this customer cannot be considered as a new customer. Following this logic, a reduction in churn refers to customers that are already part of the customer base.
- (1224) Second, as regards improved customer service, the Notifying Party has not sufficiently shown how the improvement would be achieved nor it has explained why E-Plus could not improve its customers' satisfaction on a stand-alone basis. The Notifying Party, in its Reply to the Statement of Objections, refers to its previous submissions⁸⁸⁵ allegedly showing how these efficiencies would materialize. As regards E-Plus, the Notifying Party notices that, given that E-Plus has apparently not managed to improve its customer service up to now, it is unlikely that it would do so in absence of the proposed transaction.
- (1225) The Commission reiterates that the Notifying Party's description of the way by which improvements in customer service would be achieved is not sufficiently detailed for such improvements to be considered verifiable. Also, the Commission does not consider the fact that no apparent improvement in E-Plus' customer service has taken place to date as sufficient evidence that any possible future improvement should be related to the proposed transaction.
- (1226) Third, with respect to VDSL cross-selling, Telefónica relies on an access offer to the VDSL network of Deutsche Telekom. This access offer is regulated and there is nothing preventing E-Plus from entering into a similar contract with Deutsche Telekom and cross sell the related fixed offer to its mobile customers. In its Reply to

⁸⁸³ Reply to the Commission RFI dated 19 November 2013, Document ID 1084, question 41; Presentation by Telefónica: "Network cooperation opportunities" dated 5 December 2013, Document ID 991-15439.

⁸⁸⁴ Reply to the Article 6(1)(c) Decision, paragraph 490.

⁸⁸⁵ See in particular Annex A to the Form CO, Section 3 as well as the reply to the RFI 5 to Telefónica, of 19 November 2013, Question 39.

the Statement of Objections, the Notifying Party states that E-Plus would face significant costs in order to conclude such an agreement with Deutsche Telekom, in the absence of the proposed transaction. The Commission accepts that this could be the case, yet this does not constitute definitive evidence that entering into such an agreement would be impossible for E-Plus.

- (1227) The Commission also notices that, in the absence of the proposed transaction, E-Plus' current consumers could still be able to combine their mobile services from E-Plus with fixed VDSL services from other providers. Therefore, the Commission does not consider that the merger is necessary in order for E-Plus customers to benefit from VDSL cross-selling. According to Telefónica's internal responses to investors of Q4 2012, "regulation now enables competitors to access Deutsche Telekom's super-fast VDSL network"⁸⁸⁶. Taking this into account, the Commission does not see any reason why E-Plus would not be in a position to benefit from this opportunity without the merger.
- (1228) In addition, the Commission notes that consumers with both VDSL and mobile offers from the same company may face increased difficulties in switching to another service provider. This disadvantage to consumer is acknowledged in Telefónica's internal document as a benefit for Telefónica itself and described as follows: "[...]"⁸⁸⁷. Taking this into account, it is difficult to clearly identify to what extent the benefit deriving to consumers by the cross –selling options described in recitals (1221) and (1226) can offset the negative effects possibly deriving from the lock-in of the consumers of merged entity.
- (1229) For all these reasons, the Commission concludes that the claimed efficiencies related to new business opportunities are not verifiable, not merger specific and not likely to bring any benefit to consumers.

6.9.5. *Efficiencies related to mobile termination rates*

6.9.5.1. Notifying Party's view

- (1230) The Notifying Party submits that the merger would lead to efficiencies in relation to mobile termination rates ("MTRs") in two ways: (a) the merger would lead to internalise MTR fees, that are set above marginal costs by the BNetzA and therefore result into price decreases and (b) the merger would lead to a revision of the MTR definition by BNetzA leading to decreasing MTRs which will in turn lead to lower prices.
- (1231) Post-transaction, Telefónica would no longer have to pay termination charges to E-Plus and vice versa. Therefore, calls by Telefónica's customers to E-Plus' customers and vice versa, would not have to terminate on another operator's network and thus no call termination charges (above marginal costs) would apply.
- (1232) MTRs are regulated by BNetzA. The Notifying Party claims that the methodology used by BNetzA in order to set these rates, that is to say the "costs of an efficient operator"⁸⁸⁸, leads to set rates above marginal costs. Therefore, the difference between marginal costs and MTRs would be saved by the Parties and passed on to consumers.

⁸⁸⁶ [...] *Document ID 991-8534.

⁸⁸⁷ Presentation [...] *dated [...] *Document ID 991-12124, slide 4.

⁸⁸⁸ *Kosten der effizienten Leistungsbereitstellung (KeL).*

- (1233) The Notifying Party considers that the corresponding marginal cost reductions would, if entirely passed on to consumers, translate into a [...] * and [...] * price reduction for Telefónica's and E-Plus' customers respectively (relative to their effective voice prices per minute in Q1 2013).
- (1234) Moreover, the proposed transaction would lead to a reduction of all MTRs based on a modification of BNetzA's efficient operator model used for the calculation of MTRs. According to the Notifying Party, BNetzA would adapt its model, based on an efficient operator with a 25% market share, which presuppose a market structure of four MNOs, to an efficient operator with a 33% market share based on the new market structure with only three MNOs. The Notifying Party submits that this efficiency is merger-specific since, in the absence of the proposed transaction, the existing MTRs would still apply.

6.9.5.2. Commission's assessment

Verifiability

- (1235) In the Statement of Objections, the Commission noted that the Notifying Party, in its analysis, focussed solely on the cost implications of saved MTRs (on outgoing calls from one party to the other) and did not take into account the termination revenues stemming from incoming calls. In the context of the assessment of the efficiencies stemming from the merger, the Commission considers that MTRs between the merging Parties represent at the same time a revenue for one and a cost for the other one; in other words, the MTRs are a zero-sum game between them. This implies that cross-payment between the Parties in MTRs would be internalized by the proposed transaction. The Notifying Party submitted that the call minutes between the Parties lead to a monthly average of EUR [...] * million in MTR payments from Telefónica to E-Plus and EUR [...] * million in MTR payments from E-Plus to Telefónica. However, simply considering the reduction in MTR payments, when assessing the effects of the proposed transaction on MTRs, as proposed by the Notifying Party, misrepresents the nature of MTRs expenses as mutual payments between the Parties.
- (1236) In the Statement of Objections, the Commission considered that the merger would merely have an impact on EUR [...] * million, resulting from the difference between the aggregate revenues from the incoming calls and the costs of the outgoing calls. This would imply that the overall potential impact related to MTR is roughly fourteen times lower than submitted by the Notifying Party. This value would go down to zero, if it were necessary to take account of the fact that even this surplus monthly payment from Telefónica to E-Plus, representing a cost for Telefónica and a revenue for E-Plus pre-merger, would be balanced out following the merger.
- (1237) In its Reply to the Statement of Objections, the Notifying Party does not question the Commission's reasoning set in recital (1236). The Notifying Party, instead, made reference to the Commission Recommendation on how to set MTR⁸⁸⁹ that concludes that lower MTRs usually lead to lower retail prices. This would not be, in the Notifying Party's view, in line with the assessment of the efficiencies made by the Commission in the Statement of Objections.

⁸⁸⁹ European Commission: "Commission Staff Working Document accompanying the Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU; Implications for Industry, Competition and Consumers", Brussels, 7.5.2009 SEC(2009) 599

- (1238) The Commission considers that a clear distinction should be made between a change in MTR levels, as discussed in the Recommendation, and the fact that, through the proposed transaction, the merging Parties would internalize the MTRs they are currently imposing on each other.
- (1239) In addition, the Notifying Party assumed that the relevant benchmark for the assessment of the effect of the proposed transaction is the short term marginal cost of on-net calls which would be equal to zero. However, in its reply a Commission's RFI⁸⁹⁰, the Notifying Party relied on a quote from GSMA, which states that "call minutes generate almost no marginal costs until a point is reached when e.g. further investment in the network or an additional member of staff is required". In order to take into account these additional investments which occur occasionally, the Commission considered in the Statement of Objections that an average measure of long term incremental costs may constitute a more appropriate benchmark than the Notifying Party's assumption of zero costs. For this reason, the Commission proposed an assessment based on a measure of the difference between BNetzA's methodology to calculate MTRs and the long term incremental costs.
- (1240) In its Reply to the Statement of Objections, the Notifying Party claims that the use of long-run incremental costs made by the Commission is inconsistent with approach taken when assessing the competitive effect of the merger. In that context in fact, the Commission used a model based on contribution margins as the main specification and one based on incremental margins as an additional sensitivity check.
- (1241) The Commission points out that the approach used in the Statement of Objections was chosen as it is in line with the its recommendation on MTR methodology⁸⁹¹. For this reason, the Commission considers that, as it is the case for the competitive assessment, the efficiency claims concerning MTR savings should be assessed both under a short and a longer term perspective. This exercise is carried out in recitals (1242) to (1247) conducted below, first on the basis of marginal costs, as originally provided by the Merging Party, and then on the basis of estimate of long run incremental costs.
- (1242) According to the Form CO⁸⁹², the share of call minutes from Telefónica to E-Plus out of all outgoing call minutes is about [...]*. Thus, [...]* of calls from Telefónica's network could benefit from a reduction of around 1.79 eurocents per minute. This translates into an average marginal cost reduction of [...]* eurocents per minute. Considering Telefónica's average voice price per minute of [...]* per minute, and assuming by way of example a 50% pass through, this would represent a [...]*price reduction on Telefónica's calls. This potential price reduction becomes negligible (around [...]*%) once applying the ratio of 1 to 14 stemming from the balancing between MTR revenues and MTR costs between the Parties. This computation shows that, even taking a short term perspective by using marginal costs, the savings generated in this regard by the proposed transaction would be negligible once they are applied only to the surplus monthly payment between Telefónica and E-Plus. In addition, for the sake of completeness, the Commission points out that these efficiencies would be obtained exclusively on the price for voice service. For this reason, it seems reasonable to expect that the percentage price reduction would

⁸⁹⁰ Notifying Party's response to Commission's RFI No 5 of 12 December 2013, Document ID 1084, p. 110.

⁸⁹¹ Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU.

⁸⁹² Page 115 of Annex A to the Form CO.

decrease if it is spread over the full tariff price on which the competitive assessment is based.

- (1243) In order to approximate the difference between the German MTRs and the long run incremental costs, MTRs from other Member States that calculate MTR on the basis of a "long term incremental costs" approach may constitute an appropriate benchmark. Considering that the vast majority of Member States now apply the long run incremental costs methodology for calculating their MTRs in application of the Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, the average weighted MTR in the EU can be used for this purpose. According to BEREC's data⁸⁹³, this would correspond to a difference of 0.39 eurocents per minute of call termination between the German average MTRs and the EU weighted average MTRs. By applying this cost difference to the previous amount of EUR [...] *million, it leads to a monthly cost difference of monthly EUR [...] *million, that is to say EUR [...] * million per year.
- (1244) Applying the same computation set out in recital (1242), the [...] *of calls from Telefónica's network could benefit from a reduction of around [...] *eurocents per minute (difference between the German MTR of 1.79 eurocents per minute and the weighted EU average MTR of 1 eurocent per minute among Member States which apply the recommended methodology). This translates into an average marginal cost reduction of [...] * eurocents per minute. Considering Telefónica's average voice price per minute of [...] * eurocents per minute, and assuming, by way of examples, a 50% pass through this would represent a [...] *price reduction on Telefónica's calls. This potential price reduction becomes negligible (less than [...] *) once applying the ratio of 1 to 14 stemming from the balancing between MTR revenues and MTR costs between the parties. This implies that the claimed efficiencies would be further reduced by more than half if a longer time horizon would be considered. Finally, the Commission reiterates that the percentage price reduction, which is obtained only for voice services, would decrease if it is spread over the full tariff price on which the competitive assessment is based.
- (1245) With respect to a change of the BNetzA's model for calculating MTRs, any decrease of MTR would require a material revision of BNetzA's Decision and its model of an efficient operator (currently based on a 25% market share which would need to be changed to a 33% market share). It remains unclear if and how BNetzA would amend its model if the proposed transaction were to be implemented. BNetzA did not indicate any intention in the short term to change its model.
- (1246) The Notifying Party, in its Reply to the Statement of Objections, argues that a change of the model currently used by BNetzA would be necessary following a consolidation in the German market; yet, it did not provide any evidence that BNetzA would implement such a change.⁸⁹⁴ BNetzA informed the Commission that its procedure for setting the rates applicable for the period as of 1 December 2014 is ongoing and a decision should be provisionally taken on 7 July 2014. BNetzA did not provide any indication of the level of the new rates, or on the way in which the implementation of the proposed transaction could affect the rates. BNetzA,

⁸⁹³ Average weighed MTR in the EU is 1.46 cents per minutes according to Document ID 4172.

⁸⁹⁴ At this stage, there appears to be also some uncertainty as to whether BNetzA will keep employing its long run incremental costs plus common costs (LRIC+) costing methodology given that the currently employed costing methodology is not in compliance with the Commission's Termination Rates Recommendation (https://circabc.europa.eu/sd/a/bdfa8f7d-dbc9-4fc9-b6fd-fae5744a4c65/DE-2013-1424%20Adopted_EN%280%29.pdf).

nevertheless, informed the Commission that, in view of the forthcoming decision in this Case, [...]*. On this basis, the Commission concludes that a decision to reduce mobile termination rates by BNetzA as of 1 December 2014 is unlikely, and therefore should not be taken into account for the purpose this assessment.

- (1247) Finally, it may be assumed that, once a mobile network operator has captured 20% to 25% of the market share, there are only very limited remaining economies of scale to be achieved.⁸⁹⁵ Therefore, even assuming that BNetzA could possibly amend its model in such a way as to reduce the rates, the impact of the change to 33%, would in all likelihood impact the resulting level of MTRs only to a minor extent.

Merger-specificity

- (1248) The Commission notices that MTRs have decreased significantly during recent years. According to BEREK data, average MTRs in Germany decreased from 6.8 eurocents per minute in 2010⁸⁹⁶ to 1.79 eurocents per minute in 2013 according to the Form CO. At the same time, MNOs' financial publications report that network costs have remained by and large stable. This indicates that MTRs are increasingly close to marginal long run costs. Accordingly, the Commission considers that any difference between marginal costs and BNetzA's methodology to calculate MTRs will further decrease regardless of the implementation of the proposed transaction; this difference is likely to be negligible over the medium or long run.
- (1249) Moreover, the Commission considers that any reduction in MTRs resulting from the proposed transaction would be only merger-specific to the extent it could not be achieved by less competitive means, as for instance through the implementation of a network-sharing agreement between the Parties. In addition, with reference to recitals (1097) to (1193), any reduction of MTRs that could be alternatively realized due to cost savings on the basis of network sharing would not be merger specific.

Conclusion

- (1250) The Commission considers that benefits related to MTRs are not verifiable for three main reasons: (a) the Notifying Party did not take into account that MTRs are not only costs but also revenues for MNOs, (b) there is no evidence that the BNetzA envisages changing its model for MTR calculation and (c) in any event such change would only insignificantly affect the level of MTRs. Furthermore, the Commission considers that the effect of MTR internalisation is likely to reduce over time with on-going reductions of MTRs and a growing substitution between voice and data revenues and is likely not to be merger-specific. Therefore, the Commission concludes that MTR efficiencies are unlikely to lead to any benefit to consumers as claimed by the Notifying Party.

6.10. Efficiencies on the market for wholesale access and call origination

6.10.1.1. Notifying Party's view

- (1251) The Notifying Party submits that the claimed demand-side and supply-side network efficiencies are directly relevant for both the retail and the wholesale market for access and call origination. In particular, as regards the wholesale market for access and call origination the Notifying Party submits that these efficiencies are expected

⁸⁹⁵ See section 5.2.3 of Commission Staff Working document, SEC (2009) 600.

⁸⁹⁶ Source: http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/197-mtr-benchmark-snapshot-as-of-july-2010.

to be passed on to the wholesale customers due to the functioning of competition in this market.

- (1252) The other claimed demand-side efficiencies are, according to the Notifying Party, relevant for the retail market. The other claimed supply-side efficiencies are, according to the Notifying Party, relevant also for the wholesale market for access and call origination since Telefónica considers "allocated ("fixed") costs such as customers' services costs and IT costs when defining partners' offers".
- (1253) As regards the claimed efficiencies concerning lower mobile termination rates, the Notifying Party considers that they are relevant exclusively for the retail market.

6.10.1.2. Commission assessment

- (1254) The Commission considers that, as regards the network efficiencies, it is not clear, on the basis of the evidence submitted by the Notifying Party, whether and, if so, to what extent these efficiencies are relevant for the wholesale market for access and call origination. In any event, the Commission underlines, that even if such efficiencies were relevant for the assessment of the effects of the proposed transaction on the wholesale market for access and call origination, a similar reasoning as set out in section 6.9.1 would apply. Given that, as explained in these sections, the Notifying Party did not sufficiently show that the claimed efficiencies are (a) verifiable; (b) merger specific and (c) likely to benefit consumers, the claimed efficiencies cannot be considered for any of the retail or the wholesale market for access and call origination.
- (1255) As regards other claimed supply-side efficiencies, it is also not clear, on the basis of the evidence submitted by the Notifying Party, whether and to what extent these efficiencies are relevant for the assessment of the wholesale market for access and call origination. As shown in Section 6.9.3., these efficiencies are not verifiable, merger specific and likely to benefit consumers implying that the claimed efficiencies cannot be considered for any of the retail or the wholesale markets.

6.10.2. *Conclusion on the assessment of efficiencies*

- (1256) The Commission concludes that the above mentioned (a) network efficiencies, (b) distribution network efficiencies, (c) S&G synergies, (d) additional business opportunities and (e) MTR related efficiencies are not verifiable, in part not merger specific and/or unlikely to benefit consumers.
- (1257) The Commission therefore considers that the Notifying Party has to date failed to show that, based on the framework of the Horizontal Merger Guidelines, the efficiencies are likely to counter any adverse effect on competition that might otherwise result from the proposed transaction.

7. COMPATIBILITY WITH THE INTERNAL MARKET

- (1258) The Commission concludes that it is likely that the merger will significantly impede effective competition.

8. CONCLUSION

- (1259) In light of all the foregoing considerations, the Commission considers that the proposed transaction would give rise to non-coordinated anti-competitive effects because it involves 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 in an already highly concentrated

market. For the reasons explained above (see sections 6.4.3, 6.6, 6.7, 6.8 and **Error! Reference source not found.**), these non-coordinated anti-competitive effects are not offset by countervailing factors such as possible buyer power, entry and efficiencies. Therefore, the notified concentration would significantly impede effective competition in a substantial part of the internal market, within the meaning of Article 2 of the Merger Regulation, through non-coordinated anti-competitive effects in the German retail market for mobile telecommunication services.

- (1260) It can be left open whether the non-coordinated effects in the German wholesale market for access and call origination on public mobile telephone networks, which result from the notified transaction, also amount to a significant impediment of competition in a substantial part of the internal market, within the meaning of Article 2 of the Merger Regulation.

9. COMMITMENTS

9.1. Analytical Framework

- (1261) When a concentration raises competition concerns because it would significantly impede effective competition, the notifying party/parties may seek to modify the concentration in order to resolve those competition concerns and thereby obtain clearance for the merger.
- (1262) 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.⁸⁹⁷ Furthermore, the commitments must be capable of being implemented effectively within a short period of time as the conditions of competition on the market will not be maintained until the commitments have been fulfilled.⁸⁹⁸
- (1263) 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. 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.

9.2. Procedure

- (1264) In order to address the competition concerns identified in the Statement of Objections, the Notifying Party submitted a first set of commitments on 10 April 2014 (the "First Commitments"). The Commission launched a market test of the First

⁸⁹⁷ 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).

⁸⁹⁸ 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).

Commitments on 11 April 2014 (the "First Market Test"). Questionnaires were sent to: (1) Deutsche Telekom and Vodafone; (2) MVNOs and Service Providers active in Germany; (3) MNOs active outside Germany; and (4) certain national telecoms regulators, as well as to the BKartA and the Monopolkommission.⁸⁹⁹

- (1265) Following the First Market Test, the Notifying Party submitted a revised set of commitments on 27 April 2014, which it further revised on 29 April 2014 (the "Second Commitments"). On 30 April 2014, the Commission launched a second market test of the Second Commitments (the "Second Market Test"). Questionnaires were sent to (1) Deutsche Telekom and Vodafone; (2) MVNOs and Service Providers active in Germany; and (3) certain national telecoms regulators, as well as the BKartA and the *Monopolkommission*.
- (1266) On 29 May 2014, the Notifying Party submitted a final set of commitments (the "Final Commitments").

First Commitments

9.2.1. Description of the First Commitments

- (1267) The First Commitments submitted on 10 April 2014 comprised the following three components:
- (a) an MNO component;
 - (b) a so-called Mobile Bitstream Access ("MBA") component; and
 - (c) a general non-MNO component.

9.2.1.1. MNO component

- (1268) According to the Notifying Party, the MNO component would support the entry of a new MNO entrant into the German market by following a two-stage approach. In the first stage, Telefónica committed to offer a third party wholesale access to the merged entity's network covering all technologies (2G/3G/4G) under an MVNO or Service Provider arrangement. At the choice of this MVNO or Service Provider, the Notifying Party offered to either apply a traditional price-per-unit pricing mechanism to the wholesale access or an MBA model, as described in the MBA component (see recitals (1277) to (1284)). In both cases, the wholesale agreement would be offered on pre-defined terms and conditions. In the second stage, the third party would be able to convert from an MVNO or Service Provider into an MNO and roll-out its own mobile network based on 3G and 4G technologies (or 4G technology only) in specified urban areas reaching a population coverage of 50% within a period of approximately two years. To facilitate this conversion, Telefónica offered under a MNO Agreement to: (a) lease spectrum assets (2x10 MHz in the 2.1 GHz band and 2x10 MHz in the 2.6 GHz band); (b) sell sites and enter into a passive network sharing agreement in urban areas; (c) enter into a roaming agreement covering rural areas (as well as urban areas until the new MNO would have rolled out its own urban network); (d) to sell additional assets (namely, shops and call centre capacity); and (e) commit to offer fixed wholesale access to fixed line communication products. Telefónica aimed at enabling the new MNO entrant to commence its MNO business in July 2015.
- (1269) Under the spectrum offer referred to in point (a) of recital (1268), Telefónica committed to offer an irrevocable lease to the new MNO entrant of 10 MHz of paired

⁸⁹⁹ See footnote 62.

spectrum in the 2.6 GHz band for a lease price of EUR [...] million per year payable as a yearly upfront payment. Telefónica offered to carry out a technical hand-over of the spectrum at the earliest one month after the date of signing of the MNO Agreement (see recital (1268)) and to terminate the lease on 31 December 2025 or at such time as BNetzA obliged Telefónica to return the respective spectrum, whichever date is the earlier. In addition, Telefónica committed to offer the new MNO entrant an irrevocable lease of 10 MHz of paired spectrum in the 2.1 GHz band for a lease price of EUR [...] million per year payable as a yearly upfront payment with technical hand-over of the spectrum on 1 January 2017 and termination of the lease on 31 December 2020.

- (1270) Under the divestiture of sites offer referred to in point (b) of recital (1268), Telefónica committed to offer to the to sell to the new MNO entrant sites to enable it to build its own 3G/4G network in urban areas at [...]*. The scope of the sale would include permissions, rental contracts, power supply, steel antenna and passive radio frequency elements. Telefónica committed to offer the sites for sale on a staggered basis according to its network consolidation and dismantling plan.
- (1271) Under the passive radio access network sharing offer referred to in point (b) of recital (1268), Telefónica committed to offer to the new MNO entrant a sharing agreement in relation to passive infrastructure on roof-tops, chimneys and other special third party buildings in urban areas. Under the offered sharing agreement, the new MNO entrant would have [...]* required for the site adaptation for the passive sharing, which would run until the end of 2025.
- (1272) Under the roaming offer referred to in point (c) of recital (1268), Telefónica committed to offer national roaming on pre-defined reference terms and conditions either under an upfront bulk model or a pay-as-you-go model. In urban areas, the roaming agreement would be gradually phased out depending on the progress made by the new MNO entrant in rolling out its own urban network. By [...]*, Telefónica would entirely deactivate roaming in urban areas for those technologies that the new MNO entrant had rolled out itself (3G/4G or 4G only). Roaming for other technologies (2G or 2G/3G) would remain available in urban areas until 31 December 2025. In rural areas, where the new MNO entrant would not have any mobile network infrastructure of its own, the roaming agreement would cover 2G/3G/4G and terminate on 31 December 2025. Telefónica proposed to limit the new MNO entrant's use of roaming to a maximum of [...]* of the built capacity of the Telefónica network in 2G/3G/4G under the roaming agreement. In the case of an excess usage of roaming that led to a degradation in network performance, Telefónica would be permitted to cap the capacity usage (for example throttle user throughput for data). In order to ensure the smooth operation of the national roaming, the new MNO entrant would be required to provide Telefónica every year with a three-year detailed traffic forecast.
- (1273) Under the sale of shops offer referred to in point (d) of recital (1268), Telefónica committed to offer to sell up to [...]* shops in urban areas to the new MNO entrant. Telefónica offered to sell the shops at no more than [...]*.
- (1274) Under the sale of call centre offer referred to in point (d) of recital (1268), Telefónica committed to sell to the new MNO entrant one existing call centre, including technical infrastructure, facility related contracts, and the transfer of employees. The First Commitments did not specific the price for the sale of the call centre. As an alternative to the sale, Telefónica also offered sublease agreements [...]*

- (1275) Finally, Telefónica committed to offer fixed wholesale access to the new MNO entrant under standard wholesale conditions based on Telefónica's fixed network cooperation with Deutsche Telekom.
- (1276) Telefónica committed to offer this MNO component, including the MVNO or Service Provider arrangement and the MNO arrangement with its various elements described in recitals (1268) to (1275), to third parties from the date of a possible clearance by the Commission of the proposed transaction until 31 December 2014. If no third party expressed an interest in the offer by that date, the offer would lapse. If a third party accepted the MNO offer, but only carried out the first step (that is to say, started operations as a MVNO or Service Provider) and did not convert into an MNO, the MVNO or Service Provider agreement would continue to run until the end of 2020.

9.2.1.2. MBA component

- (1277) Under the MBA component, Telefónica committed to enter upfront (that is to say, prior to the closing of the proposed transaction) into a wholesale agreement with one MBA MVNO or Service Provider (the "Upfront MBA MVNO") covering all technologies (2G/3G/4G). The Upfront MBA MVNO would be required to purchase the following in advance (for a five year period): (a) a certain amount of "data throughput capacity" of the Telefónica network measured in Gbps (see recital (1279) below); and (b) a certain amount of traffic (that is to say, data usage, voice minutes and SMS) to serve its customers. Specific reference rates were included for each of the data throughput capacity, data usage, and voice and SMS traffic.
- (1278) More specifically, the MBA wholesale agreement would have to comprise the following three different components, each of which would have to be purchased by the Upfront MBA MVNO:
- (a) Bitstream component 1, which corresponded to the network capacity (measured in Gbps) to be purchased by the Upfront MBA MVNO;
 - (b) Bitstream component 2, which corresponded to the data traffic (measured in data packages of millions of Megabytes) necessary to "fill" in part or in full the capacity purchased under Bitstream component 1, also to be purchased by the Upfront MBA MVNO; and
 - (c) A third component, which corresponded to the voice and SMS traffic (measured in voice minute packages and SMS packages) necessary to "fill" in part or in full the capacity purchased under Bitstream component 1, also to be purchased by the Upfront MBA MVNO.
- (1279) The minimum amount of data throughput capacity to be purchased by the Upfront MBA MVNO under Bitstream component 1 was [...] Gbps (corresponding to [...] million subscribers in the first year) and, under a glide path,⁹⁰⁰ increased to [...] Gbps (corresponding to [...] million subscribers) in the third year and the following years.

⁹⁰⁰ The reference to a "glide path" in the context of the description of the First Commitments, as well as of the Second and the Final Commitments is to be understood as a reference to the fact that Telefónica does not sell the entire amount of capacity ([...] Gbps) in the case of the First Commitments, as of year one, but only after a certain time period and prior to the end of the agreement in year five. During the period between year one and year five, a glide path applies, according to which the amount of capacity sold by Telefónica increases over time.

- (1280) Under the Bitstream component 2, the Upfront MBA MVNO had to purchase packages for the data usage of its customers measured in Millions of Megabytes. These packages were to be purchased for a minimum runtime of one year. The minimum capacity to which the Upfront MBA MVNO needed to commit under the Bitstream component 2 was the required monthly volume based on the subscriber forecast of the Upfront MBA MVNO for the first year.
- (1281) As regards voice and SMS services, minutes and SMS were to be purchased in bulk packages which could be used for a period of up to two years. If a package was used up before the end of that period, then a new package could be purchased at any time. Voice was to be charged according to minute bundles independent of the transport method.
- (1282) If Telefónica did not sign an MNO agreement with a new MNO entrant by the end of year 2014, the launch for the Upfront MBA MVNO would have had to take place as soon as technically feasible and at the latest 12 months following the date of the signing of the Upfront MBA MVNO agreement (launch date: approximately July 2015). Alternatively, if Telefónica signed an MNO agreement with a new MNO Entrant by the end of year 2014, Telefónica would ring-fence the market start of the New MNO Entrant (which was envisaged by July 2015) by a suspension of the launch date for the Upfront MBA MVNO by 12 months after the launch of the New MNO Entrant (launch date: approximately July 2016).
- (1283) As part of the MBA component, Telefónica also committed to offer to up to two other interested MVNOs or Service Providers, an MBA wholesale agreement under the same terms and conditions as agreed with the Upfront MBA MVNO (the "Consecutive MBA MVNOs", together the Upfront MBA MVNO and the Consecutive MBA MVNOs are referred to as the "MBA MVNOs"). These players would commercially launch their services 12 months after the launch date of the upfront MBA MVNO or Service Provider (which was expected to take place in July 2016 or July 2017 depending on whether or not Telefónica signed an MNO agreement with a new MNO entrant. Telefónica would be deemed to have complied with this commitment by publishing a reference offer on its website and keeping it available for negotiation with third parties for a period of five years from the commercial launch of the upfront MBA MVNO or Service Provider.
- (1284) Telefónica committed to make available up to a total of 20% of its network data throughput capacity to the Upfront MBA MVNO, the Consecutive MBA MVNOs and the new MNO entrant. It specified that the 20% threshold should apply to its network capacity "today and in the future". Telefónica claimed that 20% of its network capacity corresponded to 4 Gbps (and at most four million subscribers). As set out in recital (1279), the Upfront MBA MVNO had to purchase data throughput capacity of 2 Gbps under a glide path. If no new MNO entrant had signed an MNO agreement with Telefónica, the consecutive MBA MVNOs would have to purchase together additional 2 Gbps data throughput capacity under a glide path. If an agreement was achieved with just one Consecutive MBA MVNO, that player would be required to commit to the same minimum capacity as the Upfront MBA MVNO. If two Consecutive MBA MVNOs signed agreements, the committed minimum capacity would be divided equally between the two Consecutive MBA MVNOs.

9.2.1.3. Non-MNO component

- (1285) Under the non-MNO component, Telefónica committed to offer to extend all existing 2G and 3G wholesale contracts with MVNOs and Service Providers that are currently wholesale customers of Telefónica and/or E-Plus until the end of 2025. Moreover, Telefónica committed to provide access to its 4G network on the basis of

an MVNO or Service Provider agreement to all these MVNOs and Service Providers [...] after the launch date of the upfront MBA MVNOs and Service Providers (that is to say [...]*) on pre-defined commercial terms until the end of [...]*. In addition, Telefónica committed to allow its wholesale partners to freely switch their customers hosted on Telefónica's and/or E-Plus' networks from one business model to another (for example, from a Service Provider to an MVNO business model) without any penalty. In addition, Telefónica committed to eliminate the contractual clauses in agreements with wholesale partners of either Telefónica or E-Plus, which could prevent the MVNOs and Service Providers from switching their customers from one MNO to another.

9.2.2. *Commission's assessment*

- (1286) The Commission recalls that the overall result of any commitments accepted in this Case must be to eliminate the significant impediment of effective competition resulting from the merger of Telefónica and E-Plus on the retail market for mobile telecommunications services in Germany..
- (1287) In light of the results of the First Market Test, the Commission considered that the First Commitments were insufficient to eliminate the competition concerns raised by the proposed transaction.
- (1288) The majority of those national telecoms regulators that responded to the First Market Test, as well as the BKartA and the Monopolkommission, considered that the First Commitments were inadequate to eliminate the competition concerns raised by the proposed transaction.⁹⁰¹ They noted, in particular, that the MNO component was only an offer, and therefore there was no guarantee that this part of the remedy would ever be implemented. They also highlighted the likely limited impact on the market of the MBA component and the non-MNO component, given that non MNOs would not exercise the same type of competitive pressure as MNOs, as they could not compete on network quality. On this basis, they considered the First Commitments insufficient to compensate for the loss of infrastructure competition and the competitive pressure exercised by E-Plus as an MNO. Likewise, one third party submitted on several occasions that any approval of the proposed transaction should be conditioned on the actual market entry of a new fourth challenger MNO.⁹⁰²
- (1289) Vodafone and Deutsche Telekom re-iterated that [...] ⁹⁰³ In addition, [...] pointed out that any remedy that would oblige the merged entity to grant wholesale access at prices below the competitive level would distort competition and undermine investment in infrastructure.
- (1290) The MVNOs and Service Providers active in Germany criticised the First Commitments as being commercially unattractive. No interest was expressed in the MNO and/or the MBA component (whereas some of them expressed a positive opinion about the non-MNO component).
- (1291) As regards the MNO component, those MVNOs and Service Providers which responded to the market test did not express any credible interest in accepting Telefónica's offer.⁹⁰⁴ The main reasons for the lack of interest were that the spectrum

⁹⁰¹ See comments in response to questionnaire Q4 to National Regulators dated 11 April 2014.

⁹⁰² See submissions by [...]*, Document IDs 3881, 3882, 3883, and 3879.

⁹⁰³ See responses to questionnaire Q2 to German MNOs dated 11 April 2014.

⁹⁰⁴ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 33.

included in the MNO package was deemed insufficient to roll-out a competitive urban mobile network on 3G and 4G technologies or on 4G technology only, and the unattractiveness of the commercial terms and conditions for the spectrum and for the additional elements of the package.

(1292) The majority of responding MVNOs and Service Providers considered that, based on the frequencies offered for lease by Telefónica (2x 10 MHz in the 2.1 GHz band and 2x10 MHz in the 2.6GHz band), the new MNO entrant would not be able to effectively compete against the other German MNOs.⁹⁰⁵ Responding MVNOs and Service Providers considered that, in order to be able to effectively compete with existing MNOs, the new MNO entrant would have to be able to acquire more contiguous spectrum in a frequency band above 1 GHz, that is to say at least 2x20 MHz instead of 2x10 MHz. [...] ⁹⁰⁶ Respondents considered that ideally the 2x20 MHz spectrum would be in the 1.8 GHz instead of the 2.6 GHz band, as the latter band has poorer indoor penetration and propagation characteristics, which would make any network roll out very expensive, and would therefore lead to a cost disadvantage for the new MNO entrant. Several MVNOs and Service Providers further pointed out that some spectrum below 1 GHz should be offered as part of the MNO component. Moreover, this spectrum should be offered on more attractive commercial terms and conditions than those proposed by Telefónica in the First Commitments.

(1293) According to the MVNOs and Service Providers active in Germany, further shortcomings of the MNO component related to the commercial unattractiveness of the terms and conditions of the other elements of the remedy. The majority of responding MVNOs and Service Providers submitted that the wholesale conditions for the first step of this component, that is to say the MVNO or Service Provider agreement, were not commercially attractive and even worse than wholesale conditions currently granted to some players.⁹⁰⁷ In particular, respondents considered that wholesale prices for voice, SMS and data services were too high and would not permit the new player to compete effectively. Respondents also expressed the view that pricing under the national roaming offer for rural areas would be unattractive.⁹⁰⁸ Moreover, MVNOs and Service Providers considered that active network sharing would be preferable to national roaming for technical and financial reasons.⁹⁰⁹ The majority of MVNOs and Service Providers further raised concerns as to the commercial feasibility of the roll-out of an urban mobile network based on the offered sites⁹¹⁰ and the passive network sharing offer for urban areas.⁹¹¹ Finally, some MVNOs and Service Providers considered that in order for the new MNO

⁹⁰⁵ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 4.

⁹⁰⁶ Document ID3219, pages 1 and 3.

⁹⁰⁷ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, questions 1, 37, 42, 49, and 54.

⁹⁰⁸ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 14.

⁹⁰⁹ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 11.

⁹¹⁰ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 20.

⁹¹¹ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 21.

entrant to be able to become a viable and long-term competitor, the MNO component should also include the transfer of a sufficient number of customers.⁹¹²

- (1294) Despite the criticisms voiced by responding MVNOs and Service Providers, a small number of respondents to the First Market Test indicated that they might be interested in entering the German market as an MNO, if the MNO component were to be significantly improved.⁹¹³
- (1295) The MBA component was also heavily criticised by the responding MVNOs and Service Providers currently active in Germany. These respondents submitted that the commercial conditions of the MBA component were not attractive compared to their current wholesale conditions.⁹¹⁴ This criticism concerned mainly the prices offered by Telefónica,⁹¹⁵ but also other commercial conditions, such as the limited duration of the offered wholesale contract (five years)⁹¹⁶ and the unilateral right of Telefónica to apply a 20% surcharge or limit data speed if the purchased capacity was exceeded.⁹¹⁷ Further issues that were raised by MVNOs and Service Providers related to the fact that the First Commitments did not clearly define the threshold of 20% capacity of Telefónica's network that Telefónica committed to make available to MBA MVNOs or Service Providers⁹¹⁸ and how to ensure that such capacity would be adapted to the future development of the merged entity's network. In this context, responding MVNOs and Service Providers questioned whether the current limitation of the offered capacity to 20% of Telefónica's network would provide them with a sufficient amount of capacity to be able to significantly increase their customer base and compete effectively with MNOs.⁹¹⁹
- (1296) None of the responding MVNOs and Service Providers expressed an interest in entering into the offered MBA wholesale agreement under the proposed commercial terms and conditions. However, several of those respondents declared an interest in the MBA component, if the commercial terms and conditions were improved.⁹²⁰
- (1297) As regards the non-MNO component, responses to the market test were mixed as to the impact of this component on the competitive position of non-MNOs in Germany. Some MVNOs and Service Providers considered that this commitment would ensure that non-MNOs on the Telefónica's network would have sufficient planning security to make investments and to continue to compete on the market. However, the majority of MVNOs and Service Providers emphasized that this commitment would only contribute to maintaining their *status quo* of without enabling the non-MNOs to

⁹¹² See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 28.

⁹¹³ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 34.

⁹¹⁴ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 54.

⁹¹⁵ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, questions 37, 42, and 49

⁹¹⁶ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 63.

⁹¹⁷ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 39.

⁹¹⁸ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, questions 40, 41.

⁹¹⁹ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, questions 40, 41.

⁹²⁰ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, questions 70 and 71.

compete more effectively.⁹²¹ MVNOs and Service Providers criticised the proposed timing for 4G wholesale access as included in the non-MNO commitment. They submitted that 4G wholesale access should not be delayed until [...] and should be made available for the same time period as 2G/3G wholesale access, that is to say until the end of 2025, instead of [...]. Moreover, several respondents criticised the monthly base fee of EUR [...] per 4G subscriber on the grounds that it was not commercially justified.⁹²²

- (1298) While the overall evaluation of the First Commitments by MNOs active outside of Germany was more positive than the evaluation by German MVNOs and Service Providers (some of these MNOs supported the proposed transaction and stated that similar consolidation should be allowed in the Member State(s) where they operate), none of these MNOs expressed an interest in taking up either the MNO component as offered under the First Commitments or any improved MNO component⁹²³ nor the MBA offer under the First Commitment or any improved MBA offer.⁹²⁴
- (1299) Taking into account the results of the First Market Test as set out above, the Commission considered that these commitments would not eliminate the competition concerns raised by the proposed transaction.
- (1300) By way of a preliminary remark, in relation to the arguments advanced by Deutsche Telekom and Vodafone that the appropriate scope of any remedy package should be [...] addressing spectrum imbalance, for the reasons already set out in Section 6.3.1.5, the Commission does not consider that these MNOs' claims in relation to the likely anti-competitive effects resulting from the proposed transaction are founded. Moreover, since the commercial terms and conditions of the MBA component were considered to be so commercially unattractive that none of the responding MVNOs and Service Provider, nor any of the MNOs active outside of Germany were interested in entering into a wholesale agreement on this basis (see recitals (1294), (1295), and (1296)), the [...] argument advanced by [...] that there is a risk of a distortion of competition stemming from too low wholesale prices also appeared unfounded.
- (1301) Moreover, the Commission considered, first, that the only component of the First Commitments, which would be implemented with the requisite degree of certainty, was the proposed commitment by Telefónica to enter into an upfront MBA wholesale agreement with one MVNO or Service Provider. All the other components of the First Commitments were mere offers on behalf of Telefónica, which may or may not have been accepted by third parties. However, taking into account that no third party expressed a credible interest in entering the German market as an MNO based on the MNO component or entering into an MBA wholesale agreement under the MBA component, the Commission considered it to be highly unlikely that these parts of the First Commitments would be implemented.
- (1302) Second, as regards the upfront MBA wholesale agreement, the Commission considered that this element of the First Commitments was not sufficient to address the competition concerns raised by the proposed transaction given its structure, the commercial terms and conditions, and its size.

⁹²¹ See responses to Questionnaire Q1 to MNOs/MVNOs/Service Providers/Regulators, question 73.

⁹²² See responses to Questionnaire Q1 to MNOs/MVNOs/Service Providers/Regulators, question 75.

⁹²³ See Responses to questionnaire Q3- MNOs outside Germany dated 11 April 2014, questions 33 and 34.

⁹²⁴ See Responses to questionnaire Q3- MNOs outside Germany dated 11 April 2014, questions 71 and 72.

- (1303) As explained in Section 6.3.1.6, the Commission considers that MVNOs and Service Providers in Germany are currently unable to exercise the same degree of competitive pressure as an MNO. This essentially stems from the MVNOs'/Service Providers' dependency on wholesale conditions, in particular their dependency on (a) wholesale pricing (see recitals (581), (582) and (583)), (b) the type of services and technologies (2G/3G/4G), including speed classes for the transmission of mobile data to which wholesale access is granted (see recitals (584) to (602), as well as the (c) the design of retail offers that MVNOs and Service Providers can offer under their wholesale agreements (see recitals (604), (605) and (605)). Furthermore, the Commission finds that MVNOs and Service Providers have fewer incentives to compete than MNOs as they have very low fixed costs in contrast with MNOs. This, in turn, means that these operators also have fewer incentives to aggressively compete for new customers than an MNO that has to recover its higher fixed cost, see recital (568).
- (1304) The Commission therefore considers that any remedy aimed at addressing the competition concerns raised by the proposed transaction that is not based on the entry of a fourth MNO must be one, which results in significantly strengthening the ability and incentive of the non-MNOs to compete on the retail market. A remedy, which limits itself to perpetuating (or even slightly improving) the current situation in terms of wholesale access terms and conditions for MVNOs and Service Providers would not be sufficient to address the competition concerns resulting from the loss of a network player, such as E-Plus.
- (1305) The Commission also considers that, in the specific circumstances of this Case, a capacity based wholesale agreement, under which an MVNO or Service Provider buys a specific percentage of an MNO's mobile network capacity, may permit such an MVNO or Service Provider to benefit from an enhanced flexibility as to the design and pricing of its retail offers and thereby increase its ability to compete more effectively with the existing MNOs. Moreover, a capacity based wholesale agreement can improve the incentives of MVNOs and Service Providers to compete aggressively by reducing the incremental costs of acquiring (and hosting) new subscribers. If MVNOs and Service Providers are committed to buy a certain capacity within a given period, then, as long as the traffic of the hosted subscribers does not attain the committed capacity, acquiring additional subscribers will not increase the wholesale network costs of this MVNO or Service Provider. Therefore, the respective MVNO or Service Provider would have an incentive to aggressively compete for new customers. However, in order for such a remedy to work, it must be ensured that the committed capacity is large enough so that the MVNO or Service Provider ideally attains the capacity limit only when competing very aggressively.
- (1306) In this context, the MBA wholesale agreement offered by Telefónica under the First Commitments was insufficient to address the competition concerns raised by the proposed transaction as it would not have strengthened the ability and incentive of MVNOs and Service Providers to exercise a similar type of competitive pressure as an MNO.
- (1307) First, the wholesale pricing / commercial terms and conditions offered by Telefónica for 2G and 3G access were less attractive than those currently negotiated by many MVNOs and Service Providers on the market. As a result, the proposed remedy would not have increased (and possibly would have decreased) these players' ability to compete on the market.
- (1308) Second, as regards access to services and technology, while the remedy would allow the upfront MVNO or Service Provider to have access to 4G, such access was to be

granted at pre-defined terms and conditions, which were commercially unattractive. For example, these prices were fixed for the entire contract period. Since the production cost for 4G would likely decrease over time, these fixed prices would be likely to make it very difficult for the Upfront MBA MVNO to remain competitive as regards 4G services.

- (1309) Third, the maximum number of subscribers that the upfront MBA MVNO or Service Provider could acquire under the proposed wholesale agreement amounted to only [...] million subscribers as of year three, which corresponds to a market share based on subscribers of less than [...].
- (1310) Fourth, the MBA wholesale agreement offered by Telefónica, in addition to being commercially unattractive, was also not very dissimilar in terms of business model to the wholesale agreements currently existing on the market in Germany. In other words, the proposed agreement was not based on a capacity-type model as outlined in recital (1305), but rather was based on a “pay-as-you-go” model and therefore would not significantly increase the incentives of the MVNO or Service Provider to compete aggressively. This reflects the fact that both Bitstream component 2 and component 3 introduced a large amount of variable costs into the model. Specifically, under Bitstream component 2, the MBA MVNOs would only have had to firmly commit to purchase a minimum data volume corresponding to their subscriber forecast for the first year. Any data traffic was, however, to be billed according to actual usage once the committed minimum was reached. As to voice and SMS, the MBA MVNOs were required to purchase bulk packages which could be used for a period of up to two years. If a package was used up before the end of the two year period, then a new package could be purchased at any time.
- (1311) Finally, as regards the non-MNO component, the Commission considered that this component, if anything, would merely preserve the current situation in terms of the competitive pressure exercised by MVNOs and Service Providers without enabling them to compete more effectively. The commercial terms and conditions of the reference offer were not attractive and access to 4G services was only due to be granted in [...] (on commercial terms and conditions that were unattractive).
- (1312) To summarise, the Commission concluded that the First Commitments were insufficient to address the competition concerns raised by the proposed transaction on the market for the provision of retail mobile services in Germany.

9.3. Second Commitments

9.3.1. Description of the Second Commitments

- (1313) The Second Commitments followed the structure of the First Commitments and comprised the following three components:
- (a) the MNO component;
 - (b) the MBA component; and
 - (c) the general non-MNO component.

(1314) The commitments that were formally submitted on 27 April 2014 and the Second Commitments submitted on 29 April 2014 only vary in a few respects concerning the MBA component and are therefore being assessed together.⁹²⁵

(1315) All components of the Second Commitments had been amended since the First Commitments. However, the most substantial amendments concerned the MBA component. The different amendments are set out in recitals (1316) to (1331).

9.3.1.1. MNO component

(1316) As regards the MNO component, Telefónica made three main amendments to the First Commitments:

(1317) First, it added a so-called “Wi-Fi Hotspot” offer to the elements of the MNO component under the First Commitments pursuant to which Telefónica committed to offer the new MNO entrant's subscribers access to Wi-Fi services in around [...] *Wi-Fi hotspots available to Telefónica under its agreement with a third party provider for a specified monthly fee per active subscriber.

(1318) Second, Telefónica amended the national roaming offer as regards its pricing structure. While the First Commitments provided for higher fees for roaming in rural areas than in urban areas, the Second Commitments provided for the same pricing for roaming in rural areas as for roaming in urban areas. Moreover, Telefónica increased the limitation of the new MNO entrant's use of roaming to a maximum of 20% of Telefónica's build capacity in 2G/3G/4G instead of 10% provided for in the First Commitments. Moreover, if one of the Upfront MBA MVNOs was to convert into an MNO based on the MNO component, Telefónica committed to apply the conditions agreed under the MBA agreement to the national roaming at the request of the Upfront MBA MVNO.

(1319) Third, Telefónica amended the duration of the validity of the offer. Under the Second Commitments, Telefónica committed to offer the MNO arrangement to third parties from the date of a possible clearance by the Commission of the proposed transaction until 31 December 2014. After that date, the offer would continue to be valid for those entities that entered into an upfront MBA wholesale agreement for the period of the duration of their respective initial contract (that is to say, a period of five years). However, certain elements of the MNO arrangement would be phased out at an earlier point in time.

⁹²⁵ Compared to the commitments submitted on 27 April 2014, the Second Commitments contained the following amendments relating to the MBA component. First, under the Second Commitments, Telefónica committed that the contracts with the Upfront MBA MVNO(s) would foresee for Bitstream component 2 from year three onwards a minimum commitment corresponding to the actual usage in the preceding year plus [...] * (compared to [...] * under the commitments of 27 April 2014). Second, to guarantee a sufficient minimum commitment by the Upfront MBA MVNO(s), the MBA MVNO contract under the Second Commitments would foresee that, in case the actual usage of the preceding year was below 50% of the committed capacity, the minimum future commitment would be fixed at a specified minimum. Third, the Second Commitments introduced a commitment, according to which MBA MVNO contracts foresaw an upfront commitment regarding the costs for data throughput and volume irrespective of the actually negotiated prices. Minimum [...] * of the total costs on basis of full utilization of both components would always be contractually committed irrespective of the actual usage. Finally, Telefónica included in the Second Commitments an obligation to ensure that the MBA MVNO agreements foresee that at any time at least 50% of the [...] * Gbps committed capacity was reserved for newly acquired customers (not hosted yet on either the existing Telefónica and/or E-Plus network).

(1320) Specifically, the offer to acquire sites, shops, and/or a call centre would expire at the end of 2014. The spectrum offers (the lease of spectrum in the 2.1 and the 2.6 GHz band) would expire six months after the partial consolidation of the E-Plus network (at the latest by 31 December 2016). The national roaming offer, the passive network sharing offer, the Wi-Fi hotspot offer and the convergence offer would be made available for the entire duration of the MNO offer (that is to say, at most for the initial duration of five years of the MBA MVNO wholesale agreements).

9.3.1.2. MBA component

(1321) The MBA component offered under the Second Commitments followed the same structure as the MBA component under the First Commitments with three separate elements, namely (a) Bitstream component 1 (data throughput capacity); (b) Bitstream component 2 (data usage); and (c) and Bitstream component 3 (voice and SMS). However, the amendments referred to in recitals (1322) to (1330), which significantly increased the complexity of the MBA component, were included in the Second Commitments:

(1322) First, as regards the number of upfront MBA contracts, Telefónica committed to enter into MBA wholesale access agreements with up to three MVNOs and Service Providers prior to closing the proposed transaction ("Upfront MBA MVNOs"). Under the First Commitments, Telefónica only committed to enter into one Upfront MBA MVNO wholesale agreement, together with an offer to enter into up to two additional agreements under the same terms and conditions as the upfront agreement post-closing.

(1323) Second, with respect to Bitstream component 1, while the First Commitments required the Upfront MBA MVNO to purchase under Bitstream component 1 a minimum data throughput capacity of [...] Gbps under a glide path (with an additional [...] Gbps offered post-closing to the Consecutive MBA MVNOs), the Second Commitments required up to three Upfront MBA MVNOs to purchase (together): (a) a minimum of [...] Gbps under a glide path, if customers of the Upfront MBA MVNOs possibly hosted by Telefónica or E-Plus were transferred to the MBA wholesale contract; or (b) a minimum of [...] Gbps under a glide path, if the Upfront MBA MVNOs did not have any subscribers who were hosted by Telefónica or E-Plus or did not decide to transfer customers hosted by Telefónica or E-Plus to the MBA wholesale contract.

(1324) Telefónica submitted that [...] Gbps corresponded to 30% of the total capacity (measured in terms of the peak data throughput) of Telefónica's network (that is to say of the network of Telefónica and of the network of E-Plus to the extent it would be integrated in the network of Telefónica) in 2016, while [...] Gbps would amount to 22%. In this context, Telefónica also committed to reserve at least 50% of the [...] Gbps for newly acquired customers of the Upfront MBA MVNO(s) (that is to say for customers not yet hosted on either the Telefónica or the E-Plus networks prior to the proposed transaction). If the usage of the existing customers exceeded this 50% threshold, Telefónica committed in order to increase the total available capacity to the required extent to preserve such 50% ratio at no additional cost.

(1325) Third, as regards the maximum capacity available under the MBA wholesale agreement, the First Commitments provided that Telefónica would make available 20% of Telefónica's network "today and in the future" (probably referring to the network of Telefónica and of E-Plus to the extent that it was integrated into the Telefónica network). The Second Commitments provided that Telefónica would make available a maximum of [...] Gbps (including all existing customers already hosted on Telefónica's and E-Plus' network) or [...] Gbps (excluding existing

customers) under a glide path. It submitted that this would amount to approximately 30% and 22% respectively of the total capacity of the Telefónica network (including the E-Plus network to the extent it would be integrated into the Telefónica network) in 2016.

- (1326) At the same time, the Second Commitments provided for a glide path which defined a minimum of capacity to be purchased by the Upfront MBA MVNOs in each of the five years of the agreement under component 1⁹²⁶, for an adjustment mechanism for the minimum capacity available in contract years one and two, and an additional mechanism, according to which the Upfront MBA MVNOs were able to acquire additional capacity as of the contract year three. The adjustment mechanism for the contract years one and two applied, if the existing traffic generated by subscribers of an Upfront MBA MVNO on the combined network of Telefónica and E-Plus (at the date of the signature of the MBA agreement(s)) equalled or exceeded the peak data throughput made available under the MBA glide path. In this event, the minimum capacity which the respective MBA MVNO had to purchase would become 150% of the existing combined capacity used by this MBA MVNO on the Telefónica and E-Plus networks. The mechanism to acquire additional capacity as of contract year three stipulated that each Upfront MBA MVNO could acquire an amount of capacity corresponding to a percentage of the committed capacity, which equalled the growth rate of the actually used capacity within the 12 month period preceding the month in which the MBA MVNO submitted its request (for example: committed capacity = [...] Gbps; request in May 2017; period from May 2016 to April 2017; growth rate = 20%; additional capacity = [...] Gbps). However, the total amount of additional capacity that may be requested by all Upfront MBA MVNOs in one contract year must not exceed 10% of Telefónica's total consolidated network capacity in the preceding contract year. Moreover, the share of each MBA MVNO of the total amount of additional capacity must not be higher than the share of the MBA MVNO's individual committed capacity of the total initial capacity. That is to say an Upfront MBA MVNO that initially committed to purchase 50% of the available capacity under Bitstream component 1 at the beginning of the MBA agreement would not be able to purchase more than 50% in the additionally available capacity under the adjustment mechanism.
- (1327) Fourth, as regards component 2, the First Commitments provided that the MBA MVNO had to commit, at the time of signing of the MBA wholesale agreement for the monthly volume required for the first contract year based on the MBA MVNO's subscriber forecast for the first contract year. The Second Commitments increased the data usage commitments by the Upfront MBA MVNOs in that the latter were required to purchase two predefined packages for the first two years, which increased in size from contract year one to contract year two. The predefined data package for contract year one amounted to [...] TB, if traffic of existing customers of the Upfront MBA MVNO was included, and amounted to [...] TB, if traffic for existing customers was excluded. The predefined data package for contract year two amounted to [...] TB, if traffic by existing customers was included, and amounted to [...] TB, if traffic by existing customers was excluded. As of contract year three, data usage packages were required to be purchased on an annual basis, with a

⁹²⁶ The glide path under the Second Commitments provided that the maximum throughput capacity to be made available on a yearly basis to the Upfront MVNO MBAs corresponded in contract year one to 20%, in contract year two to 40%, in contract year three to 80% and in contract years four and five to 100% of the [...] Gbps.

minimum size for each year based on the preceding year's consumption plus 15% to 20%. Moreover, in order to guarantee a sufficient minimum commitment by the MBA MVNO(s), Telefónica also committed that the MBA wholesale access contracts would provide that, in the event that the actual data usage of the preceding year is below 50% of the committed data usage, the minimum size of the data package to be purchased would be fixed at a specified amount ([...]* TB, if traffic by existing customers was included and [...]* TB if traffic by existing customers was excluded).

- (1328) Fifth, as regards component 3, the First Commitments did not require the MBA MVNO to any minimum purchase. Under the Second Commitments, the Upfront MBA MVNOs were required to purchase predefined packages of voice minutes for contract years one and two, which increased in size from contract year one to contract year two. As of contract year three, voice minutes were to be purchased in packages of 1 000 million minutes, which were valid for a period of two years. As regards SMS, the Upfront MBA MVNOs were required to purchase a package of 100 million SMS in the contract year one, which was valid for a period of two years. Afterwards, they were able to buy additional SMS packages of 100 million also valid for two years.
- (1329) Sixth, as regards wholesale prices, the First Commitments provided for specified prices for each of the components of the MBA wholesale agreement. In contrast, the Second Commitments provided that prices would be negotiated individually between Telefónica and the Upfront MBA MVNO(s). However, Telefónica committed to ensure that the MBA wholesale agreements would provide that a minimum of 66% of the total costs on the basis of full utilisation of component 1 and component 2 would always be contractually committed by their wholesale partner irrespective of the actual usage.
- (1330) Finally, Telefónica introduced a call option according to which the Upfront MBA MVNO(s) could request the prolongation of the MBA agreement for an additional period of five years. It was specified that the call option would lapse in the event that a new fourth MNO which was not an Upfront MBA MVNO would enter the German market.

9.3.1.3. Non-MNO component

- (1331) The Non-MNO component changed in relation to the date when wholesale partners of the merged entity (other than the Upfront MBA MVNOs) would be granted access to 4G services. This date was moved to [...]* months after the launch date of the upfront MBA MVNOs and Service Providers (which means between January and July 2016) instead of July [...]* as provided for under the First Commitments.

9.3.2. *The Commission's assessment*

- (1332) In light of the results of the First and the Second Market Tests, the Commission considered that the Second Commitments are insufficient to eliminate the competition concerns raised by the proposed transaction.
- (1333) The majority of national telecoms regulators, including ComReg,⁹²⁷ Ofcom⁹²⁸ and RTR,⁹²⁹ as well as BKartA⁹³⁰ and *Monopolkommission*⁹³¹ stated that the revised

⁹²⁷ See Document ID 4295.

⁹²⁸ See Document ID 3874.

⁹²⁹ See Document ID 3722.

⁹³⁰ See Document ID 3822.

remedy package under the Second Commitments was not sufficient to eliminate the competition concerns raised by the proposed transaction given its legal structure and the content of the various components. These respondents pointed out that the MNO component only consisted of an offer, which, moreover, was commercially so unattractive that it was very unlikely to be taken up by any third party.

- (1334) As regards the MBA component, the majority of these respondents argued that this remedy would only have limited effects on competition, which would not be sustainable. *Monopolkommission* highlighted that the MBA MVNO(s) would only be able to reach a market share of around 6% on an aggregated level, which would be insufficient to replace the competitive pressure currently exercised by E-Plus. BKartA underlined that the MBA model under the Second Commitments did not achieve the objectives claimed by Telefónica, that is to say creating a wholesale access structure that provided an incentive for the MBA MVNOs to compete more aggressively than at the present time by reducing their incremental costs for the acquisition of new customers. It pointed out that future demand in data traffic was currently difficult to predict with precision. Therefore, it would be difficult to assess the importance of variable costs under the MBA model, which provided that additional capacity, as well as usage were to be purchased on top of the upfront commitment. Moreover, the BKartA took the view that, even a pure capacity based MBA model, would not fully eliminate the competition concerns raised by the proposed transaction, as MBA MVNOs would not have the ability to compete on network quality. In other words, the MBA MVNO component did not address the loss of infrastructure competition. In addition, the MBA MVNO component would be characterised by a degree of complexity comparable to regulation and would raise questions as to the feasibility of implementation and monitoring.
- (1335) Finally, several of these respondents considered the non-MNO component to be insufficient based on the same reasoning as provided in response to the First Market Test. RTR clearly concluded that, in light of Telefónica's current remedy proposal, a prohibition decision would be the most appropriate decision. In contrast, the Swedish regulator⁹³² took a more nuanced stance, basically arguing that the MNO component could be potentially interesting to third parties and could permit them to enter the German market. At the same time, it underlined that active network sharing (instead of roaming) would increase the attractiveness of the MNO component.
- (1336) Deutsche Telekom⁹³³ and Vodafone⁹³⁴ basically maintained their overall position, as expressed in relation to the First Commitments.
- (1337) The feedback on the Second Commitments provided by MVNOs and Service Providers active in Germany can be summarised in recitals (1338), (1339), and (1340).
- (1338) None of the MVNOs and Service Providers active in Germany expressed a serious interest in the MNO component under the Second Commitments.⁹³⁵ In particular, the majority of responding MVNOs and Service Providers did not consider that the inclusion of the “Wi Fi hotspot” offer meaningfully increased the attractiveness of

⁹³¹ See Document ID 3786.

⁹³² See Document ID 3605.

⁹³³ See Document ID 3797.

⁹³⁴ See Document ID 3877.

⁹³⁵ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 8.

the package since this offer was basically limited to two cities in Germany (Berlin and Munich) and only to public areas. As a result, its inclusion did not address one of the most fundamental shortcomings of the MNO component, namely the fact that the spectrum included in the package and, in particular, the 2 600 GHz spectrum, does not have the necessary characteristics (including, in particular, in terms of coverage and indoor penetration) to permit cost effective urban roll-out of a 4G network.⁹³⁶

- (1339) As regards the MBA component, three out of 13 MVNOs and Service Providers active in Germany expressed an interest in becoming an Upfront MBA MVNO under the Second Commitments,⁹³⁷ while more than half of the responding MVNOs and Service Providers stated that they would be interested in becoming an Upfront MBA MVNO under improved conditions.⁹³⁸ While the majority of responding MVNOs and Service Providers were of the opinion that the MBA model would not increase their ability and incentive to compete, few respondents were of the opinion that this would be the case if the offer were to be improved.⁹³⁹ Only two responding Service Providers considered that the MBA model would permit them to gain a larger market share compared to the ability that they have to do so at present.⁹⁴⁰ Moreover, only one Service Provider considered the MBA model to be sufficiently clear to be implemented in practice,⁹⁴¹ while the majority of the MVNOs and Service Providers highlighted the complexity of the MBA model (in particular, as regards the various adjustment mechanisms and minimum purchase requirements under component 1⁹⁴² and component 2).⁹⁴³⁹⁴⁴
- (1340) As regards the non-MNO component, MVNOs and Service Providers continued to criticise the price level of the reference offer for MVNO and Service Provider wholesale agreements, including the monthly base fee of EUR [...] per 4G subscriber which they considered to be excessive.⁹⁴⁵
- (1341) The Commission considers, first, that, under the Second Commitments, the MNO component continued to constitute a mere offer on behalf of Telefónica, which might or might not be accepted by third parties. Taking into account that no MVNO or Service Provider active in Germany expressed a credible interest to enter the German market as an MNO based on the Second Commitments, and that no MNO outside of Germany has expressed any interest in entering the German market as MNO based

⁹³⁶ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 1.

⁹³⁷ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 41.

⁹³⁸ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 42.

⁹³⁹ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, questions 37 and 38.

⁹⁴⁰ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 39.

⁹⁴¹ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 40.

⁹⁴² See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 16.2.

⁹⁴³ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 24.2.

⁹⁴⁴ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 17.3.

⁹⁴⁵ See responses to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, question 47.

under the First Commitments or any improved MNO component, the Commission considered it to be unlikely that the MNO component as formulated in the Second Commitments would be implemented.

- (1342) Second, as regards the MBA component, the Commission acknowledged that this component of the Second Commitments improved significantly compared to the First Commitments in terms of certainty of implementation. Despite a certain increase in complexity, under the Second Commitments, Telefónica committed to enter into up to three MBA wholesale agreements upfront as opposed to entering into one upfront and merely offering to enter into two further MBA wholesale agreements after closing the proposed transaction. It could therefore be assumed that the MBA component, as proposed by Telefónica, would be implemented in full under the Second Commitments.
- (1343) Nevertheless, the Commission considered that the MBA component under the Second Commitments would not allow the MBA MVNOs to exercise a degree of competitive pressure, which would address the significant impediment of effective competition resulting from the merger of two MNOs, such as Telefónica and E-Plus, on the retail market for mobile telecommunications services in Germany..
- (1344) The MBA wholesale agreement as offered by Telefónica under the Second Commitments did not comply with the requirements of a capacity based wholesale model that would significantly increase MVNOs' and Service Providers' ability and incentive to compete. In essence, the MBA wholesale model under the Second Commitments contained the following fundamental shortcomings: (a) the amount of network capacity that Telefónica committed to sell to the Upfront MBA MVNOs was too low, which would limit the Upfront MBA MVNOs' ability to compete aggressively; (b) the minimum amount of traffic to be sold by Telefónica under component 2 and 3 to comply with the Second Commitments was very low, which would create Upfront MBA MVNOs with a very limited market presence, in particular after the second year of the contract year two; and (c) there was a significant risk that the level of incremental costs that would be faced by the Upfront MBA MVNOs would be too high to increase their incentive to compete aggressively for new customers.
- (1345) First, the total amount of capacity that Telefónica committed to sell to the Upfront MBA MVNO(s) (under the applicable glide path) is set out in Table 49 below:

Table 49: Capacity committed by Telefónica under the MBA model

[all values in Gbps]	Year 1	Year 2	Year 3	Year 4	Year 5
Committed capacity including existing SP/MVNO customers	[...]*	[...]*	[...]*	[...]*	[...]*
Committed capacity excluding existing SP/MVNO customers	[...]*	[...]*	[...]*	[...]*	[...]*

- (1346) Taking into account that the Second Commitments include a limitation pursuant to which the Upfront MBA MVNOs are only allowed to host one million customers per peak data throughput of 1 Gbps, the maximum number of additional customers that all the Upfront MBA MVNO together would be able to host based on their MBA wholesale agreements with Telefónica did not give the Upfront MBA MVNOs sufficient scope to grow if they were to compete aggressively.
- (1347) Moreover, and still in relation to the total amount of capacity to be sold by Telefónica under component 1, the Commission had serious doubts that Telefónica

provided a realistic prognosis for the development of the capacity (measured in terms of peak data throughput) of the Telefónica network (including the E-Plus network to the extent it would be progressively integrated in the Telefónica network). Telefónica submitted that the capacity of the Telefónica consolidated network would amount to [...] Gbps in 2016. In order to calculate the absolute value of the minimum capacity to be sold to the Upfront MBA MVNO(s) Telefónica assumed that the committed 22% and 30% of its network capacity related to the overall capacity achieved by this network in 2016. This assumption, however, ignored the fact that the capacity of the Telefónica consolidated network was likely to significantly increase post 2016. This is first of all due to the fact that the consolidation of the E-Plus network into the Telefónica network would take at least until 2019. Therefore, the capacity of the Telefónica network would not reflect the total capacity of the fully consolidated networks until 2019 at the earliest, and possibly later. Moreover, it was also extremely likely that Telefónica's 4G roll-out would continue to increase its capacity post 2016. In this context, the Commission also noted that, according to their network planning, the merged entity's two MNO competitors aim at [...] capacities for the years 2015 to 2016 than the [...] Gbps estimated by Telefónica for 2016.

- (1348) Against this background, the Commission considered that it was highly likely that the capacity of the fully consolidated network of the merged entity by 2019 (or any later point in time when full network consolidation would be achieved) would be significantly higher than [...] Gbps. Therefore, the Commission also considered that [...] Gbps respectively [...] Gbps would not correspond to 22% and 30%, respectively, of the capacity of the fully consolidated network of the merged entity once full network consolidation would be achieved completely.
- (1349) Second, the Second Commitments featured a “mismatch” between the amount of capacity to be sold by Telefónica under Bitstream component 1 and the amount of data, voice and SMS traffic to be purchased under Bitstream components 2 and 3 and to be channelled through such capacity. More specifically, during the first two years of the agreement between Telefónica and the Upfront MBA MVNOs, the amount of traffic to be purchased upfront by the Upfront MBA MVNOs (at least as far as data traffic is concerned) corresponded to the amount of capacity bought. In other words, the Second Commitments guaranteed that the Upfront MBA MVNOs purchased upfront both the capacity and the traffic to serve their customers and that therefore they had an incentive to sell this capacity and traffic aggressively on the market. However, the structure of Bitstream component 2 was such that, as of year three of the agreement, when the capacity to be purchased by the Upfront MBA MVNOs under Bitstream component 1 grew significantly based on the applicable glide path, there was no guarantee that the Upfront MBA MVNOs would also be required to purchase a corresponding amount of data traffic to fill this capacity.⁹⁴⁶ In other words, Telefónica could have complied with the Second Commitments by selling to the Upfront MBA MVNOs an amount of data traffic in years three to five of the agreement, which was significantly lower than the amount of capacity sold under Bitstream component 1.

⁹⁴⁶ As explained in recital (1327), after the second year of the MBA Agreement, the Upfront MBA MVNOs were only required to purchase up to 15% to 20% of the traffic used in the previous year under component 2, while the amount of capacity made available to them by Telefónica under component 1 based on the applicable glide path would increase by much more than 15% to 20% (see footnote 926). Similarly, the minimum purchase requirements under component 2 would only require the MBA MVNO to purchase 75% of the traffic purchased in year two under component 2.

- (1350) Third, and as a corollary, the Second Commitments introduced a significant element of incremental cost into the MBA model for each of data, voice and SMS traffic, therefore significantly departing from a pure capacity model.
- (1351) As explained in recital (1327), with respect to data traffic, the Upfront MBA MVNOs would only be required to purchase a minimum amount of data traffic after the first two years. In other words, as of year three, the Upfront MBA MVNOs would basically revert to a “pay-as-you-go” model, by purchasing the data traffic required to serve its then customer base on a yearly basis, and therefore incurring significant incremental cost.
- (1352) As regards mobile voice, Telefónica does not apply a real capacity model whereby the MBA MVNO would get access to a certain amount of Telefonica’s mobile voice capacity. The voice allowances offered are only roughly half of the volumes corresponding to 30% (including existing MVNO/SP customers) or 22% (excluding existing MVNO/SP customers) of Telefónica's forecasted voice capacity. Even in years one and two of the MBA agreement, the number of voice minutes that would be needed to host the contractually limited maximum number of subscribers (one million per Gbps) is roughly twice as high as the minimum commitment allowance. Therefore, it must be anticipated that even in the first two years the MBA MVNOs will have to buy mobile voice volumes in addition to the committed amounts, implying again significant incremental costs. Moreover, from year three onwards Telefónica does not offer significant committed voice volumes. Likewise, the Second Commitments do not provide for any significant minimum commitment of actual SMS volumes, so that the MBA MVNOs would also face incremental costs for SMS.
- (1353) The Commission therefore considered that the Second Commitments introduced a significant amount of incremental costs for the Upfront MBA MVNOs, which, in turn, would significantly reduce their incentives to compete compared to a pure capacity-based model and would not significantly increase their incentives to compete compared to their current business models.
- (1354) For completeness, the Commission also notes that the fact that Telefónica committed to ensure in negotiations that 66% of the wholesale costs of Bitstream components 1 and 2 would always be contractually committed irrespective of the actual usage does not alter this conclusion. First, even taking this percentage at face value, Telefónica’s model entailed that up to 34% of total wholesale costs would be incremental. Moreover, and in any event, since the pricing of Bitstream components 1 to 3 was left to the negotiations between Telefónica and the Upfront MBA MVNOs, it was possible that, as a result of these negotiations, the usage related incremental costs under Bitstream components 2 and 3 would amount to a significant sum. Moreover, since the commitment to ensure that 66% of the wholesale costs were always contractually committed only related to Bitstream components 1 and 2, voice and SMS usage under Bitstream component 3 was excluded from this rule.
- (1355) Finally, as regards the non-MNO component, the Commission maintained its view that this component merely aims at preserving the current situation in terms of competitive pressure exercised by MVNOs and Service Providers without enabling them to compete more effectively.
- (1356) To summarise, the Commission concluded that the Second Commitments were insufficient to address the competition concerns raised by the proposed transaction on the market for the provision of retail mobile services in Germany.

9.4. Final Commitments

9.4.1. Description of the Final Commitments

(1357) The Final Commitments follow the structure of the First and the Second Commitments and comprise the following three components:

- (a) the MNO remedy;
- (b) the MBA remedy; and
- (c) the general non-MNO remedy.

(1358) All remedies of the Final Commitments contain amendments compared to the Second Commitments. However, the most substantial amendments concern the MBA remedy. The three remedies under the Final Commitments are summarised in the following subsections 9.4.1.19.4.1.2 to 9.4.1.3.

9.4.1.1. MNO remedy

(1359) Under the MNO remedy, Telefónica commits to offer one MNO Agreement to be concluded with a new MNO entrant. For this purpose, Telefónica commits to make the following offers: (a) the spectrum offer; (b) the national roaming offer; (c) the divestiture of sites offer; (d) the passive radio network sharing offer; and (e) the sale of shops offer.

(1360) Telefónica commits to offer the MNO Agreement to all interested third parties until the end of 2014. If no third party has provided Telefónica with a written non-binding offer, according to which it is generally prepared to enter into an MNO Agreement with Telefónica by the end of 2014, Telefónica will only offer the MNO Agreement to the Upfront MBA MVNO(s) as of 1 January 2015. Some of the elements offered under the MNO Agreement are only available for a specific timeframe, for instance the offer to divest sites will elapse on 31 December 2016 and the sale of shops offer will elapse on 30 June 2015. In any event, the offer to conclude an MNO Agreement will only be valid for a period of five years after the date of the closing of the proposed transaction.

(1361) Under the spectrum offer, Telefónica commits to offer to lease 10 MHz of paired spectrum in the 2.6 GHz band for a lease price of EUR [...] *million per year (net). The technical handover of the 2.6 GHz spectrum has to be completed at the earliest one month after signing of the MNO Agreement and the lease terminates on 31 December 2025 or when such spectrum is to be otherwise handed back to BNetzA. In addition, Telefónica commits to offer to lease 10 MHz of paired spectrum in the 2.1 GHz band for a lease price of EUR [...] * million per year (net). Technical handover of the 2.1 GHz spectrum is to be completed within one month following the request of the new MNO entrant, but not earlier than 1 July 2016 or two years after the date of closing, if closing takes place later than 31 July 2014. The lease terminates on 31 December 2020.

(1362) While Telefónica has not amended the spectrum offered for lease under the Final Commitments as compared to that under the First and Second Commitments, it has reduced the annual lease prices for the 2.6 and the 2.1 GHz spectrum by 50% compared to the First and the Second Commitments.

(1363) Under the roaming offer, Telefónica commits to offer national roaming to the new MNO entrant. If the new MNO entrant chooses to roll out a 3G/4G network in urban areas, the 3G/4G roaming agreement will be gradually phased out in these areas over a period of five years depending on the progress made by the new MNO entrant in rolling out its own urban network. The 2G/3G/4G roaming in rural areas and 2G

roaming in urban areas will remain available until 31 December 2025. If the new MNO entrant chooses to roll out a 4G only network in urban areas, the 4G roaming agreement will be gradually phased out in urban areas over a period of five years depending on the progress made by the new entrant in rolling out its own urban network. The 2G/3G/4G roaming in rural areas and 2G/3G roaming in urban areas will remain available to the new MNO entrant until the end of 2025. Under the roaming agreement the new MNO entrant's use of roaming would be limited to a maximum of [...] of the built capacity in 2G/3G/4G of Telefónica's consolidated network and the E-Plus legacy network. National roaming is offered at the best available market terms and conditions for a comparable access service in the value chain in Germany. Moreover, if an Upfront MBA MVNO concludes the MNO Agreement with Telefónica, the terms and conditions of the MBA wholesale agreement will apply to the national roaming agreement (subject to certain adjustments⁹⁴⁷).

- (1364) Under the divestiture of sites offer, Telefónica commits to offer to sell the new MNO entrant sites for building its own network in urban areas. The scope of the sale includes permissions, rental contracts, power supply, steel antenna and passive radio frequency elements. Telefónica commits to offer the sites for sale on a staggered basis according to its network consolidation and dismantling plan. Telefónica will provide to the new MNO entrant an initial list of [...] sites available for sale at different points in time up to the end of 2016 (in the First and Second Commitments the offer was valid until the end of 2014). During this period, Telefónica will identify on a quarterly basis those of the [...] sites, which are available for sale during that quarter. The new MNO entrant could decide which ones, if any, of the sites available for sale in every quarter, it elects to purchase. Telefónica commits to offer these sites at no more than book value.
- (1365) Under the passive radio access network sharing offer, Telefónica commits to offer the new MNO entrant a nation-wide agreement for collaboration in the sharing of passive infrastructure for their radio networks until the end of 2025. This offer concerns the Telefónica consolidated network, not the E-Plus legacy network. All recurring costs are to be shared ([...] % to be borne by Telefónica and [...] % to be borne by the new MNO entrant); [...] investment costs caused by the new MNO entrant are to be borne by [...].
- (1366) Under the sale of shops offer, Telefónica commits to offer the sale of up to [...] shops in urban areas to the new MNO entrant, which are to be pre-selected by Telefónica, including the takeover of existing rental contracts and the optional takeover of employment contracts of existing staff. Telefónica offers to sell the shops at [...]. The new MNO entrant is to have the duty to ensure rebranding and dismantling where necessary [...].

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According to the Final Commitments, if the new MNO entrant is an Upfront MBA MVNO, the MBA Agreement will continue as the national roaming agreement which means that national roaming traffic will be handled and invoiced under the Bitstream Component 1, the Bitstream Component 2 and the Bitstream Component 3 of the MBA Model and not under any national roaming agreement. The capacity commitment under the MBA Agreement and the Upfront MBA MVNO Remedy will over time decrease proportionately to the new MNO entrant's own network rollout measured by the traffic split on its own network and on Telefónica's consolidated network. If the new MNO entrant is an Upfront MBA MVNO, Telefónica's and the Upfront MBA MVNO's commitments concerning the nationwide scope of services under the MBA Agreement and the Upfront MBA MVNO Remedy will be adjusted accordingly.

(1367) The Wi Fi hotspot offer, the sale of call centre offer and the offer to provide fixed wholesale access to the new MNO entrant under standard wholesale terms and conditions based on Telefónica's fixed network cooperation with Deutsche Telekom contained in the First and Second Commitments are no longer included in the Final Commitments. The market participants did not consider that the inclusion of these offers had any material impact on the attractiveness of the MNO remedy.⁹⁴⁸

9.4.1.2. MBA remedy

(1368) Under the MBA remedy of the Final Commitments, Telefónica commits to enter into MBA Agreements prior to the date of closing with up to three, but in any event with at least one Upfront MBA MVNO(s). Under these agreements, Telefónica will be required to sell, and the Upfront MBA MVNO(s) will purchase, in total 20% of the total capacity (for each of data voice and SMS) of the networks under the legal control of Telefónica post-transaction, that is to say the sum of the capacity of the Telefónica consolidated network and of the E-Plus legacy network ("Obligatory Purchase Commitment") under a specified glide path.

(1369) Telefónica further commits to offer under the MBA Agreements the purchase of an additional 10% of the capacity of Telefónica's consolidated network and the E-Plus legacy network to the Upfront MBA MVNO(s) (the "Optional Capacity") on the same terms and conditions as the Obligatory Purchase Commitment. The Optional Capacity, which is not subject to the glide path applicable to the Obligatory Purchase Commitment, will be offered based on a "first come, first served" principle, which also constitutes a change compared to the Second Commitments.

(1370) The Obligatory Purchase Commitment is strictly incremental. If the Upfront MBA MVNOs already have subscribers hosted on each of the Telefónica and/or the E-Plus networks, the capacity purchased under the Obligatory Purchase Commitment must not be used to serve these customers. Telefónica will offer the capacity necessary to serve existing customers of the MVNOs/SPs converting into Upfront MBA MVNOs in addition to, and subject to the same terms and conditions as the capacity sold under, the Obligatory Purchase Commitment. The capacity necessary to serve existing customers of the MVNOs/SPs converting into MBA MVNOs will be deducted from the capacity available as Optional Capacity.

(1371) In practice, the Obligatory Purchase Commitment and the Optional Capacity will be calculated based on an initial network forecast for the Telefónica consolidated network and the E-Plus legacy network to be provided by Telefónica to the Monitoring Trustee and to the Upfront MBA MVNOs by the date of the signing of the MBA agreement(s).

(1372) Telefónica, however, also commits to include an adjustment mechanism in the MBA agreements, which will ensure that the share of Telefónica's network capacity which is sold to the MBA MVNOs corresponds to Telefónica's most recent network forecasts and to the actual capacity of the two networks under its legal control. The adjustment mechanism applies (a) if Telefónica adapts its network forecast; or (b) if the actual capacity of the Telefónica consolidated network and of the E-Plus legacy network deviates from the most recent forecast, based on which the Obligatory Purchase Commitment and the Optional Capacity are calculated. For the purposes of the adjustment mechanism, Telefónica commits to provide every December an

⁹⁴⁸ See Responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, questions 26, and 27.

updated network forecast for the Telefónica consolidated network and the E-Plus legacy network and to permit the Monitoring Trustee to measure quarterly the capacity of each of Telefónica's consolidated network and of the E-Plus legacy network.

- (1373) The MBA agreements offered under the Final Commitments follow the same structure as the MBA agreements offered under the Second Commitments and therefore include three components (Bitstream component 1, 2 and 3). However, under the Final Commitment, these agreements are designed in such a way that the Upfront MBA MVNO(s) must commit for the entire contractual period of five years to purchase an amount of data traffic (under component 2) and of voice and SMS traffic (under component 3) which corresponds to the amount of network capacity purchased under component 1.
- (1374) Therefore, the MBA agreements under the Final Commitments guarantee that Telefónica would sell upfront and that the Upfront MBA MVNOs would purchase upfront both a significant amount of capacity and the data, voice and SMS traffic corresponding to that capacity for the entire duration of the agreement. This improvement contributes to eliminating a significant part of the usage-based variable cost element of the MBA agreements compared to the Second Commitments. Telefónica also commits to supply the Upfront MBA MVNO(s) with the same level of quality of technical service and of coverage as it provides to its own customers (non-discrimination clause).
- (1375) As in the Second Commitments, the definition of the commercial terms of the MBA agreements is left to the negotiations between Telefónica and the potential Upfront MBA MVNOs. However, as regards the pricing under Bitstream component 2, Telefónica commits for current data transmission technologies that the spread between the price for its lowest speed class ([...])* and the price for its highest speed class [...]* must not exceed [...]*. For future technologies, Telefónica commits that the spread between the price for the highest speed class of its current technologies ([...])* and the price for any future technology must not exceed [...]*. Telefónica also reserves the right to charge the Upfront MBA MVNOs a special fee of no more than [...]* in the event of "excessive heavy usage".⁹⁴⁹
- (1376) Telefónica further commits to offer to the Upfront MBA MVNO(s) certain ancillary and additional services.
- (1377) The MBA agreements would have an initial term of at least five years with a unilateral call option for the Upfront MBA MVNO(s) at pre-defined terms and conditions to extend their agreements for an additional term of five years.

9.4.1.3. Non-MNO remedy

- (1378) Under the non-MNO remedy, Telefónica commits to offer to extend all existing wholesale contracts with MVNOs and Service Providers that are currently wholesale customers of Telefónica and/or E-Plus until the end of year [...]*. That is to say Telefónica removed the limitation included in the First and Second Commitments, to only extend existing 2G/3G (and not 4G) wholesale agreements. Moreover,

⁹⁴⁹ Excessive heavy usage is to be defined differently for residential and business customers and is to be differentiated between mobile data products and/or services. Excessive heavy usage fees are only to be applied if customers of the Upfront MBA MVNO exceed specified benchmarks by a yearly defined factor for each defined product and customer segments (residential/business and small screen/big screen). The benchmarks are also set on a yearly basis, [...]*

Telefónica commits to grant wholesale access to its 4G network on the basis of an MVNO or Service Provider agreement to all MVNOs and Service Providers [...] months after the latest technical launch of the Upfront MBA MVNOs at the best available market terms and conditions until the end of [...] (or such earlier date on which Telefónica terminates to offer 4G products to its own clients). In addition, Telefónica commits to permit its wholesale partners to switch their customers hosted on Telefónica's and/or E-Plus' networks from one business model to another without any penalty. Furthermore, Telefónica commits to eliminate the contractual clauses in the agreements with wholesale partners of either Telefónica or E-Plus, which could prevent the MVNOs and Service Providers from switching their customers from one MNO to another.

9.4.2. *The Commission's assessment*

- (1379) The Commission recalls that it has found that without remedies, the merger between Telefónica and E-Plus would significantly impede effective competition in a substantial part of the internal retail market for mobile telecommunications services within the meaning of Article 2 of the Merger Regulation because (a) the proposed concentration would remove two close competitors; (b) the proposed concentration would remove E-Plus (as well as Telefónica) as important competitive forces; (c) the incentive of the merged entity to compete would decrease in an already highly concentrated market characterized by high barriers to entry as an MNO and very limited buyer power; (d) competing MNOs would not have the incentive to compete more aggressively; (e) non-MNOs would not have the ability and incentive to compensate for the loss of competitive pressure caused by the elimination of E-Plus as a network operator; and (f) the possible efficiencies resulting from the transaction would not offset the competition concerns.
- (1380) In the subsections 9.4.2.1 to 9.4.2.3, the Commission assesses whether the Final Commitments, in aggregate, are suitable and sufficient to address these competition concerns. The Commission also assesses whether there is sufficient certainty that the Final Commitments can be implemented effectively, such that the significant impediment to effective competition, which the Commission concludes would otherwise arise, does not materialise. In carrying out this assessment, the Commission takes into account both the particularities of the relevant market and of the market players in Germany (in particular, the existence of well-established MVNOs and Service Providers in Germany) and also the specific information obtained from the responses to the First and the Second Market Tests and through follow-up contacts with third parties interested in the commitments offered by Telefónica.

9.4.2.1. MNO remedy

- (1381) The MNO component under the Final Commitments constitutes an offer on behalf of Telefónica. Although Telefónica has reduced the price for the spectrum option under the Final Commitments [...] compared to the First and Second Commitments, it has not modified the content of the spectrum offer. In particular, Telefónica has neither included more contiguous spectrum in the 2.1 and 2.6 GHz bands into its offer compared to the First and Second Commitments, nor has it included any spectrum in the 1.8 GHz band or below 1 GHz. Moreover, the MNO component includes the offer of a passive network sharing, which, as it emerged from the submissions of one

market participant after the Second Market Test,⁹⁵⁰ would make the entry as MNO into the German market based on the MNO component significantly less likely compared to a situation where an active network sharing had been offered. Given that the improvement of the MNO component under the Final Commitments compared to the First and Second Commitments mainly relates to the price, and taking into account the lack of interest that market participants expressed in the MNO component in the course of the market tests, the Commission considers it uncertain whether any third party will enter into an MNO agreement with Telefónica on the basis of the Final Commitments.

- (1382) Accordingly, the Commission considers that the MNO component of the Final Commitments is unlikely to be implemented and is therefore also unlikely to alleviate the competition concerns raised by the proposed transaction. The MNO component, in conjunction with the upcoming frequency auction to be organised by BNetzA, nonetheless contributes to “keeping the door open” in order to potentially facilitate the entry of a new MNO into the German market in the future.

9.4.2.2. MBA remedy

- (1383) As Telefónica commits to enter into at least one and up to three MBA agreements prior to closing, the effect of this part of the Final Commitments is that this number of Upfront MBA MVNOs will enter the German market with the prerequisite degree of certainty required under the Remedies Notice. Moreover, the Final Commitments are far less complex than the Second Commitments, which will help ensure their effective implementation.⁹⁵¹
- (1384) The Commission considers that the up to three Upfront MBA MVNOs, which will start operating on the market as a result of these Commitments, will be able to ensure, together with the three remaining MNOs and the other non-MNO players, a sufficient degree of competition on the German retail mobile telephony market. Therefore, this will address the competition concerns identified as resulting from the elimination of the important competitive constraint currently exercised by E-Plus.
- (1385) First, the MBA wholesale model provided for in the Final Commitments significantly changes the Upfront MBA MVNOs’ ability and incentive to compete compared to the wholesale models currently practised in the German market. In this context, it should be recalled that at present MVNOs and Service Providers basically lack (a) the ability to exercise the same degree of competitive pressure as an MNO as they depend on wholesale access conditions, particularly including (i) wholesale pricing (see recitals (581), (582) to (583)); (b) the type of services and technologies (2G/3G/4G), including speed classes for the transmission of mobile data to which wholesale access is granted (see recitals (584) to (599)); as well as (c) the design of retail offers that MVNOs and Service Providers can offer under their wholesale agreements (see recitals (603), (604) and (605)). Furthermore, the Commission finds that MVNOs and Service Providers have fewer incentives to compete than MNOs as they have very low fixed costs in contrast with MNOs. This, in turn, means that these operators have fewer incentives to aggressively compete for new customers than an MNO that has to recover its higher fixed cost, see recital (568).

⁹⁵⁰ [...]*

⁹⁵¹ See paragraph 14 of the Commission Notice on remedies acceptable under the Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004.

- (1386) In terms of ability to compete, the fact that Telefónica commits to enter into all MBA agreements prior to the closing of the proposed transaction should provide an incentive for Telefónica to offer commercially attractive terms and conditions, including wholesale prices to the Upfront MBA MVNO(s). The actual terms and conditions of the relevant agreements will be defined in commercial negotiations between Telefónica and the Upfront MBA MVNO(s). Given that MVNOs and Service Providers already have an established market presence in Germany, these players are familiar with the negotiation of wholesale agreements and are best placed to decide whether the terms and conditions for the Upfront MBA wholesale agreements are commercially attractive for them. In fact, in the course of the First and the Second Market tests, several MVNOs and Service Providers already active in Germany indicated that they would be interested in a capacity based wholesale mode.⁹⁵² Moreover, Telefónica confirmed that it is currently in negotiations with a number of third parties and a number of third parties also independently confirmed that they are in negotiations with Telefónica.
- (1387) Furthermore, as regards the type of services and technologies (2G/3G/4G), including speed classes for the transmission of mobile data to which wholesale access is granted, the MBA wholesale model also enables the Upfront MBA MVNO(s) to include in their retail offerings the latest network technologies that Telefónica also offers to its own customers. In particular, the Upfront MBA MVNO(s) will be able to offer 4G services under their own brand, which none of the MVNOs and Service Providers currently active in Germany is able to do at present. Not being able to obtain wholesale access to 4G services in order to offer 4G retail tariffs under their own brand and on a different pricing basis than retail-minus is one of the main limitations for MVNOs and Service Providers to compete effectively with MNOs (see recitals (584) (600)). This concern is adequately addressed under the Upfront MBA MVNO remedy. The fact that Telefónica equally commits to make immediately available all higher speed classes for data transmission (such as data transmission speed of [...]*) and new mobile network technologies ensures that the Upfront MBA MVNO(s) will remain able to compete aggressively even if new data transmission speed classes and mobile network technologies are introduced to the German mobile retail market. This aspect of the Final Commitments contributes to them being "future proof".
- (1388) In addition, the MBA wholesale model, by granting the Upfront MBA MVNO(s) access to a given percentage of the network of the merged entity in terms of data, voice and SMS capacity, provides the Upfront MBA MVNO(s) with a significant degree of flexibility to devise their retail offerings. The Upfront MBA MVNO(s) will be free to use the purchased capacity to offer retail tariffs with any combination of mobile services that is most profitable to fill the pre-committed capacity. While the Final Commitments still provide for some constraints in terms of slightly higher wholesale prices for the latest technologies and in the case of "excessive usage" by its customers, the Commission does not believe that these constraints are such as to materially constrain the Upfront MBA MVNO(s)' ability to compete. Under the Final Commitments, the price for the latest technologies can, at most, be [...] * higher than the price for the oldest technologies and can potentially be less dependent on the outcome of the commercial negotiations between Telefónica and the Upfront MBA

⁹⁵² See responses to questionnaire Q1 MNOs/MVNOs/Service Providers/Regulators dated 11 April 2014, question 62 and to Questionnaire Q5 Additional Market Test - to MVNOs and Service Providers dated 30 April 2014, questions 41 and 42.

MVNO(s). The Commission considers this price spread to be sufficiently limited. Similarly, the excessive usage clause is designed in such a way as to trigger an additional payment on the part of the Upfront MBA MVNO(s) only in exceptional circumstances. Excessive usage will be assessed [...]*. In the Commission's view the yearly adaptation of the usage benchmark ensures that the threshold for excessive usage takes into account the predicted increase in consumption of mobile data in Germany. Excessive usage payments will only be triggered if in a given customer category the Upfront MBA MVNOs' customers exceed the benchmark by a yearly defined factor. [...]*. Moreover, the threshold for minimum data usage for per customer depending on different speed classes has been deleted from the Bitstream component 2 under the Final Commitment. The respective thresholds for minimum data usage contained in the First and the Second Commitments would have prevented the Upfront MBA MVNO(s) to offer retail tariffs with small data allowances. Tariffs with small data allowances are, however, important to make offers at the entry level for usage of mobile data or for machine-to-machine applications (such as SIM cards used in the navigation systems of cars). Therefore, the Commission considers that the deletion of the minimum threshold for data usage from the Final Commitments has materially contributed to ensuring that the Upfront MVNO(s) enjoy significant flexibility in the design of their retail tariffs.

- (1389) In terms of incentives, under the MBA wholesale model, Telefónica will sell a pre-determined amount of its (data/voice/SMS) network capacity for a pre-determined price for a minimum period of five years, see recitals (1373) and (1374). In other words, the Upfront MBA MVNO(s) will pay a fixed price on a periodic basis for access to a fixed capacity on the consolidated network of the merged entity, as opposed to paying wholesale access fees per subscriber under the retail-minus model or per usage under the price-per-unit or revenue sharing models. This constitutes one of the major improvements of the MBA wholesale model under the Final Commitments compared to the MBA wholesale model under the First and Second Commitments, which was characterised by significant incremental costs for each of data, voice and SMS traffic. The main effect of introducing the fixed price/fixed capacity model is to create a strong incentive for the Upfront MBA MVNO(s) to fill the purchased network capacity by aggressively acquiring customers. This is the case since with a fixed committed capacity and payment the Upfront MBA MVNOs' network costs of serving each additional customer will be minimal until the pre-committed capacity is filled up.
- (1390) Second, the Commission considers that the network capacity made available by Telefónica to the Upfront MBA MVNOs is sufficient to allow the Upfront MBA MVNO(s) to compete aggressively and expand their market share so as to address the anti-competitive effects resulting from the elimination of the important competitive constraint that E-Plus currently exercises. Under the Final Commitments, Telefónica has addressed the Commission's concern regarding the accuracy of Telefónica's capacity forecast for the consolidated network of the merged entity under the Second Commitments for the reasons set out in the following recitals (1391) and (1392).
- (1391) The Final Commitments significantly improve the basis for the calculation of the capacity that has to be made available to the Upfront MBA MVNO(s). The capacity made available to the Upfront MBA MVNO(s) is no longer calculated, as was in the Second Commitments, solely on the basis of the Telefónica network (including of the E-Plus network only to the extent it is consolidated into the Telefónica network) and by reference to a pre-determined estimated capacity figure. Instead, the capacity made available to the Upfront MBA MVNOs is calculated on the basis of both the

Telefónica network (including of the E-Plus network to the extent it is consolidated into the Telefónica network) and the E-Plus legacy network and on the basis of the actual capacity of these networks at any point in time during the duration of the wholesale agreements concluded under the Final Commitments to be measured on a quarterly basis by the Monitoring Trustee. More specifically, as set out in recital (1325), in the Second Commitments, Telefónica committed to make available a maximum of [...] Gbps (including all existing customers already hosted on Telefónica's and E-Plus' network) or [...] Gbps (excluding existing customers) under a glide path which, it submitted, would amount to approximately 30% respectively 22% of the total capacity of the Telefónica network (including the E-Plus network to the extent it would be integrated into the Telefónica network) in 2016. In the Final Commitments no such pre-determined capacity figures are included. In addition, in order to ensure that the capacity available to the Upfront MBA MVNOs evolves over time in the same way as the network capacity of the merged entity, the Final Commitments provide for the adjustment mechanism described in recital (1372).

- (1392) In this way, it is ensured that the Upfront MBA MVNO(s) always benefit from (a percentage of) the total network capacity under the control of the merged entity, up until the point in time when full network consolidation is achieved and regardless of when such full consolidation actually takes place. This constitutes a major improvement of the MBA remedy under the Final Commitments compared to the Second Commitments.
- (1393) Third, in order to ensure that the Upfront MBA MVNOs would be able to continue to operate on the market on the basis of the same model after the first term of five years of the MBA agreement, the Final Commitments also grant to the Upfront MBA MVNOs a unilateral option to extend the MBA Agreements for an additional term of five years at pre-set terms and conditions. The prices for the three Bitstream Components amount to, [...]*. Moreover, each Upfront MBA MVNO is entitled to purchase the same capacity which it has purchased during that 12 month period. Finally, the Upfront MBA MVNO(s) will be entitled, on a "first come first served" basis, to increase the actual annual capacity purchased to a total of 30% of the total capacity of the merged entity's network or to reduce their aggregate annual capacity in each year to an amount equivalent to their actual usage in the preceding contractual year.
- (1394) Assuming that the the merged entity's market share in terms of subscribers remained the same as today over a period of five years following the completion of the proposed transaction (that is to say around 35%), the Obligatory Purchase Commitment of 20% of the merged entity's network capacity under the Final Commitments can be estimated to permit the Upfront MBA MVNOs access to sufficient capacity to increase their market share by an additional around 7 percentage points (20% of 35%) in terms of subscribers over this period.
- (1395) Moreover, to the extent that these Upfront MBA MVNOs already have a subscriber base on each of the Parties' networks they would be required under the Final Commitments to switch those subscribers to the MBA model. As a result, post transaction, the Upfront MBA MVNO(s), which would have committed to purchase upfront both the capacity to serve their existing customer base and a significant amount of additional capacity to expand such base, would have a strong incentive to compete very aggressively both to retain their customer base and to acquire new customers. An Upfront MBA MVNO would want to avoid forgoing revenues by leaving unused capacity that it had already purchased. Given that the Upfront MBA MVNO would, under the commitments, be required to transfer its existing customer base to the Upfront MBA MVNO model there would, therefore, be an incentive in

transferring the existing customer base to the Upfront MBA MVNO terms and to offer attractive conditions to that base in order to avoid churn, while at the same time offering attractive terms also to new customers so as to further increase the overall customer base.

- (1396) In addition, taking into account the Optional Capacity of 10% of the merged entity's network capacity under the Final Commitments, and on the basis of the same assumption as in recital (1394), the Upfront MBA MVNOs will be able to increase their market share by up to an additional 3.5 percentage points in terms of subscribers over five years depending on the size of their customer base that is, at present, possibly hosted by Telefónica or E-Plus. In total, on the basis of the same estimation, the amount of capacity that Telefónica commits to sell or to make available to the Upfront MBA MVNOs would allow these players to reach an estimated subscriber share of around 10.5%. The Commission considers this to be a sufficiently sizeable market share which would enable the Upfront MBA MVNOs to exercise sufficient competitive constraints..
- (1397) The aggressive competition likely to be injected by the Upfront MBA MVNOs in the German retail market would, in the Commission's view, offset a significant impediment of effective competition resulting from the elimination of E-Plus.

9.4.2.3. Non-MNO remedy

- (1398) As regards the non-MNO remedy, the Commission acknowledges the improvements made under the Final Commitments, in particular the extension of the unilateral prolongation of existing wholesale agreements with current wholesale customers of Telefónica and E-Plus to wholesale agreements that already cover 4G services, as well as the commitment to offer 4G wholesale access until the end of year [...] under the Second Commitments, which MVNOs and Service Providers currently active in Germany had criticised as being commercially unattractive and which would not have been negotiable.
- (1399) The Commission considers that the non-MNO remedy of the Final Commitments mainly results in preserving the current situation in terms of ability and incentive to compete of the MVNOs and Service Providers, which currently have a wholesale agreement with Telefónica or E-Plus. The Commission also considers that the non-MNO remedy also improves their position as it provides them with planning security for 2G and 3G services (regardless of the future of the Service Provide Obligation) and with the guarantee to be granted access to 4G services as of [...] month after the latest technical launch of the Upfront MBA MVNOs, that is to say at the latest in [...]. Moreover, even if MVNOs and Service Providers active in Germany finally decide not to enter into wholesale agreements for 4G services with Telefónica they can use Telefónica's commitment under the non-MNO remedy in order to improve their negotiation position vis-à-vis Deutsche Telekom and Vodafone.

9.4.2.4. Impact of the Final Commitments on the market for wholesale access and call origination on public mobile networks

- (1400) The Commission considers that, taken together, the MBA remedy and the Non-MNO remedy under the Final Commitments also address the possible competitive concerns raised by the proposed transaction on the market for access and call origination on public mobile networks. As already explained in recital (1399), the Final Commitments provide MVNOs and Service Providers with planning security for 2G and 3G services (regardless of the future of the Service Provide Obligation) and with the guarantee to be granted access to 4G services. Moreover, those MVNOs and Service Providers that currently already benefit from the access to 4G services from

Telefónica or E-Plus would continue to enjoy 4G access under the non-MNO remedy. The Upfront MBA MVNOs will have access to 4G services [...]*, while other MVNOs and Service Providers will be able to access 4G services at the latest as of [...]*. The certainty of prolongation of existing contracts, the access to 4G services and the fact that some MVNOs and Service Providers will have access to the Telefónica network under a capacity-based model would also be likely to increase the negotiating power of all MVNOs and Service Providers vis-à-vis the other MNOs.

9.4.2.5. Impact of the Final Commitments with respect to horizontal coordinated effects on the retail market for mobile telecommunications services and the market for wholesale access and call origination on public mobile networks

(1401) While the evidence at the Commission's disposal did not meet the requirements the Commission has to meet according to the case law in order to prove a significant impediment to effective competition due to coordinated effects, the Commission considers that by strengthening the competitive position of the Upfront MBA MVNOs, the Final Commitments also ensure that those players will be in a position to effectively disrupt any possible coordination between the remaining MNOs. Similarly, the Commission also considers that the fact that Telefónica will grant 4G wholesale access to the up to three Upfront MBA MVNOs [...]* and will generally offer 4G wholesale access to other non-MNOs in the first half of [...]*, effectively addresses any potential risk of coordinated effects on the wholesale market.

9.5. Conclusion

(1402) In light of all the preceding considerations, the Commission concludes that the Final Commitments taken as a whole and, in particular, the Upfront MBA MVNO remedy and the non-MNO remedy, are such to address in full the competition concerns raised by the proposed transaction.

(1403) The Commission therefore also concludes that subject to full compliance with the Final Commitments given by the Notifying Party, the proposed transaction will not significantly impede effective competition in the internal market or a substantial part thereof. The proposed transaction should therefore be declared compatible with the internal market and the EEA agreement pursuant to Article 2(2) and Article 8(2) of the Merger Regulation and Article 57 of the EEA Agreement, subject to full compliance with the commitments in the Annex C to this Decision.

10. CONDITIONS AND OBLIGATIONS

(1404) Pursuant to the second subparagraph of Article 8(2) of the Merger Regulation, the Commission may attach to its decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering the concentration compatible with the internal market.

(1405) The fulfilment of the measure that gives rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve this result are generally obligations on the parties. Where a condition is not fulfilled, the Commission's decision declaring the concentration compatible with the internal market is no longer applicable. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 8(6) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.

(1406) The Final Commitments submitted by the Notifying Party on 29 May 2014 are attached as Annex C to this Decision. In accordance with the basic distinction between conditions and obligations as described in Recital (1404), this Decision should be made conditional on the full compliance by the Notifying Party with the conditions set out in Section C.1 of Annex C, including Annexes 2 to 3 thereto. All other Sections of Annex C should be obligations within the meaning of Article 8(2) of the Merger Regulation.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby by which Telefónica Deutschland Holding AG acquires sole control over E-Plus Mobilfunk GmbH & Co. KG ("E-Plus"), within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004, is hereby declared compatible with the internal market and the European Economic Area Agreement.

Article 2

Article 1 is subject to compliance by Telefónica Deutschland Holding, AG with the conditions set out in Section C.1 of Annex C and in Annexes 2 and 3 to Annex C.

Article 3

Telefónica Deutschland Holding AG shall comply with the obligations set out in the Sections C.2 and C.3, and in Sections E, F, and H of Annex C and in Annex 1 to Annex C.

Article 4

This Decision is addressed to:

Telefónica Deutschland Holding AG
Georg-Brauchle-Ring 23-25
80992 Munich
Germany

Done at Brussels, 2.7.2014

*For the Commission
(Signed)
Joaquín ALMUNIA
Vice-President*

ANNEX A: THE COMMISSION'S QUANTITATIVE ANALYSIS

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1. NON-TECHNICAL SUMMARY

- (1) As explained in Section 6.3.1.7 of the Decision, the Commission also carried out a quantitative assessment of the likely price effects resulting from the elimination of horizontal competition between Telefónica and E-Plus. This assessment used two complementary approaches which are introduced in the Decision and are discussed in more detail in the present Annex A. This analysis is based on the Commission's quantitative analysis in the Statement of Objections.
- (2) In this Annex the Commission presents its quantitative assessment of the likely price effects resulting from the elimination of horizontal competition between Telefónica and E-Plus.
- (3) The Commission used two complementary approaches: (i) a calibration based approach that uses diversion ratios and margins to predict likely effects which is akin to standard Upward Pricing Pressure (UPP) techniques (UPP-type approach); and (ii) a demand estimation based approach as a further robustness check on the UPP results presented in the Statement of Objections and in this Annex.
- (4) Both approaches assume a differentiated products industry in which firms set prices to maximize their respective profits. These two approaches allow quantifying the implied price change resulting from the elimination of horizontal competition between Telefónica and E-Plus by comparing the optimal pre-merger prices with the post-merger prices. In the context of differentiated products markets, similar approaches were used in previous cases.¹
- (5) Both approaches use a common analytical framework to model competition and to predict price effects. This common framework is the so-called Bertrand-Nash equilibrium where firms set prices in a differentiated products market to maximise their own profits. The framework is explained in section (2) below.
- (6) The two approaches differ in terms of the empirical inputs used to derive the conclusions. The calibration based approach uses observed diversion ratios and margins and calibrates the demand parameters. The demand estimation based approach uses the observed tariff characteristics and estimates the demand parameters and margins.
- (7) The Commission also presents results of its analysis that take account of arguments by the Notifying Party that the Commission considers appropriate. These arguments were provided in the Reply to the Statement of Objections and in the Reply to the Letter of Facts.

Calibration-based Modelling

- (8) This approach calibrates demand parameters by relying on diversion ratios between products and observed margins and quantities. When it is assumed that the merged entity's rivals do not react to unilateral price increases by the merged entity, the approach becomes a multi-segment version of standard UPP techniques which gives an indication of likely unilateral price increases by the merged entity. When rival reactions are taken into account the analysis becomes a calibrated merger simulation exercise which can predict price increases by all firms in the market.

¹ Case COMP M.4854 *TomTom / Tele Atlas*, Case COMP M.5644 *Kraft Foods / Cadbury*, Case No COMP/M.5658 – *Unilever / Sara Lee*, Case COMP/M.6497 *Hutchison 3G Austria / Orange Austria*.

- (9) The entire analysis is performed at the segment level, treating each segment-firm combination (for example "E-Plus pre-paid") as one product. Two scenarios are considered: (i) a baseline scenario which is based on contribution margins; and (ii) a sensitivity scenario which uses conservative estimates of the incremental margins.
- (10) In the baseline scenario based on contribution margins (respectively the sensitivity scenario based on incremental margins), the overall segment wide effects presented in the Statement of Objections were around 33% (respectively 25%) in the pre-paid segment and 11% (respectively 8%) in the post-paid residential segment. The average predicted price effect across the pre-paid and post-paid residential segments in the Statement of Objections was 16% (respectively 12%).
- (11) After taking account of certain arguments in the Notifying Party's Replies to the Statement of Objections and the Letter of Facts (in relation to cross-segment switching, aggregate demand reductions in response to price changes, and minor issues in the data management), the Commission's first quantitative approach based on diversion ratios and contribution margins predicts average price increases across all MNOs in the range of 12%-20% for the pre-paid segment and in the range of 4%-6% in the post-paid residential segment. The average across the pre-paid and post-paid residential segments is in the range of 6%-10%
- (12) In the sensitivity scenario based on incremental margins, the Commission's first quantitative approach predicts average price increases across all MNOs in the range of 9%-15% for the pre-paid segment and in the range of 4%-6% in the post-paid residential segment. The average across the pre-paid and post-paid residential segments is in the range of 5%-8%.
- (13) The approach is discussed in detail in section (3) below.

Demand Estimation Based Modelling

- (14) The Commission also performed demand estimation based merger simulations for the private segment. The estimation was carried out based on tariff level data of the five main operators in the German market. The demand for retail mobile telecommunications services is modelled in a so-called discrete choice framework where subscribers choose their tariffs based on the characteristics (such as price and allowances) of the different offerings. The price of a tariff is calculated as the subscribers' cost of using the tariff given the typical usage pattern. The price competition between the telecom operators is modelled as a multiproduct oligopoly structure.
- (15) The results, after taking account of certain arguments in the Notifying Party's Replies to the Statement of Objections and the Letter of Facts, from the demand estimation based simulation show price increases for Telefónica in the private segment that tend to be around or above 10%, and in the range of 7-12% for E-Plus. The predicted overall price increases are in the range of 4-8%.
- (16) The demand estimation based modelling is discussed in detail in section (4) below.
- (17) Section (4.4.6) presents the Commission's conclusions drawn from its quantitative analysis.

2. COMMON FRAMEWORK: BERTRAND-NASH COMPETITION IN DIFFERENTIATED PRODUCTS

- (18) Both of the Commission's quantitative approaches use the standard Bertrand-Nash differentiated products framework to model the effect of the merger. This framework assumes that firms compete on price in a market with differentiated products.

- (19) The starting point of the analysis is the standard assumption that firms set prices to maximise their profits, given the prices set by their rivals. This implies that the pre-merger situation constitutes a Bertrand-Nash equilibrium. As a result of the merger, Telefónica's and E-Plus' products are brought under common ownership. This eliminates competition between these products and generates incentive for the merged entity to raise price. Post-merger, Telefónica will take into account the effect on the profitability of all of its tariffs when contemplating to change the price of one of its tariffs. If, for example, before the merger Telefónica increases the price of one of its tariffs it would lose subscribers. A number of these lost subscribers would go to the E-Plus tariffs. After the merger, when Telefónica controls the E-Plus tariffs, these subscribers would no longer be lost. Moreover, the more there is substitution between Telefónica and E-Plus 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 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.
- (20) Moreover, the incentives to raise price in the framework may be reduced or offset by merger related reductions in marginal costs or increases in quality (if such effects can be quantified to the required standard set out in the Horizontal Merger Guidelines²).

2.1. The model of Bertrand-Nash competition in differentiated products

- (21) 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:

$$\Pi_f(p) = \sum_{j \in J^f} (p_j - mc_j) q_j(p).$$

- (22) 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.
- (23) The effect of a change in the price of product j 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 (denoted as $f_j(p_j, p_{-j})$):

$$f_j(p_j, p_{-j}) = q_j(p) + \sum_{j' \in J^f} (p_{j'} - mc_{j'}) \frac{\partial q_{j'}(p)}{\partial p_j},$$

- (24) 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.

² See paragraphs 77 and 78.

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, $f_j(p_j, p_{-j})=0$. This is the first order condition for p_j to be a profit maximising price given the prices of other products.

- (25) 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 $J \times 1$ vector with the demand for each product, $\nabla(p) \equiv \partial q(p) / \partial p'$ is the $J \times J$ Jacobian matrix of first derivatives, and mc the vector of marginal costs. Θ denotes the product ownership matrix, that is, a $J \times J$ 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 \bullet 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.

- (26) Inverting this equation yields an expression of the Bertrand-Nash equilibrium price vector:

$$p = mc - \left(\Theta \bullet \nabla(p) \right)'^{-1} q(p).$$

- (27) 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

- (28) As the merger brings together the products of the merging parties, it changes the ownership matrix. The post-merger ownership matrix Θ^{post} reflects the fact that post-merger all Telefónica and E-Plus tariffs are controlled by the merged entity. Elements of this matrix which refer to the interaction between Telefónica and E-Plus tariffs and which took the value 0 pre-merger are changed to 1.

- (29) This change in ownership implies that the first order conditions for a Bertrand-Nash equilibrium do no longer hold for the merged entity's products at the pre-merger price.

2.2.1. Gross Upward Pricing Pressure Index (GUPPI)

- (30) 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.

- (31) The GUPPI is derived from the post-merger first order conditions when evaluated at the pre-merger price. For the GUPPI, 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):

$$GUPPI_j = \frac{1}{p_j^{pre}} \left(\sum_{i \in J^{otherParty}} (p_i^{pre} - mc_j) DR_{ji} \right), \text{ where}$$

$$DR_{ji} = - \frac{\partial q_i(p^{pre})}{\partial p_j^{pre}} \bigg/ \frac{\partial q_j(p^{pre})}{\partial p_j^{pre}}$$

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.

(32) 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.

(33) 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)*

(34) 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 at what level of marginal costs will the pre-merger price still be a Bertrand-Nash equilibrium post-merger.³ This required level of compensating marginal cost can be computed as:

$$mc^{comp} = p^{pre} + \left(\Theta^{post} \bullet \nabla(p^{pre})' \right)^{-1} q(p^{pre}).$$

(35) The compensating marginal cost reduction for product j is then

$$CMCR_j = mc_j - mc_j^{comp} \text{ per subscriber, or}$$

$$CMCR_j\% = \frac{mc_j - mc_j^{comp}}{mc_j} \text{ in percentage terms.}$$

(36) 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.

(37) 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.

³ 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, Doc ID 44080.

2.2.3. Indicative price rises and merger simulation

- (38) 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:

$$p^{post} = mc^{pre} - \left(\Theta^{post} \bullet \nabla(p^{post})' \right)^{-1} q(p^{post}). \quad (1)$$

- (39) The predicted post-merger prices within this framework are the prices which satisfy these post-merger first order conditions.
- (40) 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 (1) 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

- (41) 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

- (42) 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 (1) for all products of all firms simultaneously.
- (43) 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*

- (44) It is also straightforward to use this framework to predict price increases taking account of quantified marginal cost efficiencies. To do so, one simply needs to replace the marginal cost estimate in the equation (1) with the marginal cost after efficiencies.
- (45) Quality improvements may 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, quality improvements become equivalent to analysing competition in quality adjusted prices with reduced marginal cost.⁴ In a logit demand

⁴ Willig, R., (2011): "Unilateral Competitive Effects of Mergers: Upward Pricing Pressure, Product Quality, and Other Extensions," *Review of Industrial Organization*, 39, pages 19-38, Doc ID 4410.

function, quality increases would need to be accounted for as a change in the parameters of the utility function (see demand estimation below).

- (46) The Commission 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 UPP framework. However, in order to be taken into account in the Commission's quantitative assessment, these potential demand side or supply side efficiencies arising from the merger must satisfy the conditions in the Horizontal Merger Guidelines. The Commission's detailed assessment of the Notifying Party's efficiency claims is provided in Section 6.9 of the Decision.

3. CALIBRATION BASED QUANTIFICATION OF LIKELY MERGER EFFECTS

- (47) This section explains the details of the calibration based simulations. It presents the calibration of the demand parameters (section 3.1), the data inputs and the construction of diversion ratios (section 3.2), a summary of the results reported in the Statement of Objections (section 3.3), and the assessment of the Notifying Party's arguments (section 3.4).

3.1. Calibration of demand parameters

- (48) The calibration of the demand parameters under this approach is based on measures of diversion ratios, margins and quantities.
- (49) The diversion ratio from product j to i is defined as:

$$DR_{ji} = -\frac{\partial q_i}{\partial p_j} \bigg/ \frac{\partial q_j}{\partial p_j}.$$

- (50) With this definition, the pre-merger first-order condition for product j can be rewritten as:

$$q_j \bigg/ \frac{\partial q_j}{\partial p_j} - \sum_{i \in J^j} (p_i - mc_i) DR_{ji} = 0.$$

- (51) 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.
- (52) With 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 (IPRs) or by solving the full equilibrium effect which takes account of and predicts price reactions by rivals.

3.2. Data inputs and construction of diversion ratios

- (53) The calibration based approach relies on two key data sources obtained from MNOs: (i) segment level monthly data on each MNO's subscribers, revenues and margins in the respective segment for both the retail and the wholesale level; and (ii) switching data from mobile number portability (MNP) data which is collected when customers port their mobile number from one operator to another as well as switching data from INFO survey. The Commission obtained further data regarding the merging parties' estimates on avoidable OPEX expenditure in the hypothetical case of a substantial reduction of the subscriber base.

3.2.1. Construction of diversion ratios

- (54) The key diversion ratios on which the Commissions' calibration based approach relies are based on information on "port out" requests in each MNO's MNP database. These "port out" requests represent the number of porting requests an MNO receives from other MNOs relating to customers that want to port their number to the other MNO. This data is available separately for each segment of the original MNO. The diversion ratio from segment *a* 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 firm *j*'s segment *a* divided by the total number of port out requests received by firm *j* relating to segment *a* from any other MNO.
- (55) For the merging parties as well as for the remaining firms, these diversion ratios were submitted in Phase I. However, they do not allow to identify the destination segment of the port (that is to say the segment the customer ports to). To split the "port out" diversion ratios obtained in this way also by destination segment, the Commission uses information from the 2012 INFO Survey studies submitted by the Notifying Party in Phase I. In particular, it uses the implied switching shares --from a given operator in a given segment into the pre-paid and post-paid residential segment of another operator-- obtained from the 2012's INFO Survey to split the port-outs from the MNP data from a given segment into post-paid residential and pre-paid segments. This is called the HybridMNP approach.
- (56) On this basis the Commission was able to estimate the full port out diversion ratio matrix including cross segment switching (see Table 1). This approach results in "port out" diversion ratios from each segment of each MNO to each segment of each other MNO. For example, Table 1 shows a diversion ratio from Telefónica to E-Plus in the pre-paid segment at [...]*. The diversion ratio from E-Plus to Telefónica in the pre-paid segment is [...]*. In the post-paid residential segment, the diversion ratio from Telefónica to E-Plus is [...]*, and the diversion ratio from E-Plus to Telefónica is [...]*. Table 1 furthermore shows the cross-segment diversion ratio with a diversion ratio from E-Plus/pre-paid to Telefónica/residential Post-paid at [...]* and from Telefónica/Pre-paid to E-Plus residential post-paid at [...]*. Table 1 also shows a cross-segment diversion ratio from Telefónica/residential post-paid to E-Plus/pre-paid at [...]* and from E-Plus/residential post-paid to Telefónica/pre-paid at [...]*.
- (57) The Commission also notes that while the number of MNP requests covers only a fraction of customer switches between MNOs, there is no reason to believe that the diversion ratios derived from MNP data would be biased. Likewise, although the INFO survey data relies on a smaller sample than the MNP data there is no reason to believe that the use of the INFO survey data would bias the results.
- (58) Moreover, while switching in the MNP data is not necessarily price based, it reflects actual switching of consumers between MNOs and segments. The Commission considers actual switching to be informative for consumer preferences and hence considers the resulting diversion ratios to provide a good measure for likely consumer reactions to price changes.⁵

⁵ The analysis in the Statement of Objections considered that diversion ratios both within segment and across segment can proxy consumer reactions to price changes. Following comments by the Notifying Party in its Reply to the Statement of Objections, the Commission considers that observed switching across segments in the MNP data is less likely to be a good proxy for reactions by consumers to price changes. However, the Commission continues to consider that price based switching within segment is well approximated by within segment diversion ratios from the MNP data (see Section 3.4 below).

Table 1: Diversion ratios matrix using 2012 MNP data and 2012 InfoSurvey data⁶

MNO	to Telekom/ Pre-paid	to Vodafone/ Pre-paid	to E-Plus/ Pre-paid	to O2/ Pre-paid	to Telekom/ Post-paid residential	to Vodafone/ Post-paid residential	to E-Plus/ Post-paid residential	to O2/ Post-paid residential
from Telekom/ Pre-paid	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
from Vodafone/ Pre-paid	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
from E-Plus/ Pre-paid	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
from O2/ Pre-paid	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
from Telekom/ Post-paid residential	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
from Vodafone/ Post-paid residential	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
from E-Plus/ Post-paid residential	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
from O2/ Post-paid residential	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

3.2.2. Margins

- (59) The Commission computed two margin measures. First, for the baseline specifications it computed the contribution margin per subscriber from the segment level data for each MNO. This margin proxies for all costs which can be directly attributed to subscribers such as, for example, (outgoing) termination costs and (incoming) termination revenues.⁷ They also contain handset subsidies in each month.
- (60) Second, the Commission also examined the sensitivity of its conclusions when conservative estimates of margins are used. The margins used in the sensitivity scenario include incremental costs based on OPEX costs as well as amortization costs and depreciation cost for a hypothetical reduction in the number of consumers by 10%. These estimated incremental margins are based on estimates of additional avoidable costs resulting from a change in subscriber numbers (absent the proposed transaction) submitted by each MNO.
- (61) While all MNOs provided OPEX and CAPEX figures, only Telefónica provided the long-run avoidable OPEX and CAPEX costs for a reduction in the subscriber base by 10%. Therefore, it was necessary to assume that all MNOs face equal –namely Telefónica's- OPEX elasticities for a 10% reduction in the subscriber base in order to construct the incremental margins.

⁶ The diversion ratios reported in this Table differ from the ones reported in Annex 1 to the Statement of Objections regarding Deutsche Telekom. This is related to the comment of the Notifying Party that information on the wholesale market was neglected in the Statement of Objections for Deutsche Telekom. This cross-segment diversion ratio matrix was used in the Letter of Facts and the corresponding data source and codes were available in the data room.

⁷ Termination revenues from incoming calls are not paid for by an MNO's own subscribers. They can therefore be interpreted as a negative marginal cost.

- (62) To allocate additional incremental costs across the pre-paid and post-paid residential segments it is necessary to obtain a measure of usage for each segment. The Commission considers total service revenues as an appropriate proxy for usage. Therefore, the Commission used the shares of total service revenues related respectively to the pre-paid and post-paid residential segments to allocate the incremental costs across the pre-paid and post-paid residential segments.
- (63) The conservative estimates of incremental margins for the sensitivity analysis were then obtained by deducting the additional incremental costs per subscriber from the contribution margins per subscriber for each MNO and segment.
- (64) In order to test the robustness of the results with respect to the levels of margins, the Commission computed contribution margins taking into account retail and wholesale customers. Wholesale contribution margins were calculated analogously to the retail level contribution margins on a segment level and incorporate all the relevant costs and revenues that the network providers incur by hosting both MVNOs and Service Providers on their respective networks. Then, the Commission computed a revenue-weighted average of retail contribution margins and wholesale contribution margins.

3.2.3. *Pre-merger demand measure: new and retained subscribers*

- (65) 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 tariff or provider. To proxy for these customers, the Commission used the market share estimates of the contestable subscriber base for all scenarios presented for the UPP framework. As regards the contestable subscribers the Commission uses contestable subscriber market shares provided by Telefónica.⁸
- (66) The Commission also considered the numbers of contestable subscribers provided separately by each of Deutsche Telekom, Vodafone, E-Plus, and Telefónica. However, the numbers of new and retained customers appear to be different from the shares of retained customers and gross adds shares as provided by Telefónica⁹; for example, the numbers of contestable subscribers provided separately by each of Deutsche Telekom, Vodafone, E-Plus, and Telefónica lead to lower contestable shares for Deutsche Telekom in the pre-paid and post-paid residential segments. Therefore, the Commission considers it more appropriate to use the shares of gross adds and retained subscribers provided by the Notifying Party.¹⁰
- (67) As an additional sensitivity analysis, the Commission also reports results under the restrictive assumption of symmetry in the cross price derivatives. In this case, the

⁸ See reply of 29 January 2014, to the Request for Information dated 24 January 2014.

⁹ See reply of 29 January 2014, to the Request for Information dated 24 January 2014.

¹⁰ When using the contestable subscriber shares provided by Telefónica in the UPP analysis for the indicative price rise, the Commission also assumed that the shares of pre-paid and post-paid residential contestable customers are equal at 50%. The Commission also considered a second sensitivity analysis where the proportion of new and retained subscribers is calculated in the post-paid residential segment for each of Deutsche Telekom, Vodafone, Telefónica, and E-Plus. These proportions are calculated by dividing the number of new and retained subscribers by the active subscriber base in the post-paid segment. Next, for each MNO, these proportions are applied to the active subscriber base in the pre-paid segment, which leads to a measure of volumes for the contestable subscribers in the pre-paid segment. This approach deals with the issue that only the new subscribers are reported in the pre-paid segment and not the retained subscribers. This approach leads to similar results with respect to the IPR approach reported in this Annex.

volumes do not impact the results of the UPP analysis.¹¹ Therefore, this methodology allows to abstract from measurement errors in the volumes of new and retained customers reported by each of Deutsche Telekom, Vodafone, Telefónica, and E-Plus. The results of this sensitivity analysis are reported under the heading of *IPR2*.

3.2.4. *ARPU as price measure*

- (68) Finally, and only for the purpose of expressing results in percent of pre-merger prices, the Commission uses average revenue per user (ARPU) as a price measure excluding incoming termination fees.
- (69) This measure provides an estimate of the total revenues paid to an MNO by its own subscribers (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.
- (70) In the Commission's view, the use of ARPU is justified as a single measure of price in order to estimate the predicted price increase in this approach for the following reasons. ARPU allows the use of a single value to conceptually represent the price of the "typical" phone bundle offered by each firm in each segment, which is demanded in unit quantities. It is also appropriate to work with the simplifying assumption that usage needs are exogenous and that customers choose between brands, that is to say, they choose the provider with the most interesting offer given these exogenous needs.
- (71) Wholesale ARPUs were calculated based on information submitted by the merging parties and rivals in Phase II. Similar to the retail contribution margins, wholesale ARPUs were calculated analogously to ARPUs at the retail level based on the wholesale level data submitted. Where wholesale customers are included in the UPP analysis, the Commission computed a revenue-weighted average of retail ARPU and wholesale ARPU.
- (72) The results presented in this section are based on data for the full calendar year 2012, which is the last full year for which data was provided.
- (73) In response to the Notifying Party's argument that 2013 was a year of changes, the Commission also reports the results of the UPP analysis using data from the first half of 2013.¹²

3.3. **Summary of the results reported in the Statement of Objections**

- (74) The results in this section were presented in the Statement of Objections and in the Letter of Facts. The Notifying Party's arguments in its Replies to the Statement of Objections and to the Letter of Facts are presented and assessed in Section 3.4.

3.3.1. *Single-segment UPP analysis*

- (75) This section contains results from the section 3.3.1 of Annex 1 to the Statement of Objections as well as some additional results presented in the Letter of Facts.
- (76) Table 2 presents the results of a standard UPP analysis without rivals' reactions.¹³ In the baseline scenario based on contribution margins, in the pre-paid segment, the

¹¹ Hausman, J., S. Moresi, and M. Rainey, (2011): "Unilateral effects of mergers with general linear demand," *Economics Letters*, 111(2), pages 119-121, Doc ID 4393.

¹² The first half of 2013 is the time period common to all data sources used in the UPP analysis, in particular margins, MNP data, and InfoSurvey data.

corresponding GUPPI is [...] for Telefónica and [...] for E-Plus; the indicative price rise is of 34% for Telefónica and 20% for E-Plus. In the post-paid residential segment, the corresponding GUPPI is of [...] for Telefónica and [...] for E-Plus; the indicative price rise is of 7% for Telefónica and 15% for E-Plus.

- (77) In the sensitivity scenario based on incremental margins, the corresponding GUPPI is [...] for Telefónica and [...] for E-Plus in the pre-paid segment; the indicative price rise is of 24% for Telefónica and 15% for E-Plus. In the post-paid residential segment, the corresponding GUPPI is [...] for Telefónica and [...] for E-Plus; the indicative price rise is 5% for Telefónica and 12% for E-Plus.
- (78) Table 2 also reports the compensating marginal cost reductions for each merging party. They are expressed as cost reductions in EUR per subscriber per month. In the baseline scenario based on contribution margins they range between EUR [...] and EUR [...] in the pre-paid segment and EUR [...] and EUR [...] in the post-paid residential segment for the merging parties.
- (79) In the sensitivity scenario based on incremental margins, the CMCR range between EUR [...] and EUR [...] in the pre-paid segment and EUR [...] and EUR [...] in the post-paid residential segment for the merging parties.

Table 2: UPP analysis without rivals' reactions (2012 data)

		2012 data		
		Indicative price rise	GUPPI	CMCR
(a) Baseline case based on contribution margins				
Pre-Paid	E-Plus	19.9%	[...]*	[...]*
	Telefónica	34.3%	[...]*	[...]*
Post-Paid residential	E-Plus	14.8%	[...]*	[...]*
	Telefónica	6.9%	[...]*	[...]*
(b) Sensitivity scenario based on incremental margins				
Pre-Paid	E-Plus	14.5%	[...]*	[...]*
	Telefónica	23.6%	[...]*	[...]*
Post-Paid residential	E-Plus	11.9%	[...]*	[...]*
	Telefónica	5.1%	[...]*	[...]*

¹³ These results are based on a diversion of [...] from Telefónica to E-Plus and [...] from E-Plus to Telefónica in the pre-paid segment. In the post-paid residential segment, these results are based on a diversion of [...] from Telefónica to E-Plus and [...] from E-Plus to Telefónica.

(80) On the basis of the UPP methodology included in the Statement of Objections and the Letter of Facts, the Commission provisionally considered that the proposed transaction would likely lead to significant predicted price increases.

3.3.2. *Multi-segment UPP analysis (ignoring rival reactions)*

(81) In the Statement of Objections, the Commission further extended this methodology by including cross-segment effects and the response of rivals (and corresponding feedback effects). Results under these extensions are reported below.

(82) Table 3 below presents a summary of the results of the multi-segment UPP analysis presented in the SO. This analysis is based on cross-segment diversion ratios as a proxy for price based switching between MNOs within and across segments.

Table 3: Multi-segment UPP Analysis including cross segment switching

Segment	MNO	IPR(%)	GUPPI(%)	CMCR(€)
(a) Baseline case based on contribution margins				
Pre-paid	Telefónica	51.5%	[...]*	[...]*
	E-Plus	40.4%	[...]*	[...]*
Post-paid residential	Telefónica	10.2%	[...]*	[...]*
	E-Plus	15.1%	[...]*	[...]*
(b) Sensitivity scenario based on incremental margins				
Pre-paid	Telefónica	35.7%	[...]*	[...]*
	E-Plus	31.4%	[...]*	[...]*
Post-paid residential	Telefónica	8.5%	[...]*	[...]*
	E-Plus	11.3%	[...]*	[...]*

Source Commission calculations based on data provided by Telefónica and E-Plus.

(83) The results in panel (a) of Table 3 correspond to the baseline scenario using contribution margins. The results indicate that in the baseline scenario when contribution margins are used, all standard measures used in a UPP framework and discussed above (GUPPI, CMCR, IPR) indicate that the elimination of competition between the parties is (absent efficiencies) likely to lead to significant competitive harm. GUPPI measures range from [...]* for Telefónica in the post-paid residential segment to [...]* for Telefónica in the pre-paid segment. For E-Plus, GUPPI measures range from [...]* in the post-paid residential segment to [...]* in the pre-paid segment. Indicative price increases based on the additional assumption of linear demand are in the order of 40-52% in the pre-paid segment and 10-15% in post-paid residential segment.

(84) The compensating marginal cost reductions required to offset the incentives to raise price are in the order of EUR [...]* to EUR [...]* per subscriber per month in the pre-paid segment and EUR [...]* to EUR [...]* per subscriber per month in the post-paid residential segment. In each case the required CMCRs represent a substantial percentage of ARPU.

(85) To check the sensitivity of the above results against the use of the margin measure, panel (b) of the table reports corresponding results when incremental margins are applied instead of contribution margins.

- (86) Whilst, as expected, price effects in this specification are lower (as a direct consequence of the reduction in margins) they remain substantial with IPRs in the order of 31% to 36% in the pre-paid segment and 9% to 11% in the post-paid residential segment. Required CMCRs also remain substantial and in the order of EUR [...] to EUR [...] in the pre-paid segment and EUR [...] to EUR [...] in the post-paid residential segment.
- (87) In the Statement of Objections, the Commission already recognized that the presence of cross-segment switching was likely to play a significant role in the predicted price increases. Therefore, the Commission reported the results of a multi-segment UPP analysis assuming that firms do not joint-optimize across segments by using the cross-segment diversion ratios matrix. Table 4 below reports the results of this approach.

Table 4: Multi-segment UPP Analysis including cross segment switching (without cross-segment optimisation)

Segment	MNO	IPR(%)	GUPPI(%)	CMCR(€)
(a) Baseline case based on contribution margins				
Pre-paid	Telefónica	19.9%	[...]*	[...]*
	E-Plus	10.3%	[...]*	[...]*
Post-paid residential	Telefónica	4.8%	[...]*	[...]*
	E-Plus	10.6%	[...]*	[...]*
(b) Sensitivity scenario based on incremental margins				
Pre-paid	Telefónica	13.4%	[...]*	[...]*
	E-Plus	7.7%	[...]*	[...]*
Post-paid residential	Telefónica	3.7%	[...]*	[...]*
	E-Plus	8.3%	[...]*	[...]*

- (88) In the baseline scenario based on contribution margins, the indicative price increase in this case is still substantial, in the order of 10%-20% in the pre-paid segment and 5%-11% in the post-paid residential segment (Table 4). In the sensitivity scenario based on incremental margins, the indicative price rises are still significant in the order of 8%-13% in the pre-paid segment and 4%-8% in the post-paid residential segment.
- (89) Overall, the Commission provisionally considered in the Statement of Objections that the multi-segment UPP analysis indicates that the transaction would likely lead to significant unilateral price increases by the merged entity (absent significant synergies).

3.3.3. Merger simulation accounting for rival reactions

- (90) As explained above, the calibration based approach also allows a full merger simulation which takes account of rival reactions to the merged entity's unilateral price increase.
- (91) Table 5 below presents a summary of the results reported in the Statement of Objections. This analysis is based on cross-segment diversion ratios as a proxy for price-based switching between MNOs within and across segments.

Table 5: Predicted price increases from calibration based merger simulation (including cross segment switching)

MNO	Indicative price rise in pre-paid	Indicative price rise in post-paid residential
(a) Baseline case based on contribution margins		
Telefónica	63.6%	16.8%
E-Plus	48.7%	20.7%
Deutsche Telekom	9.1%	4.2%
Vodafone	11.2%	8.5%
Overall segment	33%	10.6%
Average across pre-paid and post-paid residential	15.6%	
(b) Sensitivity scenario based on incremental margins		
Telefónica	46.6%	14.8%
E-Plus	37.7%	15.1%
Deutsche Telekom	6.5%	2.6%
Vodafone	9.9%	7.5%
Overall segment	25.3%	8.4%
Average across pre-paid and post-paid residential	12.2%	

- (92) In the baseline scenario based on contribution margins, predicted price increases by the merging parties are in the order of 49%-64% in pre-paid segment and 17%-21% in post-paid residential segment. Rivals would also react significantly by raising prices by around 9%-11% in the pre-paid segment and 4%-9% in the post-paid residential segment.
- (93) Weighted average price increases (by revenues) per segment and average price increase across the pre-paid and post-paid residential segments are also reported in Table 5. In the baseline scenario based on contribution margins, the overall average price increase is 33% in the pre-paid segment and 11% in the post-paid residential segment. The revenue-weighted average across the pre-paid and post-paid residential segments is 16%.

- (94) In the sensitivity scenario based on incremental margins, predicted price effects are, as expected, somewhat lower but remain very substantial. Predicted segment level price increases amount to 25% in the pre-paid segment, 8% in the post-paid residential segment and 12% across the pre-paid and post-paid residential segments.
- (95) In the Statement of Objections, the Commission furthermore reported the predicted price increases assuming that firms do not joint-optimize across the pre-paid and post-paid residential segments. The Commission reported the results using the full cross-segment diversion ratios matrix. Table 6 below reports the results of this approach.

Table 6: Predicted price increases from calibration based merger simulation (without cross-segment optimization)

MNO	Indicative price rise in pre-paid	Indicative price rise in post-paid
(a) Baseline case based on contribution margins		
Telefónica	23.5%	7%
E-Plus	12.6%	12.5%
Deutsche Telekom	3%	1.6%
Vodafone	3.8%	3.2%
Overall segment	10.2%	4.9%
Average across pre-paid and post-paid residential	6.1%	
(b) Sensitivity scenario based on incremental margins		
Telefónica	16.5%	5.7%
E-Plus	9.2%	9.5%
Deutsche Telekom	2.1%	1%
Vodafone	3.2%	2.8%
Overall segment	7.4%	3.8%
Average across pre-paid and post-paid residential	4.6%	

- (96) As expected, assuming that firms do not joint-optimize across segments leads to lower price increases by the merged entity, but still to significant price effects. In the baseline scenario based on contribution margins, the price increases by the merging parties are in the order of 13%-24% in the pre-paid segment and in the order of 7%-

13% in the post-paid residential segment. The overall average price increase is also substantial at 10% in the pre-paid segment and 5% in the post-paid residential segment. The revenue weighted average across across the pre-paid and post-paid residential segments is substantial at 6%.

- (97) In the sensitivity scenario based on incremental margins, the price increases by the merging parties are still substantial in the order of 9%-17% in the pre-paid segment and 6%-10% in the post-paid residential segment. The overall average price increase is still substantial at 7% in the pre-paid segment and 4% in the post-paid residential segment. The revenue weighted average across across the pre-paid and post-paid residential segments is substantial at 5%.
- (98) In the Statement of Objections, the Commission also reported the results of the UPP analysis when wholesale customers are included. The objective was to verify the robustness of the results as regards the levels of margins used. When wholesale customers were included, the results of the UPP analysis were very similar as compared to the scenario when they were not included.
- (99) Overall, the Commission provisionally considered in the Statement of Objections that the calibration based merger simulation indicates that the transaction would likely lead to significant unilateral price increases by the merged entity (absent significant synergies).
- (100) In the Letter of Facts, the Commission replicated the analysis of the Statement of Objections by using 2013 data. The Commission found that the results of the UPP analysis reported in the Statement of Objections were robust when 2013 data were used.

3.4. The Notifying Party's arguments and their assessment

- (101) In the Reply to the Statement of Objections, the Notifying Party argues that the Commission's quantitative approach is inappropriate for assessing price effects for the following reasons:¹⁴
- (a) The Notifying Party contests the use of switching ratios from MNP data as a proxy for price elasticities and consumer behaviour. According to the Parties, there is a fundamental shortcoming of approximating forward looking price elasticities through past switching ratios. The Parties also mention that switching ratios are based on non-price factors.
 - (b) The Notifying Party argues that the cross-segment analysis distorts predictions even more than the simpler model without cross-segment switching.
 - (c) The UPP analysis fails the reality check by predicting implausible scenarios post-merger.¹⁵
 - (d) The Notifying Party criticizes the constant usage assumption, that is to say the overall usage does not decrease when prices in the overall market increase, which implies that overall market demand is perfectly inelastic.
 - (e) The UPP analysis does not incorporate the competitive pressure created through non-MNOs.

¹⁴ Reply to the Statement of Objections, Part A, section X; Annex 5 to the Reply to the Statement of Objections; Reply to the Letter of Facts, section F; and Annex to the Reply to the Letter of Facts.

¹⁵ In its Reply to the Statement of Objections, Vodafone makes a similar argument. (see DOC ID 3836 and DOC ID 3838).

- (f) The Notifying Party contests the relevance of contribution and incremental margins to determine pricing decisions.¹⁶ The Notifying Party considers that the Statement of Objections does not consider margins implied by the empirical literature on price elasticities.
 - (g) The Notifying Party argues that the results of the first and second quantitative approach cannot be reconciled. The Notifying Party argues that the higher margins used in the UPP analysis are in contradiction with the margins estimated in the second quantitative approach. The Notifying Party argues that including the margins derived from the second quantitative approach in the UPP analysis leads to lower predicted price increases.
 - (h) The UPP analysis ignores countervailing effects such as horizontal product repositioning.¹⁷
 - (i) The UPP analysis ignores countervailing effects such as vertical product repositioning.
 - (j) Under the heading "scope of UPP analysis", the Notifying Party argues that the use of UPP-techniques requires either a threshold of upward pricing pressure or predicted price increases which are deemed acceptable, or an efficiency analysis which is part of the competitive effects analysis.
 - (k) The Notifying Party criticizes the assumed linear shape of the demand function instead of convex form of demand such as logit demand or log-linear demand. The Notifying Party also mentions the possibility of a concave form of demand functions.¹⁸
 - (l) The Notifying Party argues that the predicted price increase from the demand estimation (second quantitative approach) is lower than the [10-20]% range used in Case M.6497 - *Hutchison 3G Austria / Orange Austria*. Moreover, the Notifying Party argues that the best predictions of price increases in the current case are substantially lower than the best predictions on which the Commission built its decision in *Hutchison 3G Austria / Orange Austria*, where it considered that (post-paid) prices were likely to increase by [10-20]%.
 - (m) The Notifying Party argues that it is unclear on which numbers the Commission bases its assessment.
- (102) In addition, the Notifying Party also makes a number of specific comments related to the data management:¹⁹
- (a) The Notifying Party argues that the Statement of Objections only takes 2012 data into consideration rather than looking at more recent figures of 2013.
 - (b) According to the Notifying Party, there is an inconsistency between the pre-merger demand measure (new and retained customers) and margins used (for

¹⁶ In its Reply to the Statement of Objections, Vodafone mentions "*a danger*" if variable margins are not calculated appropriately (see DOC ID 3838). Vodafone notes that the Statement of Objections computes pricing measures on two different bases, one which looks at pure contribution margins and a second one which looks at all the costs which vary in response to a material change in subscriber numbers. Although Vodafone mentions that it is not in a position to assess these margin calculations, according to Vodafone the second approach is likely to yield more accurate results.

¹⁷ In its Reply to the Statement of Objections, Vodafone makes a similar argument. (see DOC ID 3838).

¹⁸ In its Reply to the Statement of Objections, Vodafone makes a similar argument (see DOC ID 3838).

¹⁹ Reply to the Statement of Objections, Part A, section X; Annex 5 to the Response to the Statement of Objections; Response to the Letter of Fact, section F; and Annex to the Response to the Letter of Facts.

the whole business). The Notifying Party mentions that profit margins on the new and retained customers are lower than for the overall customer base due to promotions, waiving certain fees, promotional periods with lower prices, handset subsidies, etc.

- (c) The Notifying Party criticizes the construction of switching ratios. In particular, the Notifying Party argues that wholesale switching observations from Deutsche Telekom are neglected. The Notifying Party also criticizes that Vodafone's switching ratios exclude post-paid data, post-paid business, and post-paid business data customers. The Notifying Party claims that excluding post-paid data and post-paid business data customers is questionable since there is no indication that data only switchers are excluded from the other three MNOs.²⁰ The Notifying Party also contests the exclusion of business customers from MNP data. The Notifying Party also claims an inconsistency between MNP and InfoSurvey because the latter includes business customers.
 - (d) The ARPU's presented in the UPP analysis refer to the post-paid residential segment, and not the whole post-paid segment which includes post-paid business customers as well.
 - (e) The Notifying Party criticizes the construction of ARPU's and contribution margins when wholesale customers are included in the UPP analysis. A "blended" ARPU (and "blended" contribution margins) is computed by taking a weighted average of the ARPU from retail and wholesale customers. The Notifying Party claims that the weighting used in the "blended" ARPU's (respectively "blended" contribution margins) is based on the ARPU's themselves (respectively contribution margins themselves).
- (103) As regards the construction of incremental margins, the Commission used OPEX figures provided by all MNOs, by assuming that all MNOs face equal –namely Telefónica's- OPEX elasticities for a 10% subscriber reduction. The Notifying Party argues that this assumption is not explained or motivated in the Statement of Objections. The Notifying Party criticizes the robustness of using mobile service revenues to allocate the avoidable OPEX per MNO to the post-paid and pre-paid segments.
- (104) In the following the Commission first assesses each of these points in detail. The Commission then presents a revised-UPP analysis in order to assess the robustness of its results in light of the Notifying Party's criticisms which the Commission considers to have merits.

3.4.1. Assessment of the Notifying Party's criticisms

3.4.1.1. The use of MNP data to derive diversion ratios

- (105) The Notifying Party contests the use of switching ratios from MNP data as a proxy for price elasticities and consumer behaviour. The Notifying Party argues that the essential advantage of merger simulation (based on demand estimation) is that it explicitly models consumer demand and price elasticity based on actual consumer behaviour. The Notifying Party argues that the UPP type of analysis, in contrast, only proxies this essential part based on switching ratios and by assuming that certain margins are relevant for pricing decisions. According to the Notifying Party, there is a fundamental shortcoming of approximating forward looking price elasticities

²⁰ The Notifying Party adds that Telefónica MNP data includes data only customers.

through past switching ratios. The Notifying Party also mentions that switching ratios are based on non-price factors. Lastly, the Notifying Party argues that the cross-segment analysis distorts predictions even more than the simpler model without cross-segment switching.

- (106) The Commission agrees that observed switching between MNOs in the MNP data is likely not exclusively price based. Nevertheless, the Commission considers that the MNP data which covers actual switching events from each MNO to other MNOs provides useful and informative information on the relative closeness of substitution patterns between different MNOs. In particular, if one observes a large number of customers porting their number from E-Plus to Telefónica, then this provides a good indication that Telefónica is a close alternative for E-Plus customers, even if some of the observed switches are not driven by price changes.²¹ The Commission also considers that substitution patterns pre-merger are good predictors of the substitution patterns post-merger.
- (107) However, the Commission agrees that switching across segments in the MNP and InfoSurvey data (that is to say switches from a pre-paid tariff to a post-paid tariff) may be less likely to reflect consumer reactions to price changes than observed switching within segment.
- (108) The Commission therefore considers diversion ratios from MNP data within segment to be informative on price based switching between MNOs within the same segment. As this is less clear for switching across segments, the Commission will present below the results of a revised-UPP analysis which assumes that no price based switching from one segment to another occurs while within segment diversion ratios are derived from the MNP/InfoSurvey data.

3.4.1.2. The UPP analysis predicts realistic prices post-merger

- (109) The Notifying Party argues that the UPP analysis leads to an implausible scenario post-merger as the multi-segment UPP analysis reported in the Statement of Objections suggests price increases in the pre-paid segment in the range of 62% for Telefónica and 46% for E-Plus, whilst Deutsche Telekom and Vodafone would increase their prices by 8% and 10% respectively. On this basis, the Notifying Party considers that for the same pre-merger price in the pre-paid segment (9 cent/minute), Telefónica and E-Plus would offer tariffs at [...] cent/minute and [...] cent/minute respectively, whilst Deutsche Telekom and Vodafone would offer pre-paid tariffs at much lower prices at [...] cent/minute and [...] cent/minute. The Notifying Party argues that such a scenario is implausible and therefore the UPP analysis fails a basic reality check.²²
- (110) The Commission notes that in any quantitative analysis of horizontal non-coordinated effects, the model will predict a higher price increase between the merging parties than for the rivals. This is because the loss of competitive pressure is

²¹ Ideally, one would want to observe subscribers' first and second choice of MNO at the point in time when the subscriber decides whether to switch MNO or not. The observation that a customer switches from E-Plus to Telefónica implies that, at that point in time, Telefónica was the customer's first choice. While it is possible that the customer's second choice at the same time would have been an MNO other than E-Plus, the fact that the customer is currently with E-Plus implies that that E-Plus was the customer's first choice when he/she last decided on its provider. For the purposes of a diversion ratio based analysis, it is hence reasonable to assume that the customer's second choice provider is still E-Plus.

²² Paragraph 61 of the Reply to the Statement of Objections.

higher between the merging parties. Therefore, if the starting prices pre-merger are the same for all 4 MNOs (9 cent/minute in the example provided by the Notifying Party), then by construction the post-merger prices will be higher for the merging parties than for the rivals. Therefore, the Commission considers that a reality check should take into account the differences as regards the pre-merger prices of the four MNOs.

- (111) The example provided by the Notifying Party refers to the multi-segment UPP analysis including cross-segment effects, that is to say including switching between the pre-paid and the post-paid residential segments. The Commission considers that there is a certain price-based switching between the two segments. However, as already mentioned above in paragraphs (107) and (108), the Commission believes that it is difficult to capture this price-based cross-segment switching within a UPP framework.²³
- (112) Therefore, the Commission provides in section 3.4 a revised-UPP analysis without cross-segment switching. As demonstrated by the Commission in section 3.4, the UPP analysis without cross-segment effects leads to plausible post-merger prices both in the pre-paid and post-paid residential segment. The Commission considers that the UPP analysis leads to realistic results.

3.4.1.3. The constant usage assumption

- (113) The Notifying Party questions the constant usage assumption which implies that overall market demand (i.e. across the pre-paid and post-paid residential segment in the quantitative analysis) is perfectly inelastic.
- (114) The Commission agrees that the results presented in the Statement of Objections imply (near) perfectly inelastic aggregate demand. This is because the diversion ratios used assume that customers would not leave the market: subscribers may change MNO or may switch from one segment to another, but no subscriber will stop using his mobile phone altogether. This was also the approach taken by the Commission in its UPP analysis of the merger between H3G and Orange in Austria.²⁴ The Commission considers it reasonable to assume that subscribers would not leave the market altogether following price increases since the number of consumers that would stop using a mobile phone seems negligible.
- (115) It is more plausible, however, that subscribers might change their usage patterns to some extent if mobile telecommunications services become more expensive. For example, subscribers may decide to make fewer calls if the cost per minute increases or they may end calls earlier; similarly, they may send fewer SMSs or download less data if the respective prices for such services increase. However, the Commission considers that the decline in usage following market wide price increases is likely to be rather limited.²⁵ Nevertheless, the Commission will examine below the effect on predicted price increases if it is assumed that usage will be reduced to some extent in

²³ Including price-based cross-segment effects would require observing a continuum of tariffs, while the UPP analysis uses data aggregated at an MNO/segment level.

²⁴ Case COMP/M.6497 *Hutchison 3G Austria / Orange Austria*.

²⁵ Conceptually, for there to be an incentive to change usage at all, the "marginal" price for additional minutes/SMS would need to change. While this is not implausible for pre-paid tariffs, for post-paid tariffs, the bulk of usage is within bundle, that is, additional calls/SMSs/data generate no additional costs. For there to be an incentive to change usage on post-paid tariffs, the within bundle allowances would need to change or subscribers would need to switch to different tariffs which are less suited to their usage profile and which have lower included minutes or data.

reaction to price changes. To account for this effect, the Commission presents results below that assume that a certain percentage of customers leaving an MNO would stop using mobile phones.

- (116) In the Reply to the Statement of Objections, the Notifying Party argues that the UPP analysis does not incorporate the competitive pressure created by non-MNOs. In the Reply to the Letter of Facts, the Notifying Party argues that the "*entire economic analysis of alleged predicted price increase dismisses the role of non-MNOs completely thereby disregarding 20% of the German Market*". As stated in section 6.3.1.6 of the Decision, while the Commission considers that competitive constraints from non-MNOs are limited, the Commission notes that the comment of the Notifying Party is already taken into account in paragraph (115). The statement in the previous paragraph that "*a certain percentage of customers leaving an MNO would stop using mobile phones*" could be interpreted as "*a certain percentage of customers leaving an MNOs would stop using mobile phone or switch to a non-MNO*".
- (117) Therefore, the Commission presents below the results of the UPP analysis assuming that a certain percentage of customers would leave the four MNOs following price increases.²⁶ The results of this UPP analysis are used to obtain the lower bound of the predicted price increase post-merger.

3.4.1.4. The use of contribution and incremental margins

- (118) As regards margins, the Commission disagrees with the Notifying Party and considers that profit margin (that is contribution margin) is a relevant measure of profitability since it reflects short run marginal costs of acquiring additional subscribers within current capacity limits and direct costs of usage, such as termination fees and handset subsidies.²⁷ In addition, as a sensitivity scenario, the Commission used estimates of the incremental margins as another measure of profitability, which, in addition to the costs accounted for in the contribution margin also account for long-run avoidable costs resulting from a 10% change in subscriber numbers (incremental costs). In other words, these incremental costs include the changes in network capacity costs due to a substantial variation in subscriber numbers post-merger.
- (119) As regards the academic literature, the Notifying Party mainly refers to the paper of Doganoglu, T, and Grzybowski, L. (2007).²⁸ The Commission notes that this paper uses data for Germany for the period January 1998 to June 2003. The Commission considers that market conditions have changed since the period 1998-2003 and thus gives limited weight to the argument of the Notifying Party.²⁹
- (120) Therefore the Commission considers it appropriate to use profit margins (contribution and incremental margins) in the UPP analysis.

²⁶ Technically, these customers would leave the four MNOs for an outside option, which could be interpreted either as customers leaving the market or customers switching to non-MNOs.

²⁷ See also Case COMP/M.6497 *Hutchison 3G Austria / Orange Austria*.

²⁸ Doganoglu, T., and L. Grzybowski, (2007): "Estimating Network Effects in the Mobile Telecommunications Industry in Germany," *Information Economics and Policy*, 19(1), pages 65-79, Doc ID 4390.

²⁹ Moreover, the Notifying Party argues that the Statement of Objections takes 2012 data into account instead of looking at more current figures of 2013. In light of that, the Commission notes that referring to data for the period 1998-2003 in Doganoglu and Grzybowski (2007) seems contradictory.

3.4.1.5. The two approaches can be reconciled

- (121) The Commission considers that its two quantitative approaches are complementary and are consistent with one another. The predicted market-wide price effects obtained through the demand estimation approach and the most conservative scenario of the revised-UPP analysis as described below are similar. (see also the conclusion – section 5 – of this Annex).
- (122) Moreover, it is not required that complementary, but different approaches generate the same quantitative implications in terms of intermediate results like margins. As already mentioned, the two quantitative approaches differ in terms of the empirical inputs used to derive the conclusions about the predicted price increases. The calibration based UPP approach uses observed diversion ratios and observed margins to calibrate the demand parameters. The demand estimation approach uses the observed tariff characteristics to estimate the margins, diversion ratios, and demand parameters. It is therefore not surprising that intermediate results (like margins) differ.³⁰ The Commission further notes that, on the one hand, the estimated margins are related to the assumed demand function, which is a logit-type function in the demand estimation approach whereas, on the other hand, a linear demand function is used in the UPP analysis. Therefore, the Commission considers that using the estimated margins of the demand estimation approach (based on a logit-type demand) in the UPP analysis (based on a linear demand function) would lack internal consistency.
- (123) Moreover, the overall level of margins is not identified in a demand estimation framework. Hence, the lower implied margins of the demand model do not necessarily imply that the observed incremental margins over-estimate the "true" economic margins.
- (124) For the reasons set out above, the Commission disagrees with the Notifying Party's argument to use the implied margins from the demand estimation in the UPP analysis.
- (125) In the Commission's view, what matters is that these two approaches can lead to similar final results in terms of predicted market-wide price increases. Therefore, the Commission considers that the two approaches can be reconciled which confirms the robustness of the estimated price increases.

3.4.1.6. Horizontal product repositioning

- (126) The Notifying Party argues that the UPP approach ignores horizontal product repositioning as an important countervailing competitive factor. For these purposes, the Notifying Party mainly relies on a paper from Gandhi et al. (2008).³¹
- (127) In the Statement of Objections, the Commission argues that it is not clear whether existing competitors to the merged entity in each market segment (that is, pre- and post-paid) would have an incentive to reposition their products so as to compete harder against the merging parties, given that competitors benefit from the transaction as they would be able to raise prices.³² As a response, the Notifying Party

³⁰ It should be noted that diversion ratios, which are also intermediate results, may differ as well between the two approaches.

³¹ Gandhi, A., L. Froeb, S. Tschantz, and G. J. Werden, (2008): "Post-merger product repositioning," *Journal of Industrial Economics*, 66, pages 49-67, Doc ID 4392. See also DOC ID 2262.

³² Due to the loss of competition following the proposed transaction, the overall competitive pressure in the market is reduced which makes it possible for the merging parties' rivals to increase prices.

argues that the presence of incentives to increase price does not in any way eliminate the incentive to reposition, if repositioning is possible. According to the Notifying Party, it is always more profitable to adjust two instruments (prices and positions) than only a single instrument alone (prices).

- (128) In Gandhi et al. (2008), the Commission understands that the brands combined by a merger could be repositioned away from each other to reduce cannibalisation, and non-merging substitutes are, in response, repositioned between the merged products. The Commission understands that, as a result, this type of repositioning could potentially reduce the merged entity's incentive to raise prices and thus may substantially mitigate the anti-competitive effect of a merger.
- (129) The Commission considers that brand positioning is an important element of differentiation in the market and hence part of product positioning. 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, costly and time consuming brand repositioning makes it unlikely that such repositioning would occur and mitigate price effects from the merger to any significant degree. Moreover, the Commission understands that repositioning costs and delays in brand repositioning are not taken into account in Gandhi et al. (2008).³³ The Commission considers that repositioning costs are likely to mitigate substantially the incentives of the merged entity and of the rivals to reposition their products. The Commission also considers that it is not always profitable to adjust two instruments (prices and positions) due to repositioning costs. Lastly, as indicated above, the Commission considers that repositioning can be time consuming and therefore product repositioning may have no effects in the near future.
- (130) As set out in the Statement of Objections, the Commission furthermore notes that it is not clear whether existing competitors to the merged entity in each market segment (that is, pre- and post-paid) would have an incentive to reposition their products so as to compete harder against the merging parties, given that competitors benefit from the transaction as they would be able to raise prices and given that competitors are likely to face significant repositioning costs as well. The Horizontal Merger Guidelines recognize the fact that non-merging firms can benefit from the reduction of competitive pressure which results from the merger.³⁴ This was acknowledged by a number of respondents to the Market Investigation (see recitals 539-541 of the Decision) and is also reflected in the internal documents (see recital 542 *et. seq.* of the Decision).
- (131) According to Gandhi et al. (2008), "*critically, whatever their pre-merger positions, the merged stores (interchangeably) take the outside locations in the post-merger*

³³ The Notifying Party mainly cites an economic paper to support its claim that post-merger horizontal product repositioning would mitigate price effects (Ghandi et al. 2008). Ghandi et al (at page 66) also note that "*product repositioning in the real world can be quite expensive and time consuming, and mergers therefore may have no effect on product repositioning over the relatively near term. Werden and Froeb (1998) showed that relatively modest fixed cost of entry generally can be expected to prevent entry in response to differentiated products merger, and the same is likely true for product repositioning. Certainly, the significance of post-merger product repositioning must be judged on the basis of the facts associated with any particular merger*". Therefore, if product repositioning is expensive and time consuming, even relatively low cost of doing so will likely prevent product repositioning. (Werden, G. J., and L. M. Froeb, (1998): "A Robust Test for Consumer Welfare Enhancing Mergers Among Sellers of Homogeneous Products," *Economics Letters*, 58, pages 367-369, Doc ID 4409.)

³⁴ See Horizontal Merger Guidelines, paragraph 24.

equilibrium, and the non-merging stores (interchangeably) take the inside locations." In the present case, that would mean that post-merger, the brands of one merging party would be perceived to be of higher quality than the brands of Deutsche Telekom for example. The Commission considers that this situation is unlikely to happen and the Notifying Party did not provide any evidence that this type of repositioning could happen post-merger.

- (132) The Commission considers that the weight that can be given to arguments based on an abstract model depends on the extent to which the insights from such a model are robust and shown to be relevant in the context of the specific case. The Notifying Party did not demonstrate this and did not provide any specific model. The Commission considers that the economic paper submitted by the merging parties on horizontal repositioning (Gandhi et al., 2008) is not specific enough to allow drawing specific conclusions for the proposed transaction.
- (133) Therefore, in the Commission's view, the effect of horizontal product repositioning is not sufficiently established in the economic literature to draw robust conclusions on an abstract level.

3.4.1.7. Vertical product repositioning

- (134) The Notifying Party argues that competitive effects through vertical product repositioning arise in addition to the demand side efficiencies. According to the Notifying Party, higher network quality will enable the merged entity to increase competitive pressure on the market leaders Deutsche Telekom and Vodafone and that therefore competition would increase substantially. The Notifying Party argues that the UPP analysis does not address the countervailing effects of such vertical product repositioning.
- (135) First, the Commission disagrees that vertical product repositioning would give rise to effects in addition to demand side efficiencies.³⁵ As discussed in recital (473) of the Decision, to the extent that the potential quality improvement resulting from the merger would lead to pro-competitive effects able to counteract the negative effects on competition and in particular consumer harm, this claim is analysed by applying the three cumulative criteria for efficiencies. For the Commission to be able to take these efficiency claims into account, demand side efficiencies do not only have to be verifiable but they also need to be merger specific and passed on to consumers. The Commission refers to its assessment of network efficiencies in section 6.9.1.2 of the Decision where the Commission concludes that the Notifying Party has not demonstrated that these alleged improvements in network quality and the resulting quality re-positioning of the Parties are verifiable, merger-specific and would sufficiently benefit consumers.
- (136) Second, and in any event, it should be noted that balancing consumer benefit from any quality efficiencies against competitive harm within the Commission's quantitative approaches would require appropriate quantification of such quality efficiencies. However, the studies provided by the Notifying Party to quantify the demand side efficiencies suffer from methodological shortcomings (see section

³⁵ The claimed additional effects that higher network quality would make the Parties more aggressive competitors on the market is precisely what is reflected by taking into account that substantiated demand side efficiency claims would lead, all else being equal, to lower quality adjusted (or "hedonic") prices in the UPP analysis.

6.9.1.2 of the Decision). For these reasons the Commission cannot take those studies into account in its quantitative analysis.

- (137) Third, as set out in recitals (476) of the Decision, in so far as the Notifying Party claims that its improved quality of service would enable it to compete more aggressively with Deutsche Telekom and Vodafone for large business customers, the Commission notes that this argument is not relevant in the context of its quantitative analysis since this analysis relates to the pre-paid customers and post-paid residential customers, excluding business customers. Moreover, this argument of the Notifying Party is already addressed in recitals (476) and (477) of the Decision.

3.4.1.8. Scope of UPP

- (138) The Notifying Party argues that the use of UPP techniques for the competitive effects analysis either requires a threshold of upward pricing pressure or predicted price increases which are deemed acceptable (for example because of default efficiency credit) or an efficiency analysis that is part of the competitive effects analysis.
- (139) As regards the scope of the UPP analysis, the Commission notes that the UPP analysis can incorporate efficiencies and balance consumer benefit from any quality efficiencies against competitive harm, provided that the Notifying Party provides an appropriate quantification of efficiencies. However, as explained in paragraph (135), in the Commission's view, the Notifying Party's claims on quality improvements do not qualify as efficiencies of the merger as they do not satisfy the conditions set out in the Horizontal Merger Guidelines, in particular the merger-specificity condition and the verifiability condition. Moreover, the quantification of demand side efficiencies suffers from methodological shortcomings (see section 6.9.1.2 of the Decision for further details).

3.4.1.9. Linear demand function

- (140) The Commission notes that the Notifying Party agrees that linear demand models typically yield lower predicted price increases than convex demand forms such as logit demand or log-linear demand.³⁶ However, the Notifying Party argues that the theoretical models often assume concave demand functions, and that the Statement of Objections fails to provide any reason that the actual demand is convex and that concave demand could lead to lower predicted price increases than linear demand.
- (141) In the Commission's view, it is not clear that using a concave demand function would lead to lower predicted price increases than using the linear model. The Commission notes that the Notifying Party did not provide any concrete example. Moreover, the Commission considers that using convex demand functions is a common practice in the empirical literature, and this seems to be recognized by the Notifying Party as well.³⁷ In the Commission's view, the majority of calibrated merger simulation models use functional forms of demand, based on either logit demand, log-linear demand, AIDS demand, or linear demand that differ in their degree of convexity. Of these functional forms of demand, linear demand models typically yield the lowest predicted price increases. The use of linear demand as a proxy for the real underlying

³⁶ See paragraph 526 of Annex 5 to the Reply to the Statement of Objections.

³⁷ "The Notifying Party emphasizes that convex demand functions listed in the SO are used primarily in demand estimation for convenience reasons (e.g. estimated coefficients have the interpretation of elasticities)" (see paragraph 526 of Annex 5 to the Reply to the Statement of Objections).

demand can therefore be considered a conservative approach.³⁸ Moreover, the use of concave demand functions, while possible in the theoretical literature, is not a common practice in the empirical literature.

3.4.1.10. Comparison with Case M.6497 - Hutchison 3G Austria / Orange Austria and numbers on which the Commission bases its assessment

- (142) According to the Notifying Party, the Commission should base its assessment on its most favourable predictions of price increases, and this should be compared with the [10-20]% range set out in recital 314 and Table 12 of the Commission's decision in *Hutchison 3G Austria / Orange Austria*.
- (143) The Commission disagrees with the Notifying Party. The [10-20]% range found in that case was based on a standard UPP analysis without rivals' reactions. Moreover, the UPP analysis was based on direct margins and contribution margins, while the UPP analysis in the present case is based on contribution and incremental margins.
- (144) The Commission considers that a comparison with *Hutchison 3G Austria / Orange Austria* requires a like-to-like comparison. The most comparable results in the present case are reported in section 3.3.1 of this Annex, where contribution margins are used in the framework of a UPP analysis without rivals' reactions. This analysis was also reported in the section 3.3.1 of Annex 1 to the Statement of Objections and in the Letter of Facts. and resulted in predicted price increases for the merging parties in the range of [20-30]*% to [30-40]*% in the pre-paid segment and in the range of [0-10]*% to [10-20]*% in the post-paid residential segment. The Commission also notes that the use of direct margins would lead to higher price effects.
- (145) Therefore, the Commission considers that the current transaction would lead to higher price increases than in *Hutchison 3G Austria / Orange Austria* .
- (146) Following the arguments made by the Notifying Party, the Commission bases its assessment on the results of the revised-UPP analysis reported below. It should be noted that the results reported below are very similar to the results of the within-segment UPP analysis reported in the Letter of Facts.

3.4.1.11. Data management

- (147) As regards the time period used in the UPP analysis the Notifying Party submits the following:
- (a) The Notifying Party argues that the Statement of Objections only takes into account 2012 data instead of looking at more current figures of 2013.
 - (b) Following the Notifying Party's suggestion to consider 2013 data, the Commission replicated the analysis carried out in the Statement of Objections with 2013 data in its Letter of Facts . The analysis leads to results similar to those reported in the Statement of Objections in relation to the 2012 data.
 - (c) The Commission reports below the results of the revised-UPP analysis using 2012 and 2013 data.³⁹ It should be noted that these results are similar to the results of the within segment UPP analysis reported in the Letter of Facts.

³⁸ See, for instance, Crooke P., L. Froeb, S. Tschantz, and G. J. Werden, (1999): "Effects of Assumed Demand Form on Simulated Postmerger Equilibria," *Review of Industrial Organization*, 15, pages 205-201, Doc ID 4389.

- (148) As regards the arguments by the Notifying Party that the margins used would overstate margins for contestable customers, the Commission notes that the Notifying Party did not substantiate this claim with figures. The Notifying Party also mentions an inconsistency between the demand measure (new and retained subscribers) and the margins used (for the whole business). However, the Commission presented an extensive sensitivity analysis in the Statement of Objections and in the Letter of Facts where it shows the robustness of the results with respect to the demand measures used in the UPP analysis. The same sensitivity analysis is presented below in the revised-UPP analysis.
- (149) The Notifying Party criticizes the construction of the diversion ratios:
- (a) According to the Notifying Party, wholesale switching observations of Deutsche Telekom are neglected. The Notifying Party also criticizes that Vodafone's switching ratios exclude post-paid data, post-paid business, and post-paid business data observations. The Notifying Party argues that excluding post-paid data and post-paid business data customers is questionable since there is no indication that data-only switchers are excluded from the other three MNOs (the Notifying Party argues that Telefónica MNP data includes data only customers). The Notifying Party also contests that business customers are excluded from the MNP data. The Notifying Party also claims that there is an inconsistency between MNP and InfoSurvey data as the latter include business customers.
 - (b) As regards the exclusion of data-only customers in the construction of diversion ratios, the Commission considers that it is not likely that such an exclusion would create any bias since switching by data-only customers represents a small proportion of total switches.⁴⁰
 - (c) As regards the exclusion of business customers, the Commission considers that this is consistent with the margins used which exclude post-paid business customers. Moreover, the main data source used by the Commission to obtain the diversion ratios is MNP data, while the InfoSurvey data are only used to identify the destination segments⁴¹ and to check the robustness of the results. Therefore, the Commission considers that InfoSurvey data are not likely to create any significant bias in the results.
 - (d) The Commission agrees with the Notifying Party's suggestion to consider the wholesale customers of Deutsche Telekom to construct the diversion ratio. The Commission notes that this modification in the data management has a minor impact on the results. The UPP analysis presented below includes this modification which was also included in the Letter of Facts.

³⁹ The Commission implements the UPP analysis using data for the first half of 2013 (first and second quarters of 2013) since it is the time period common to all data sources regarding margins data, MNP data, and InfoSurvey data.

⁴⁰ The Commission was able to compute the number of switchers from the post-paid data-only segment of Vodafone to other MNOs. The Commission finds that the number of switches from the post-paid data-only segment represents around [...] of the total number of switches from the post-paid segment of Vodafone. The Commission therefore considers that the issue mentioned by the Notifying Party is unlikely to have an impact on the results.

⁴¹ Technically, this amounts to compute the probability of switching from a given MNO/segment to the others possible combination MNO-Segment. This is necessary in order to capture cross-segment substitution patterns.

- (150) As regards the argument of the Notifying Party that the ARPUs presented in the UPP analysis refer to the post-paid residential segment, excluding post-paid business customers, the Commission agrees with this observation. Indeed, this is consistent with the construction of switching ratios and margins, which cover the post-paid residential segment and the pre-paid segment, excluding the post-paid business customers.
- (151) Where wholesale customers are included in the UPP analysis, the Commission computed a "blended" ARPU (and "blended" contribution margins) by taking a weighted average of the ARPU of retail and wholesale customers.
- (a) The Notifying Party considers that the weighted ARPU (respectively contribution margins) is based on the ARPUs (respectively contribution margins themselves).
- (b) The Commission disagrees with the Notifying Party's understanding of the weighting. The weighting applied to build the blended ARPUs and contribution margins is based on the total service revenues at the wholesale and retail levels.⁴² The Commission considers that total service revenue is a good proxy for usage and is therefore the most relevant weighting measure.
- (152) The Notifying Party criticizes the construction of incremental margins used in the UPP analysis. In order to construct incremental margins, the Commission used OPEX figures provided by all MNOs, assuming that all MNOs face equal –namely Telefónica's – OPEX elasticities for a 10% subscriber reduction. The Notifying Party argues that this assumption is not explained or motivated in the Statement of Objections. The Notifying Party criticizes the use of mobile service revenues to allocate the avoidable OPEX per MNO to the post-paid and pre-paid segments.
- (a) As regards the assumption of equal elasticities (OPEX elasticities for a 10% subscriber reduction in the subscriber base) this is motivated by data-constraints. While all MNOs provided OPEX and CAPEX figures, only Telefónica provided the long-run avoidable OPEX and CAPEX costs for a reduction in the subscribers base. Therefore this assumption is necessary in order to obtain the incremental costs and margins for all MNOs.
- (b) Moreover, the Commission considers it appropriate to allocate the avoidable costs between the pre-paid and post-paid segments on the basis of total service revenues as it is an appropriate measure of usage.
- (c) The Commission also notes that incremental margins are used in the sensitivity scenario of the UPP analysis reported below. The baseline scenario is based on contribution margins, where the data construction was not disputed by the Parties.

3.4.2. *Revised results for the diversion ratio based approach*

3.4.2.1. Assessment of the predicted price increases post-merger

- (153) Following the arguments submitted by the Notifying Party, the Commission revised the results of its first quantitative approach by taking into account the following

⁴² In footnotes 19 and 22 of Annex 5 to the Response of the Statement of Objections, the Notifying Party argues that the cell E183 (respectively the cell E182) is used as weighting measure for the ARPU (respectively the contribution margins). The Commission notes that the cell E180 is used instead, which represents the share of total service revenue from the retail customers divided by the sum of total service revenues from the retail and wholesale customers.

parameters: (i) customer switching from one segment to another is less likely to be price driven and (ii) the analysis accounts for a reduction in usage following market wide price increases.⁴³

- (154) In terms of data management, the Commission made two adjustments with respect to the analysis presented in the Statement of Objections: (i) The Commission considered the suggestion of the Notifying Party regarding the inclusion of Deutsche Telekom's wholesale customers in the construction of the diversion ratios,⁴⁴ and (ii) the Commission made a minor modification to construct the incremental margins since the total long run avoidable cost is allocated to the pre-paid and post-paid residential segments using their respective shares of the total service revenue.⁴⁵
- (155) To revise the implications of the absence of price-based switching across segments, the Commission adjusted diversion ratios derived from MNP data by setting observed cross segment switches to zero.⁴⁶ This approach reflects the Commission's view that while switching across segment may not be price driven, switching patterns in the MNP data are informative as to consumers' preferences of different MNOs and hence provide a good basis from which to infer consumer switching following price increases within a segment. This approach is also presented in the Letter of Facts.⁴⁷
- (156) To account for the possibility that segment or market wide price increases affect usage, the Commission further assumed a diversion ratio of 20% to an outside option which implies that aggregate demand in the calibrations is no longer perfectly inelastic. 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 proxy the effect of a reduction in usage to market wide price increases. The Commission considers that this approach is conservative and uses it to derive a lower bound for the predicted price increases.
- (157) In addition, the Commission considers that the 20% diversion ratio to the outside option could be interpreted more generally. For instance, it could represent the number of customers that would stop using mobile phones and/or switch to non-MNOs. This is consistent with the argument of the Notifying Parties in the Reply to the Letter of Facts where it submits that the "*entire economic analysis of alleged predicted price increase dismisses the role of non-MNOs completely thereby disregarding 20% of the German Market*".
- (158) The within-segment diversion ratios are presented below in Table 7 and Table 8.⁴⁸ These tables were presented as well in the Letter of Facts.

⁴³ As mentioned in paragraph (116), this could also be interpreted as switching to non-MNOs.

⁴⁴ This minor adjustment in the data management was presented in the Letter of Facts.

⁴⁵ In the Letter of Facts and the Statement of Objections, the allocation was based on the sum of the total service revenues from the pre-paid and post-paid residential segments, and not on the total service revenue including other types of customers. Using the total service revenue allows to have more comparable percentage margins across the four MNOs. This leads to slight changes with respect to the results including incremental margins of the within-segment UPP analysis presented in the Letter of Facts.

⁴⁶ Technically this amounts to setting cross-segment diversion ratios to zero and rescaling the within segment diversion ratios so that they add up to 100%.

⁴⁷ With respect to the UPP analysis presented in the Letter of Facts, the Commission made a minor modifications to construct the incremental margins (see footnote 45 for further details).

⁴⁸ In order to be consistent with the assumption of the absence of price-based switching across segments, the Commission adjusted the diversion ratio matrix by setting the observed cross-segment switches to

Table 7: Within pre-paid segment diversion ratios (2012 data)

	To Deutsche Telekom Pre-paid	To Vodafone Pre-paid	To E-Plus Pre-paid	To Telefónica Pre-paid
From Deutsche Telekom Pre-paid	[...]*	[...]*	[...]*	[...]*
From Vodafone Pre-paid	[...]*	[...]*	[...]*	[...]*
From E-Plus Pre-paid	[...]*	[...]*	[...]*	[...]*
From Telefónica Pre-paid	[...]*	[...]*	[...]*	[...]*

Table 8: Within post-paid residential segment diversion ratios (2012 data)

	To Deutsche Telekom Post-paid residential	To Vodafone Post-paid residential	To E-Plus Post-paid residential	To Telefónica Post-paid residential
From Deutsche Telekom Post-paid residential	[...]*	[...]*	[...]*	[...]*
From Vodafone Post-paid residential	[...]*	[...]*	[...]*	[...]*
From E-Plus Post-paid residential	[...]*	[...]*	[...]*	[...]*
From Telefónica Post-paid residential	[...]*	[...]*	[...]*	[...]*

- (159) Table 9 below reports the results of a standard UPP analysis without rivals' reaction (and assuming linear demand). The IPRs by the merging parties are reported for each segment. Panel (a) of the table presents the baseline scenario based on contribution margins, which reflect short run marginal costs of acquiring additional subscribers within current capacity limits, that is to say variations in subscriber numbers that do not affect OPEX or CAPEX expenditure. Panel (b) shows results for the sensitivity scenario which accounts for additional incremental OPEX and CAPEX cost savings which the Parties would expect from a substantial variation in subscriber numbers post-merger. All results presented are based on the data for 2012.
- (160) Columns (3) to (5) correspond to the results reported in the Letter of Facts without cross-segment effects; this is used to obtain the upper-bound of the price increase.⁴⁹ Columns (6) to (8) introduce, in addition, a diversion ratio of 20% to the outside option, which is used to obtain the lower bound of the price increase.
- (161) The results of the baseline scenario based on contribution margins (columns 3 and 6 of Table 9) indicate substantial price increases post-merger for both Telefónica and E-Plus. In the pre-paid segment the predicted price increases are particularly high in the range of 14%-20% for E-Plus and 25%-34% for Telefónica. In the post-paid

zero. Technically, this amounts to setting cross-segment diversion ratios from the diversion matrix in Table 1 to zero and rescaling the within segment diversion ratios so that they add up to 100%.

⁴⁹ The Commission introduces as well the suggestion of the Parties to include the wholesale customers of Deutsche Telekom in the construction of the diversion ratios.

residential segment predicted price increases are lower than in pre-paid segment, but remain significant in the range of 12%-15% for E-Plus and 5%-7% for Telefónica.⁵⁰

- (162) In the sensitivity scenario based on incremental margins, the predicted price effects for the merging parties range between 11% and 15% for E-Plus and between 17%-24% for Telefónica in the pre-paid segment. In the post-paid residential segment, the predicted price effects are in the range of 10%-12% for E-Plus and 4%-5% for Telefónica.⁵¹
- (163) Table 9 reports the CMCRs required to offset the incentives to raise price. In the baseline scenario, the CMCRs are in the order of EUR [...] * to EUR [...] * per subscriber per month in the pre-paid segment and EUR [...] * to EUR [...] * per subscriber per month in the post-paid residential segment. In each case the required CMCRs represent a substantial percentage of ARPU of the merging parties, which are in the order of EUR [...] * per month in the pre-paid segment and EUR [...] * per month in the post-paid residential segment.
- (164) In the sensitivity scenario, the CMCRs remain still substantial. The CMCRs are in the order of EUR [...] * to EUR [...] * per subscriber per month in the pre-paid segment and EUR [...] * to EUR [...] * per subscriber per month in the post-paid residential segment.

⁵⁰ In the baseline scenario, the GUPPI is substantial in the range of [...] * for E-Plus and [...] * for Telefónica in the pre-paid segment. In the post-paid residential segment, the GUPPI is in the range of [...] * for E-Plus and [...] * for Telefónica.

⁵¹ In the sensitivity scenario, the GUPPI is substantial in the range of [...] * for E-Plus and [...] * for Telefónica in the pre-paid segment. In the post-paid residential segment, the GUPPI is substantial in the range of [...] * for E-Plus and [...] * for Telefónica.

Table 9: Revised-UPP analysis without rivals' reactions (2012 data)

Diversion to outside option		No			yes		
Segment	MNO	IPR	GUPPI	CMCR (€)	IPR	GUPPI	CMCR (€)
(a) Baseline case based on contribution margins							
Pre-paid	E-Plus	19.9%	[...]*	[...]*	14.1%	[...]*	[...]*
	Telefónica	34.3%	[...]*	[...]*	24.9%	[...]*	[...]*
Post-paid residential ⁵²	E-Plus	14.8%	[...]*	[...]*	11.5%	[...]*	[...]*
	Telefónica	6.9%	[...]*	[...]*	5.1%	[...]*	[...]*
(b) Sensitivity scenario based on incremental margins							
Pre-paid	E-Plus	14.7%	[...]*	[...]*	10.6%	[...]*	[...]*
	Telefónica	23.7%	[...]*	[...]*	16.8%	[...]*	[...]*
Post-paid residential ⁵³	E-Plus	12.1%	[...]*	[...]*	9.5%	[...]*	[...]*
	Telefónica	5.2%	[...]*	[...]*	3.7%	[...]*	[...]*

- (165) While the results from the UPP analysis in Table 9 are a useful starting point, the Commission considers that the results in Table 10 below give a better indication of likely price rises as they incorporate rival reactions in the analysis. The effect of rival reactions is recognised in the Horizontal Merger Guidelines (in particular paragraph 24).
- (166) Table 10 below reports segment and average price increases across the pre-paid and post-paid residential segments when rival reactions are accounted for. The table has the same structure as Table 9: panel (a) reports results for the baseline scenario based on contribution margins and panel (b) for the sensitivity scenario based on incremental margins. The results are reported using 2012 data, assuming a constant usage to obtain the upper-bound and assuming a decrease in usage (using a 20% diversion ratio to the outside option) to obtain the lower-bound. The segment and average price effects across the pre-paid and post-paid residential segments are computed as weighted averages across all MNOs in the predicted new equilibrium prices.
- (167) In the baseline scenario, the predicted price increases are significant in the range of 12%-20% in the pre-paid segment and 4%-6% in the post-paid residential segment. The average price increase across the pre-paid and post-paid residential segments is in the range of 6%-10%. In the sensitivity scenario based on incremental margins, the

⁵² Post-paid segment means post-paid residential consumers. The Commission collected margins and MNP data for all four MNOs for the post-paid residential segment, excluding the post-paid business segment.

⁵³ Post-paid segment means post-paid residential consumers. The Commission collected margins and MNP data for all four MNOs for the post-paid residential segment, excluding the post-paid business segment.

corresponding figures are 9%-15% in the pre-paid segment, 4%-6% in the post-paid residential segment, with a average across the pre-paid and post-paid residential segments in the range of 5%-8%.

- (168) As regard the merging parties, the inclusion of equilibrium price effects of competitors triggers further price increases of the merging parties compared to the multi-segment UPP without rivals' reactions. In the baseline scenario based on contribution margins, the predicted price increases are in the range of 16%-25% for E-Plus and 28%-43% for Telefónica in the pre-paid segment. In the post-paid residential segment, the predicted price increases are in the range of 12%-17% for E-Plus and 6%-10% for Telefónica. The sensitivity scenario based on incremental margins confirms the significant price increases for the merging parties, with price increases in the range of 12%-18% for E-Plus and 20%-31% for Telefónica in the pre-paid segment; in the post-paid residential segment, the predicted price increases are in the range of 10%-14% for E-Plus and 5%-9% for Telefónica.

Table 10: Revised calibrated merger simulation results (2012 data)

Indicative price rise (%)	2012 data		2012 data	
	no	no	yes	yes
(a) Baseline case based on contribution margins				
	Pre-paid	Post-paid	Pre-paid	Post-paid
Deutsche Telekom	6.9%	2.0%	3.4%	1.1%
Vodafone	8.6%	3.5%	4.3%	1.9%
E-Plus	25.4%	16.6%	16.1%	12.2%
Telefónica	43.1%	10.2%	28.1%	6.4%
Overall segment	20.2%	6.4%	12.4%	4.2%
Average across pre-paid and post-paid residential	9.5%		6.0%	
(b) Sensitivity scenario based on incremental margins				
	Pre-paid	Post-paid	Pre-paid	Post-paid
Deutsche Telekom	5.8%	1.9%	2.9%	1.0%
Vodafone	7.9%	3.8%	3.9%	2.0%
E-Plus	18.4%	13.5%	11.9%	10.0%
Telefónica	31.2%	8.6%	19.5%	5.1%
Overall segment	15.3%	5.6%	9.2%	3.5%
Average across pre-paid and post-paid residential	7.8%		4.8%	

- (169) Based on Table 10, one can also approximate the aggregate elasticity implied by the assumption of a 20% diversion to the outside option. In the baseline scenario, the approximate implied elasticity is $[-0.5 \text{ to } 0]^*$ for the pre-paid segment, $[-0.5 \text{ to } 0]^*$ for the post-paid residential segment, and $[-0.5 \text{ to } 0]^*$ across the pre-paid and post-paid residential segments. In the sensitivity scenario, the 20% diversion to an outside option implies an approximate elasticity of $[-0.5 \text{ to } 0]^*$ for the pre-paid segment, $[-0.5 \text{ to } 0]^*$ for the post-paid residential segment, and $[-0.5 \text{ to } 0]^*$ across the pre-paid and post-paid residential segments.

- (170) As explained, the Commission considers that the diversion to an outside option is a proxy for possible reductions in usage following general price increases of the MNOs. The approximate aggregate elasticities of [-0.5 to 0]* to [-0.5 to 0]* in the analysis above correspond to a reduction in overall usage across the pre-paid and post-paid residential segments for the MNOs by [0 to 10]*% (in terms of voice minutes, number of SMSs and data volumes) following a price increase of 10%. The Commission considers these implied usage elasticities to be reasonable.⁵⁴
- (171) The cumulative introduction of the modifications mentioned above in the UPP analysis leads to lower predicted average price increases as compared to those reported in the Statement of Objections. This is, in particular, related to the assumption of no priced based switching across segments. Nevertheless, the Commission considers that the predicted price increases from the UPP analysis remain significant even after introducing these modifications. The Commission therefore considers that the quantitative implications derived from the UPP analysis above indicate that the elimination of competition for contestable customers between the merging parties is likely to lead to significant price increases. In the pre-paid segment where the Parties have the strongest position, predicted average-price increases are in the range of 12%-20% in the baseline scenario (respectively 9%-15% in the sensitivity scenario). In the post-paid residential segment, predicted-average price increases are in the range of 4%-6% in the baseline scenario and in the sensitivity scenario. The corresponding predicted average price increases across the pre-paid and post-paid residential segments are in the range of 6%-10% in the baseline scenario (respectively 5%-8% in the sensitivity scenario). The analysis continues to predict significant price increases by the merging parties.
- (172) In order to verify the robustness of the results, the Commission carried-out an extensive sensitivity analysis which is presented below.

3.4.2.2. The UPP analysis leads to realistic post-merger price increases

- (173) The Notifying Party argues that the UPP analysis leads to an implausible scenario post-merger. According to the Notifying Party, the multi-segment UPP analysis reported in the Statement of Objections suggests price increases in the pre-paid segment in the range of 62% for Telefónica, 46% for E-Plus, whilst Deutsche Telekom and Vodafone would increase their prices by 8% and 10% respectively. Assuming identical pre-merger prices in the pre-paid segment (9 cent/minute), the Notifying Party argues that Telefónica and E-Plus would offer tariffs at [...] cent/minute and [...] cent/minute respectively, whilst Deutsche Telekom and Vodafone would offer pre-paid tariffs at much lower prices, namely at [...] cent/minute and [...] cent/minute respectively. The Notifying Party argues that such scenario is implausible and therefore the UPP analysis fails a basic reality check.⁵⁵
- (174) The Commission notes that in any quantitative analysis, the model will predict a higher price increase between the merging parties than for the rivals as the loss of competitive pressure is higher between the merging parties. Therefore, if the starting prices pre-merger are identical for all four MNOs (9 cent/minute in the example provided by the Notifying Party), then by construction the post-merger prices will be

⁵⁴ An economic study by Lukasz Grzybowski and Pedro Pereira based on data for Portugal for 2003/04 found price elasticities of the demand for calls of -0.38 and of the demand for messages of -0.28 (Grzybowski L., and P. Pereira, (2008): "The complementarity between calls and messages in mobile telephony," *Information Economics and Policy*, 20, pages 279-287, Doc ID 4162.)

⁵⁵ Paragraph 61 of the Reply to the Statement of Objections.

higher for the merging Parties than for the rivals. Therefore, the Commission considers that a valid reality check should take into account the different pre-merger prices between the four MNOs.

- (175) The example provided by the Notifying Party refers to the multi-segment UPP analysis including cross-segment effects, that is to say including price-based switching between the pre-paid segment and the post-paid segment. The Commission considers that there is a certain price-based switching between the two segments. However, as already discussed above, the Commission believes that it is difficult to capture this price-based cross-segment switching within the UPP framework used in the present case.
- (176) The Commission provided above a revised-UPP analysis without cross-segment switching, which is similar to the UPP analysis in the Letter of Facts.
- (177) Table 11 below presents the pre-merger ARPU for each MNO in the pre-paid and post-paid residential segments for the retail customers. Pre-merger, the prices (ARPU) differ, with the following prices for Telefónica (EUR [...]*), Deutsche Telekom ([...]*), Vodafone ([...]*), and E-Plus ([...]*). In the post-paid residential segment, the differences are [...], with ARPUs in the range of EUR [...]* per month for the merging parties and ARPUs in the range of [...]* per month for the rivals.

Table 11: Pre-merger prices (2012 data, average ARPUs in EUR per month)

MNO	Pre-paid segment	Post-paid residential segment
Deutsche Telekom	[...]*	[...]*
Vodafone	[...]*	[...]*
E-Plus	[...]*	[...]*
Telefónica	[...]*	[...]*

- (178) Table 12 below presents the post-merger prices for each MNO in the baseline scenario based on contribution margins. These results are based on the predicted price increases in Table 10.
- (179) In the post-paid residential segment, the predicted post-merger prices appear plausible where E-Plus and Telefónica have [...]* ARPUs between [...]* per month, while Deutsche Telekom and Vodafone have [...]* ARPUs between [...]* per month.
- (180) In the pre-paid segment, the Commission considers that the predicted post-merger ARPUs are plausible with a range between [...]* per month. While the post-merger price of E-Plus is [...]* (around EUR [...]* per month), this is consistent with the pre-merger situation where E-Plus has [...]* ARPU as well (EUR [...]*). The post-merger ARPU of Telefónica, around EUR [...]* per month, is also plausible as it is [...]* the post-merger ARPU of [...]*.
- (181) The Commission therefore disagrees with the Notifying Party's argument that the UPP analysis fails the reality check. The Commission considers that the revised UPP analysis leads to realistic predicted price increases post-merger in the pre-paid and the post-paid residential segments.

Table 12: Predicted post-merger prices in the baseline scenario based on contribution margins

Diversion to outside option		No		yes	
Segment	MNO	Predicted price increase	ARPU post-merger (EUR per month)	Predicted price increase	ARPU post-merger (EUR per month)
Pre-paid segment	Deutsche Telekom	6.9%	[...]*	[...]*	[...]*
	Vodafone	8.6%	[...]*	[...]*	[...]*
	E-Plus	25.4%	[...]*	[...]*	[...]*
	Telefónica	43.1%	[...]*	[...]*	[...]*
Post-paid residential segment	Deutsche Telekom	2.0%	[...]*	[...]*	[...]*
	Vodafone	3,5%	[...]*	[...]*	[...]*
	E-Plus	16,6%	[...]*	[...]*	[...]*
	Telefónica	10,2%	[...]*	[...]*	[...]*

(182) The Notifying Party also argues that customers would switch to Deutsche Telekom and Vodafone post-merger due to implausible predicted prices post-merger. First, the Commission disagrees with the Notifying Party since the revised-UPP analysis predicts realistic prices post-merger. Second, the Commission considers that the comment of the Notifying Party is already taken into account in the UPP analysis. Indeed, in line with paragraph 24 of the Horizontal Merger Guidelines, the UPP analysis models the following three elements:⁵⁶

- (a) The most direct effect of the merger will be the loss of competition between the merging firms. This is captured by the diversion ratios between the merging parties.
- (b) Non-merging firms can 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. This is captured by the diversion ratios to the rivals.
- (c) The reduction in these competitive constraints could lead to significant price increases in the relevant market.

(183) In addition, the UPP analysis considers the constraints imposed on the merging parties' incentives to raise prices when rival firms produce close substitutes. The UPP analysis takes into account that this constraint may mitigate the incentives of the merging parties to raise prices post-merger.⁵⁷ Indeed, diversion ratios already reflect the closeness of all substitutes offered in the market. In case a firm other than the

⁵⁶ See also recital 25 of the Merger Regulation.

⁵⁷ See Horizontal Merger Guidelines, paragraph 28.

merging parties also offers a close substitute, fewer customers will switch between the merging parties than in case the third party would offer a less close substitute. Therefore, the constraints of third party products described in paragraph 28 of the Horizontal Merger Guidelines are reflected in the diversion ratios.

3.4.2.3. Robustness of the results with respect to 2013 data

- (184) The Notifying Party argues that the Statement of Objections only takes into account 2012 data instead of looking at more recent figures of 2013. In reply to this, the Commission presents the results of the UPP analysis taking into account data for the first half of 2013 below.⁵⁸ The results from the UPP analysis based on 2013 data were also presented in the Letter of Facts.
- (185) The within-segment diversion ratios are reported for the pre-paid and post-paid residential segments in Table 13 and Table 14. These tables were reported as well in the Letter of Facts.⁵⁹

Table 13: Within pre-paid segment diversion ratios (2013 data)

	To Deutsche Telekom Pre-paid	To Vodafone Pre-paid	To E-Plus Pre-paid	To Telefónica Pre-paid
From Deutsche Telekom Pre-paid	[...]*	[...]*	[...]*	[...]*
From Vodafone Pre-paid	[...]*	[...]*	[...]*	[...]*
From E-Plus Pre-paid	[...]*	[...]*	[...]*	[...]*
From Telefónica Pre-paid	[...]*	[...]*	[...]*	[...]*

Table 14: Within post-paid residential segment diversion ratios (2013 data)

	To Deutsche Telekom Post-paid residential	To Vodafone Post-paid residential	To E-Plus Post-paid residential	To Telefónica Post-paid residential
From Deutsche Telekom Post-paid residential	[...]*	[...]*	[...]*	[...]*
From Vodafone Post-paid residential	[...]*	[...]*	[...]*	[...]*
From E-Plus Post-paid residential	[...]*	[...]*	[...]*	[...]*
From Telefónica Post-paid residential	[...]*	[...]*	[...]*	[...]*

- (186) Table 15 below reports the predicted price increases based on 2013 data. The results are in line with Table 10 where 2012 are used. In the pre-paid segment where the

⁵⁸ The Commission implements the UPP analysis using data for the first half of 2013 (first and second quarters of 2013) since it is the time period common to all data sources regarding margins data, MNP data, and InfoSurvey data.

⁵⁹ In order to be consistent with the assumption of the absence of price-based switching across segments, the Commission adjusted the diversion ratio matrix by setting the observed cross-segment switches to zero. Technically, this amounts to setting cross-segment diversion ratios from the diversion matrix in Table 1 to zero and rescaling the within segment diversion ratios so that they add up to 100%.

Parties have the strongest position, predicted average-price increases are in the range of 12%-19% in the baseline scenario (respectively 10%-16% in the sensitivity scenario). In the post-paid residential segment, predicted-average price increases are in the range of 4%-6% in the baseline scenario and in the sensitivity scenario. The corresponding predicted average price increases across the pre-paid and post-paid residential segments are in the range of 6%-9% in the baseline scenario (respectively 5%-8% in the sensitivity scenario). The analysis continues to predict significant price increases by the merging parties.

Table 15: Revised calibrated merger simulation results (Q1 +Q2 2013 data)

Indicative price rise (%)	2013 data		2013 data	
Diversion to outside good	no	No	yes	yes
(a) Baseline case based on contribution margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	7.2%	2.2%	3.6%	1.2%
Vodafone	9.5%	4.2%	4.8%	2.2%
E-Plus	23.2%	14.3%	14.9%	10.4%
Telefónica	36.3%	10.4%	23.5%	6.7%
Overall segment	18.8%	6.4%	11.6%	4.1%
Average across pre-paid and post-paid residential	9.0%		5.7%	
(b) Sensitivity scenario based on incremental margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	6.6%	2.2%	3.3%	1.1%
Vodafone	8.9%	4.3%	4.4%	2.3%
E-Plus	19.5%	12.7%	12.7%	9.3%
Telefónica	30.5%	9.3%	19.3%	5.7%
Overall segment	16.2%	6.0%	9.9%	3.7%
Average across pre-paid and post-paid residential	8.1%		5.0%	

3.4.2.4. Robustness of the results with respect to the market shares of new and retained subscribers

- (187) The UPP analysis uses the market shares of gross adds and retained subscribers as a measure of volumes. These market shares were provided by the Parties.⁶⁰ In order to verify the robustness of the results with respect to the volumes used, the Commission also reports results under the assumption of symmetry in the cross price derivatives.⁶¹

⁶⁰ See reply of 29 January 2014, to the Request for Information dated 24 January 2014.

⁶¹ Hausman, J., Moresi S., M. Rainey, (2011): "Unilateral effects of mergers with general linear demand," *Economics Letters*, 111(2), pages 119-121, Doc ID 4393. Equation 11 computes the indicative price rise under the assumption of symmetry in the cross-price derivative. Equation 11 of this paper shows that volumes do not have an impact on the results under this assumption.

In this case, the volumes do not have an impact on the results of the UPP analysis. Therefore, this methodology allows to verify if any potential measurement errors in the volumes of new and retained customers significantly influence the results. The results of this sensitivity analysis, which is carried out to verify the robustness of the results presented in Table 10, are reported under the heading of *IPR2* in Table 16 below.⁶²

- (188) Table 16 below reports the predicted price increases based on 2012 data. The results are in line with Table 10. In the pre-paid segment where the Parties have the strongest position, predicted average-price increases are in the range of 14%-23% in the baseline scenario (respectively 10%-16% in the sensitivity scenario). In the post-paid residential segment, predicted-average price increases are in the range of 4%-6% in the baseline scenario (respectively 3%-4% in the sensitivity scenario). The corresponding predicted average price increases across the pre-paid and post-paid residential segments are in the range of 6%-10% in the baseline scenario (respectively 4%-7% in the sensitivity scenario). The analysis continues to predict significant price increases by the merging parties.

⁶² The Commission also carried out a second sensitivity analysis where the proportion of new and retained subscribers is calculated in the post-paid residential segment for each of Deutsche Telekom, Vodafone, Telefónica, and E-Plus. These proportions are calculated by dividing the number of new and retained subscribers by the active subscriber base in the residential post-paid segment. Next, for each MNO, these proportions are applied to the active subscriber base in the pre-paid segment, which leads to a measure of volumes for the contestable subscribers in the pre-paid segment. This approach takes account of the fact that only the new subscribers are reported in the pre-paid segment and not the retained subscribers. This approach leads to similar results with respect to the *IPR* approach reported in Table 10 of this Annex.

Table 16: Revised calibrated merger simulation results (IPR2, 2012 data)

Indicative price rise (%)	IPR2		IPR2	
Diversion to outside good	no	No	yes	yes
(a) Baseline case based on contribution margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	14.6%	1.9%	7.2%	1.0%
Vodafone	13.5%	2.4%	6.8%	1.3%
E-Plus	26.4%	17.3%	16.6%	12.6%
Telefónica	41.9%	8.1%	27.5%	5.4%
Overall segment	23.2%	5.8%	13.9%	3.8%
Average across pre-paid and post-paid residential	9.7%		6.1%	
(b) Sensitivity scenario based on incremental margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	10.1%	1.3%	5.0%	0.7%
Vodafone	9.4%	1.7%	4.7%	0.9%
E-Plus	19.6%	13.8%	12.6%	10.2%
Telefónica	27.6%	5.3%	17.8%	3.4%
Overall segment	16.3%	4.2%	9.8%	2.8%
Average across pre-paid and post-paid residential	6.9%		4.4%	

3.4.2.5. Robustness of the results with respect to the data source used to obtain the diversion ratios

- (189) The diversion ratios on which the Commission's UPP analysis relies are based on information on "port out" requests in each MNO's MNP database. However, MNP's data do not allow identifying the destination segment. Therefore the Commission uses a combination of MNP data and InfoSurvey data in order to identify the destination segment. As a sensitivity analysis, the Commission builds diversion ratios using only InfoSurvey data submitted by the Parties. Table 17 presents the UPP analysis using the InfoSurvey diversion ratios.⁶³
- (190) The results in Table 17 are in line with the results from the UPP analysis reported in Table 10. In the pre-paid segment where the Parties have the strongest position, predicted average-price increases are in the range of 12%-20% in the baseline scenario (respectively 9%-15% in the sensitivity scenario). In the post-paid residential segment, predicted-average price increases are in the range of 5%-8% (in the baseline scenario (respectively 4%-7% in the sensitivity scenario). The corresponding predicted average price increases across the pre-paid and post-paid residential segments are in the range of 7%-11% in the baseline scenario (respectively 5%-8% in the sensitivity scenario). The analysis continues to predict significant price increases by the merging parties.

⁶³ The corresponding diversion ratios are reported in the Annex to the Letter of Facts.

Table 17: Revised calibrated merger simulation results (using InfoSurvey diversion ratios, 2012 data)

Indicative price rise (%)	Using InfoSurvey diversion ratios		Using InfoSurvey diversion ratios	
	no	No	yes	yes
(a) Baseline case based on contribution margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	7.2%	2.8%	3.6%	1.5%
Vodafone	8.5%	4.2%	4.2%	2.2%
E-Plus	24.6%	18.8%	15.6%	13.1%
Telefónica	42.3%	15.5%	28.0%	10.4%
Overall segment	19.8%	8.2%	12.3%	5.3%
Average across pre-paid and post-paid residential	10.8%		6.8%	
(b) Sensitivity scenario based on incremental margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	5.9%	2.3%	2.9%	1.2%
Vodafone	7.7%	4.1%	3.8%	2.1%
E-Plus	17.6%	14.3%	11.4%	10.2%
Telefónica	30.0%	11.3%	19.2%	7.1%
Overall segment	14.8%	6.5%	9.0%	4.1%
Average across pre-paid and post-paid residential	8.3%		5.2%	

3.4.2.6. Robustness of the results when wholesale customers are included

- (191) The inclusion of wholesale customers in the UPP analysis is expected to lead to lower price increases due to lower margins. In order to verify the robustness of results when wholesale customers are included, the UPP analysis includes a revenue-weighted average of the contribution margins and ARPUs from the wholesale and the retail levels.
- (192) The results in Table 18 below are in line with the results of the UPP analysis reported in Table 10. In the pre-paid segment where the Parties have the strongest position, predicted average-price increases are in the range of 12%-19% in the baseline scenario (respectively 9%-15% in the sensitivity scenario). In the post-paid residential segment, predicted-average price increases are in the range of 4%-6% in the baseline scenario (respectively 3%-5% in the sensitivity scenario). The corresponding predicted average price increases across the pre-paid and post-paid residential segments are in the range of 5%-8% in the baseline scenario (respectively 4%-7% in the sensitivity scenario). The analysis continues to predict significant price increases by the merging Parties.

Table 18: Revised calibrated merger simulation results (including wholesale customers, 2012 data)

Indicative price rise (%)	Including wholesale customers		Including wholesale customers	
	no	No	yes	yes
(a) Baseline case based on contribution margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	6.2%	1.9%	3.1%	1.0%
Vodafone	8.6%	3.4%	4.3%	1.8%
E-Plus	25.5%	15.5%	16.1%	11.4%
Telefónica	43.0%	9.9%	28.1%	6.4%
Overall segment	19.0%	5.6%	11.6%	3.6%
Average across pre-paid and post-paid residential	8.2%		5.1%	
(b) Sensitivity scenario based on incremental margins				
	Pre-paid	Post-paid residential	Pre-paid	Post-paid residential
Deutsche Telekom	5.1%	1.8%	2.5%	0.9%
Vodafone	8.0%	3.7%	4.0%	2.0%
E-Plus	18.9%	12.8%	12.2%	9.4%
Telefónica	31.9%	8.2%	20.0%	4.9%
Overall segment	14.7%	5.0%	8.9%	3.1%
Average across pre-paid and post-paid residential	6.9%		4.2%	

3.4.2.7. Conclusion of the UPP analysis

- (193) The Commission performed an extensive sensitivity analysis which confirmed the robustness of the results of Table 9 and Table 10.
- (194) Overall, all modifications introduced to take into account the Notifying Party's arguments which the Commission considers reasonable reduce the predicted price effects from the Commission's first quantitative approach as compared to the results presented in the Statement of Objections. Nevertheless, the predicted price increases from the analysis remain significant even after applying these modifications. The Commission therefore considers that the quantitative implications derived from the analysis above indicate that the elimination of competition for contestable customers between the merging parties is likely to lead to significant price increases. In the pre-paid segment where the merging parties have the strongest position, predicted average-price increases are in the range of 12%-20% in the baseline scenario (respectively 9%-15% in the sensitivity scenario). In the post-paid residential segment, predicted-average price increases are in the range of 4%-6% in the baseline scenario and in the sensitivity scenario. The corresponding predicted average price increases across the pre-paid and post-paid residential segments are in the range of 6%-10% (respectively 5%-8%) in the baseline scenario (respectively in the sensitivity scenario).

4. DEMAND ESTIMATION BASED MODELLING

(195) This section explains the details of the demand estimation based simulations. It presents the data inputs and the construction of the models' variables (section 4.1), explains the structure of the demand models and their estimation (section 4.2), summarizes the results of the Statement of Objections and Letter of Facts (section 4.3), and presents the assessment of the Notifying Party's arguments and reports the results of the calculations (section 4.4).

4.1. Data and Variable Construction

(196) The Commission requested monthly tariff level data from the five main operators in the German mobile telecommunications market, Deutsche Telekom, Vodafone, Telefónica, E-Plus and Freenet, for the period of 2010-2013. The data contain information on tariff characteristics (monthly access fee, activation fee, call set-up fee, minimum call fee, handset subsidies, allowances/bundles, out-of-bundle prices, commitment periods, tariff options or add-ons, dates of activation and deactivation) and the monthly evolution of tariff level subscriber numbers and usage (voice, text and data). Allowances, if applicable, are broken down to on-, off- and fixed parts. Also, out-of-bundle prices are specified by on- and off-net, as well as by peak-, off-peak and weekend times. Voice usage is specified as outgoing minutes, broken down by destination type (fixed or mobile). Text usage is the number of outgoing messages, while data usage is total data traffic (both uploads and downloads) in GBs. For each operator, the data cover all tariff plans available to new subscribers at any point in time between 01 October 2010 and 31 July 2013, which together account for at least 95% of the total number of new subscribers. In addition, the Commission requested more aggregated, segment level data from each of these operators on subscriber numbers, usages, revenues and cost components on a monthly basis.

(197) In a demand model, the most important product characteristic is the price. As each tariff has many different price components, such as fixed fees, bundle allowances, out-of-bundle prices and options, it is difficult to directly compare the tariffs along these characteristics. To circumvent this problem and to make the different tariffs comparable, the Commission calculated a single price for each tariff. This price is what a new subscriber to a given tariff would have paid in a given month if he/she had used a fixed basket of telecommunications services (a fixed amount of voice minutes, text messages and data consumption, where the amounts are based on the typical usage pattern observed in the data). For all tariffs the same fixed basket is used, hence, the resulting prices are comparable across tariffs. If one or more add-ons are available for a given tariff/month pair, it is taken into account on the condition that using the add-on results in a lower price.

(198) The price was also adjusted by taking into account the handset subsidies paid by the different operators to new and retained subscribers. E-Plus and Vodafone did not provide tariff level handset subsidy estimates. Hence, for these two operators the segment level (aggregated) data is used to construct a tariff level handset subsidy estimate. A handset subsidy is allocated to those tariffs which are indicated to typically offering a handset subsidy. The estimated tariff level handset subsidies are normalized so that the average per subscriber handset subsidy is the same as in the segment level data. For all operators, the handset subsidy is further normalized by dividing it by the tariff's commitment period.

(199) The subscriber shares necessary for the models are defined in terms of contestable subscribers. The numerator of the share, the number of contestable subscribers, is defined as the sum of new and retained subscribers of the given tariff. The denominator of the share is 110% of the sum of contestable subscribers of all

tariffs.^{64,65} Three versions of the contestable share are defined. In the first, all pre-paid subscribers are treated as contestable, while for post-paid the sum of new and retained subscribers is used. In the second definition, for the pre-paid subscribers a fraction of the all pre-paid subscribers is used. The fraction is equal to the proportion of contestable post-paid subscribers to the overall post-paid subscriber number. In other words, the same contestability probability is assumed in pre-paid as in post-paid. In the third definition, the pre-paid and post-paid subscriber numbers are adjusted so as to match the Form CO's gross add shares in these segments.⁶⁶

(200) The tariff level data is aggregated to brand level.

4.2. Demand estimation

4.2.1. Discrete choice models

(201) The demand side of the model is represented by discrete choice models.⁶⁷ Discrete choice models assume that consumer decisions to purchase products depend on both the price and the characteristics of the products. In this way, they capture the key feature of product heterogeneity in consumer goods markets, namely, that products are differentiated not only by price but also along other qualitative or quantitative attributes. The indirect utility of subscriber i from choosing tariff j is assumed to be a function of the data and some parameters:

$$\begin{aligned} u_{ij} &= -\alpha_i p_j + x'_j \beta_i + \xi_j + \varepsilon_{ij} = \delta_j + \mu_{ij} + \varepsilon_{ij}, \\ \delta_j &\equiv -\alpha p_j + x'_j \beta + \xi_j, \quad \mu_{ij} \equiv -\sigma^p p_j v_i^p + \sum_k \sigma^k x_j^k v_i^k, \\ \alpha_i &\equiv \alpha + \sigma^p v_i^p, \quad \beta_i^k \equiv \beta^k + \sigma^k v_i^k. \end{aligned}$$

(202) Here, p is the price of the tariff, x is a vector of observed tariff characteristics, ξ is an unobserved tariff characteristic and ε is a term assumed to follow an i.i.d. Extreme Value distribution. Finally, v is an i.i.d. random variable with a parametric distribution. The parameters of the model are α , the mean price coefficient, β the vector of mean marginal utilities of the observed tariff characteristics and the σ describing consumer heterogeneity. The utility can be decomposed into a mean utility part, δ , and a subscriber specific part, $\mu + \varepsilon$. The mean utility, by definition, is the same for each subscriber. If consumers are heterogeneous in their utilities, the actual utility of a given consumer can deviate from this mean utility. The distribution of these deviations is governed by the σ parameters. For example, if σ^p is zero then each subscriber has the same (dis)utility of price, $-ap$. If, however, σ^p is different from zero then different subscribers can be sensitive to a different degree to a price change. To be able to identify the parameters of the model, a normalization is necessary where the utility of one of the alternatives, that of the "outside good", is set to zero: $u_{ij0}=0$.

⁶⁴ This represents the assumption that the "outside good", that is, the alternative of choice for those subscribers who do not chose a post-paid tariff is to choose a pre-paid tariff (see also the discussion in paragraph (202)).

⁶⁵ On using fractions to define share denominators in a demand estimation framework, see also Ivaldi, M., and F. Verboven, (2005): "Quantifying the effects from horizontal mergers in European competition policy," *International Journal of Industrial Organization*, 23, pages 669– 691, Doc ID 4396.

⁶⁶ Form CO, Annex B, Appendix 4, page 16.

⁶⁷ See, for example, Berry, S. T., (1994): "Estimating Discrete-Choice Models of Product Differentiation," *Rand Journal of Economics*, 25(2), pages 242-262, Doc ID 4385.

- (203) The simplest discrete choice model is the simple logit model, where all the σ parameters are zero and, hence, the model collapses to:

$$u_{ij} = -\alpha p_j + x_j' \beta + \xi_j + \varepsilon_{ij} = \delta_j + \varepsilon_{ij}.$$

- (204) In this case, the (to be estimated) parameters govern only the mean utility. This means, in particular, that each consumer has the same price sensitivity.

- (205) The full model is called **random coefficient model** because the consumer heterogeneity is modelled as the marginal utilities having a random distribution ($\alpha_i \sim N(\alpha, \sigma^\alpha)$, $\beta_i^k \sim N(\beta^k, \sigma^k)$). In contrast, the **simple logit model** is not a random coefficient model as the marginal utilities are deterministic, that is, each consumer has the same marginal valuations ($\alpha_i = \alpha$, $\beta_i^k = \beta^k$ for all i). Different random coefficient models can be specified by setting one or more σ parameters to zero. In other words, consumers might differ in their marginal utilities with respect to all or a subset of the product characteristics.

- (206) A specific, restricted version of the random coefficient model is the **nested logit model**.⁶⁸ In this case, marginal utilities of consumers differ only with respect to a categorical variable. This categorical variable allocates the products in a few distinct groups, for example, pre-paid and post-paid tariffs. According to this model, a consumer who has chosen a given pre-paid tariff might view the other pre-paid tariffs as closer substitutes to her choice than the post-paid tariffs. Formally, if there are $G+1$ mutually exclusive groups or nests, $g = 0, 1, \dots, G$,⁶⁹ and d_{jg} is an indicator variable that takes value 1 if group j belongs to group g , the utility function becomes:

$$u_{ij} = \delta_j + \sum_g [d_{jg} \zeta_{ig}] + (1 - \sigma^G) \varepsilon_{ij}.$$

- (207) Here, $[\zeta + (1 - \sigma^G) \varepsilon]$ is a random variable with an extreme value distribution.⁷⁰ The parameter σ^G is in the range $[0, 1)$ and it measures the correlation of consumer preferences within a group. The closer its value is to 1 the closer substitutes are pre-paid tariffs to each other than to post-paid tariffs (and similarly, post-paid tariffs are closer to each other in terms of substitution than to pre-paid products). If the parameter's value is 0 the model becomes equivalent to the simple logit model and the type of the tariff (pre- or post-paid) does not systematically affect the substitution patterns. On the one hand, the nested logit model can model heterogeneity of preferences on categorical variables, such as tariff types, but, unlike the full random coefficient model, not on continuous variables like price. On the other hand, its estimation is simpler than that of the full random coefficient model. In this sense, it is in-between the simple logit and random coefficient models.⁷¹ The simple logit model is too restrictive to be reliable as it essentially assumes that the diversion ratios between the different products are simply proportional to market shares (this is the so called irrelevance of independent alternatives, IIA, property). The nested logit model

⁶⁸ See, for example, McFadden, D., (1981): "Econometric Models of Probabilistic Choice," in C.F. Manski, D. McFadden (eds), *Structural Analysis of Discrete Data with Econometric Applications*, MIT Press, Cambridge, Massachusetts, pages 198-272, Doc ID 4400.

⁶⁹ Here, $g = 0$ denotes the outside good which is a group of its own; $g = 1$ denotes pre-paid, and $g = 2$ post-paid tariffs; and $G = 2$.

⁷⁰ See, for example, Cardell, N. S., (1997): "Variance Components Structures for the Extreme-Value and Logistic Distributions with Application to Models of Heterogeneity," *Economic Theory*, 13, pages 185-213, Doc ID 4387.

⁷¹ See also the discussion in Case No COMP/M.5658 – *Unilever / Sara Lee*, Technical Annex, section 3.3, pages 341-343.

retains this unrealistic restriction within its nests, while the random coefficient model does not have the IIA property.⁷²

(208) The models' predicted choice probability for product j and consumer i is:

$$s_{ij} = \frac{\exp(\delta_j + \mu_{ij})}{1 + \sum_{j'} \exp(\delta_{j'} + \mu_{ij'})}$$

(209) The predicted market share for product j is:

$$s_j(\delta, \sigma) = \int s_{ij} dF(\delta, \sigma) \quad (2)$$

(210) Here, δ is the vector of mean utilities and σ is the vector of the consumer heterogeneity coefficients, while F indicates the respective distribution of the marginal utilities across consumers.

(211) The own- and cross-price elasticities for the random coefficient model are:

Own-price elasticity:
$$e_{jj} = -\frac{p_j}{s_j} \int \alpha_i s_{ij} (1 - s_{ij}) dF,$$

Cross-price elasticity:
$$\varepsilon_{jk} = \frac{p_j}{s_j} \int \alpha_i s_{ij} s_{ik} dF.$$

4.2.2. Estimation

(212) Following Berry (1994), the mean utility, δ_j , can be expressed by equating the predicted share, $s_j(\delta, \sigma)$, to the observed share, S_j . Then the mean utility can be regressed to estimate the mean utility parameters, α and β . In the case of the simple logit model, this can be done in one step using the following estimation equation:

$$\ln S_{j,t} - \ln S_{0,t} = -\alpha p_{j,t} + x'_{j,t} \beta + c_f + c_m + c_y + \xi_{j,t}. \quad (3a)$$

(213) Here, ξ is treated as the econometric error term. The subscript t is added to note monthly observations in the panel dataset. The coefficients c are fixed effects for operators, months and years, respectively.

(214) In the case of the nested logit model, similar calculations lead to the following estimation equation:

$$\ln S_{j,t} - \ln S_{0,t} = -\alpha p_{j,t} + x'_{j,t} \beta + \sigma^G \ln S_{j/g,t} + c_f + c_m + c_y + \xi_{j,t}. \quad (3b)$$

(215) Here, $S_{j/g}$ is the observed share of good j in nest g . For the random coefficient model, δ_j , can only be numerically calculated for a given σ when equating the predicted share to the observed share. Conditional on σ , the right hand side of the estimation equation is the same as in (3a), while the left hand side is the numerically calculated $\delta(\sigma)$. The coefficients in σ then are estimated in an outer loop.

(216) The price and share variables on the right hand side of the estimating equations might be correlated with the error term, resulting in an endogeneity problem. To control for this, instrumental variables estimation techniques have to be used. Berry, Levinsohn, and Pakes (1995, BLP)⁷³ show that functions of the vector of the other

⁷² See example, Davis, P., and E. Garcés, (2010): *Quantitative Techniques for Competition and Antitrust Analysis*, Princeton University Press, Princeton and Oxford, page 501, Doc ID 4405.

⁷³ Berry, S. T., J. Levinsohn, A. Pakes, (1995): "Automobile Prices in Equilibrium," *Econometrica*, 63(4), pages 841-890, Doc ID 4386.

products' (tariffs') characteristics, x , can be used as instruments for a given product's price and relative shares. The justification for this is that the characteristics, at least in the short run, can be assumed to be exogenous and still correlated with the endogenous variables. The reason for this correlation is that in an oligopoly structure the endogenous variables are determined by the competitive interactions with the products of the other firms. Thus, the characteristics of the rival products influence the price and share of the product. In particular, functions of the rival products' characteristics can be thought of as isolation indices of the given product, measuring the "thickness" or "density" of the product space and, hence, the competitive environment surrounding the product.

- (217) This leads to a linear instrumental variables estimation procedure in the case of the simple logit and nested logit models. For the random coefficient model, non-linear IV estimation is used where the coefficient vector σ is estimated by minimizing a quadratic form of $\zeta(\sigma)$ where the weighting matrix is a function of the instruments (BLP, Nevo 2000⁷⁴ and 2001⁷⁵). The integration in (2) is carried out using sparse grid integration (Judd and Skrainka 2011⁷⁶).

4.3. Summary of the results presented in the Statement of Objections and Letter of Facts

- (218) The Commission presented its preliminary results in the Statement of Objections, and subsequently further results in the Letter of Facts. The results of the Letter of Facts partly corrected some data and modelling errors of the preliminary modelling results of the Statement of Objections.⁷⁷ Those errors were partly criticized by the Notifying Party in its Reply to the Statement of Objections.⁷⁸ In this Section, the Commission summarizes the results presented in the Letter of Facts of the model specifications of the Statement of Objections.
- (219) Table 21-Table 23 displays the coefficient estimates of the different models. Table 21 shows results for the first contestable subscriber definition (all pre-paid, new+retained post-paid), Table 22 for the second (contestable pre- and post-paid), and Table 23 for the third (adjusted subscriber numbers). Models I-IV use year and month fixed effects, while Models V-VIII use time fixed effects. Model I and V are simple logit models. Models II-III and VI-VII are random coefficient models, where random coefficients are specified on the price variables. The difference between Models II and III is that they use a different instrument set (the difference is the same between Models VI and VII). Models IV and VIII are nested logit models. The characteristics include the price, average commitment period, indicators of SIM only tariffs, variables of the allowance levels, indicators of unlimited allowances as well as operator-, month- and year or time fixed effects. The operator fixed effects are composed of three host network fixed effects (Deutsche Telekom, Telefónica and E-Plus – with Vodafone being the excluded base), an indicator of products sold by Freenet sand an indicator of Freenet's own brands.

⁷⁴ Nevo, A., (2000): "A Practitioner's Guide to Estimation of Random-Coefficients Logit Models of Demand," *Journal of Economics & Management Strategy*, 9(4), 513–548, Doc ID 4401.

⁷⁵ Nevo, A., (2001): "Measuring Market Power in the Ready-to-Eat Cereal Industry," *Econometrica*, 69(2), 307-342, Doc ID 4402.

⁷⁶ Judd, K. L. and B. Skrainka, (2011): "High Performance Quadrature Rules: How Numerical Integration Affects a Popular Model of Product Differentiation," *CeMMAP working papers*, CWP03/11, Centre for Microdata Methods and Practice, Institute for Fiscal Studies, Doc ID 4397.

⁷⁷ Letter of Facts, paragraphs 62-64

⁷⁸ Reply to the Statement of Objections, Annex 5, pages 16 and 20-24

- (220) In general, the models explain a statistically significant portion of the data variation. The random coefficient and nested logit models perform better in terms of the fit of the data (R-squared) than the simple logit models. This indicates that taking into account consumer heterogeneity is important and the assumptions of the simple logit model are probably too restrictive. All models pass the instrument tests (Rank test, weak instrument test and Hansen's over-identification test).
- (221) The coefficient on price ($-\alpha$) is estimated to be negative and, with the exception of the simple logit models, statistically significant in all models. The models using full time effects (V-VIII) tend to have somewhat less precise main coefficient estimates and in some of these cases, for example, the random coefficients are not identified. This is probably due to the extra loss of degrees of freedom relative to the more restrictive year/month effects specifications (I-IV). Also, the random coefficient models using the alternative instrument set (III and VII) give less precise coefficient estimates and somewhat poorer goodness-of-fit than the more sharply estimated and preferred baseline specifications (II and VI).
- (222) Table 24 presents the results of the merger simulations.⁷⁹ First, the very restrictive simple logit models predict price increases in a substantially different range than the other models. The simple logit models' predictions are above 30% for the overall market, while the other models predict single digit overall price changes. Second, the nested logit models tend to predict somewhat lower price increases than the random coefficient models. Third, all models predict higher price increases for the merging firms than for the competitors. This difference is more pronounced for the nested logit and random coefficient models which are better able to take into account product differentiation. This might be explained by the fact that these models estimate the merging firms' offerings to be more similar to each other than to the other two network players' products. Fourth, the time effects specifications (V-VIII) tend to predict higher price increases than the year/month models (I-IV). Overall, the more realistic nested logit and random coefficient models predict price increases above 10% for the merging firms, and private segment wide price increases in the range of 5-9%.⁸⁰
- (223) Table 25 shows the implied compensating marginal cost reductions in the range of [...] * EUR per subscriber. This indicates that the marginal costs should decrease by more than [...] * for both Telefónica and E-Plus to compensate for the incentive to increase prices which arises due to the loss off competition between these two operators.

⁷⁹ The simulations were run for each month separately. For some of the months (6 out of 34), some random coefficient models' simulations tended to be numerically unstable, resulting in slightly different outcome from run to run. Hence, these months were excluded from the reported simulation results.

⁸⁰ The nested logit models using the second type of share definition predict significantly lower price increases than the other models (see the middle section of Table 24, based on the estimates of Table 22). In the case of these models, the implied average margins are negative for each competitor. This is certainly in sharp contrast with the observed (positive) margins. Hence, these model specifications are not reliable.

4.4. The Notifying Party's arguments and their assessment

4.4.1. The random coefficient model

4.4.1.1. Remarks specific to the Commission's models

- (224) The Notifying Party claims that the Commission's random coefficient model is highly unreliable and that it is not preferred over the simple logit model.^{81,82} The estimated random coefficients on the price variable are not statistically significant and, hence, the model is not different from the simple logit model.
- (225) The Commission, while acknowledging that the random coefficient estimates of this model were imprecise, presented a refined version of the random coefficient model in the Letter of Facts.⁸³ This model used an amended set of instrumental variables and hence provided a better identification of the models' parameters. In particular, the random coefficient estimates on the price are statistically significant. The predicted price increases are in line with those of the nested logit model.
- (226) The Notifying Party argues that the Commission's refined random coefficient model (of the Letter of Facts) is arbitrary and a sensitivity analysis shows that the statistical significance of the estimated random coefficient is not robust.⁸⁴ In particular, the Notifying Party refers to alternative specifications, using slightly different sets of instrumental variables, for which either the estimated random coefficient is not statistically significant or the estimated price effects are lower.
- (227) The Commission notes that the Notifying Party's analysis of the models with alternative instrument sets does not qualify as a proper sensitivity analysis. This is because all of the alternative models fail on the so-called over-identification test (Hansen-test).^{85,86} Along with the Rank-test, the over-identification test is the most important test of the instrumental variables of a structural econometric model. Models that do not pass this test are not properly identified and hence provide no probative value.
- (228) The Notifying Party further argues that the random coefficient models of the Commission are not sufficiently numerically stable and should not be relied upon.⁸⁷ In particular, the Notifying Party further notes that the Commission's log files related to the simulations with its random coefficient models reveal some stability problems. In particular, these log files reveal that during the numerical optimization procedure for some simulations the message "numerical derivatives are approximate, nearby

⁸¹ Reply to the Statement of Objections, paragraph 63.

⁸² Reply to the Statement of Objections, Annex 5, "Comments on quantitative analysis SO," pages 24-26.

⁸³ Letter of Facts, paragraph 65 and Tables 25-26.

⁸⁴ Reply to the Letter of Facts, Memorandum by E.CA, pages 28-29.

⁸⁵ File "RC logit estimation.log", part B ("B: sensitivity analysis of rc model"), ID02700_O.

⁸⁶ In one alternative specification ("B.4" using the Commission's own instrument specification) the Hansen-test is actually met and the random coefficient of the price variable is not statistically significant (p-value: 0.236). However, in this model, unlike the Commission's models, the Notifying Party also specifies a (statistically highly insignificant – p-value 0.979) random coefficient on an additional variable ("commitment"). This clearly leads to the loss of significance of the price random coefficient too. These results imply that the second random coefficient is not identified. This, however, does not imply that the price variable's random coefficient is not identified. The correct interpretation is that the Commission's more parsimonious specification (only one random coefficient, specified on the price variable) is the correct one, which yields a statistically highly significant random coefficient estimate (p-value 0.000). Moreover, the Commission's specification performs better on the Hansen-test (p-values: 0.6156 vs. 0.5086). File "RC logit estimation.log", part A.1 and part B.4, ID02700_O.

⁸⁷ Reply to the Letter of Facts, Memorandum by E.CA, pages 29-31.

values are missing" is displayed. Moreover, for some simulations the final convergence criteria are not met ("problematic market").

- (229) The Commission notes that the Notifying Party did not interpret the evidence related to the numerical diagnostics of the simulations correctly. As the random coefficient model is technically more complex than the simple logit or nested logit models, a more complex numerical optimization algorithm has to be used for the merger simulations. The algorithm used breaks down to three "tries". In each try, several rounds of optimizations are carried out for each market (month) separately. The rounds alternate between two sub-algorithms to find converged outcomes for as many markets as possible. The converged outcome here means the setting of the norm of implied first order conditions to (near) zero.⁸⁸ If there are markets after the first try which do not meet the first order condition of optimality, a second try, with an updated starting point, is run for these markets. The second try can also have several rounds (sub-algorithms). Also, a similar third try is used if necessary. For some models/markets only one try is sufficient, for some other two or three are used. The log file output quoted by the Notifying Party shows that for some simulations in the intermediate second try the numerical derivatives used are only approximate. This is an intermediate step and in general does not imply that the *final* results are not reliable. In fact, as shown in the quotation, whenever this warning is given in the second try a third try is used and no such warning occurs in this last try. This means that the overall algorithm eventually finds a numerically well performing solution for most simulations. It can happen that there remain a few markets, in the examples only one out of 34, which do not meet the first order conditions even after the third try. These markets are not taken into account in the average price increases reported by the Commission. Hence, the results of the random coefficient model, as used by the Commission, can be considered as sufficiently stable. It is true that, in general, the less complex nested logit model does not show this type of convergence issues and, hence, is more stable. However, this relative instability of the random coefficient model is still not strong enough that the model's results could be considered as unreliable.

4.4.1.2. General remarks based on the academic literature

- (230) The Notifying Party also makes general comments on the random coefficient model based on the academic literature. First, based on Knittel and Metaxoglou (2014)⁸⁹ it points out that the estimator of the random coefficient model potentially can have instability issues. Second, based on Skrainka (2011)⁹⁰ it claims that the estimates may have finite sample bias and efficiency. Third, based on Reynaert and Verboven (2014)⁹¹ it claims that the estimates may be inefficient.
- (231) As a general remark, the Commission notes that these criticisms in general point to potential problems, but the Notifying Party does not provide evidence that these

⁸⁸ The implied first order condition is the difference between the left and right hand side of equation (1) when evaluated at the calculated prices.

⁸⁹ Knittel, C. R. and K. Metaxoglou, (2012): "Estimation of Random Coefficient Demand Models: Two Empiricists' Perspective," *Review of Economics and Statistics*, 96(1), pages 34-59, Doc ID 4398.

⁹⁰ Skrainka, B. (2011): "A Large Scale Study of the Small Sample Performance of Random Coefficient Models of Demand," *mimeo*, University of Chicago, available online at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1942627, Doc ID 4407.

⁹¹ Reynaert, M. and F. Verboven, (2012): "Improving the Performance of Random Coefficients Demand Models: the Role of Optimal Instruments," *Journal of Econometrics*, 179(1), pages 83-98, Doc ID 4406.

actually materialize in the case of the Commission's implementation of the random coefficient model. In fact, if anything can be concluded from reading these studies, it is that the Commission's implementation is likely to be robust to the potential problems listed.

- (232) First, the Knittel and Metaxoglou (2014) paper tests several optimization algorithms used to estimate the model. The finding of the paper is that the algorithms closest to that used by the Commission (the so-called Quasi-Newton methods with tight tolerances) are among the best performers.⁹² Further, Knittel and Metaxoglou report that the result of some of the algorithms fail to meet the first- and second-order optimality conditions of optimizations. It is important to note, however, that the Commission's estimates do meet these optimality conditions. Finally, Knittel and Metaxoglou use Monte Carlo integration, while the Commission uses sparse grid integration. This latter produces significantly more accurate results^{93,94} and, hence, is less prone to the criticism.
- (233) Second, Skrainka (2011) reports potential small sample bias and inefficiency properties of the random coefficient model's estimator. The Commission notes that these results are not relevant for the Commission's models because of the difference between the design of the study and the Commission's model specification. First, Skrainka shows that the potentially least precisely and most biasedly estimated random coefficient is that specified on the constant variable. However, the Commission's models do not have random coefficient on the constant variable. Second, unlike the published papers referred to by the Notifying Party (Knittel and Metaxoglou, 2014 and Reynaert and Verboven, 2014) Skrainka uses uniform random variables for the demand error term, ξ_j , instead of normally distributed draws. The published literature uses a normally distributed variable which is more plausible in an econometric setting.⁹⁵ The uniform distribution introduces a non-smoothness in the synthetic data which might partly explain Skrainka's results. The estimated error terms of the Commission's models do not show the pattern of a uniform distribution, rather they have a standard, unimodal distribution.
- (234) Third, the findings of Reynaert and Verboven (2014) do not imply that the Commission's results are unreliable. First, Reynaert and Verboven show that using the so-called optimal instruments results in a more efficient estimator than using the standard instruments. However, Reynaert and Verboven use a different, and less realistic, competition assumption (perfect competition) than the Commission's simulation models (oligopolistic competition). Hence, it is not logical that the paper's results are relevant for the Commission's model. Second, the paper shows that the main problem with the standard instruments is that the resulting random coefficient estimates may be zero when in fact the true value of the coefficient is non-zero (the distribution of the estimator is bi-modal with a spike at zero and a second mode at the true value of the coefficient). However, given that the Commission's estimates of the random coefficients from the revised specifications and in the Letter of Facts are

⁹² The algorithm actually used by the Commission, the so-called Newton-Raphson method (with tight tolerances), is not tested by Knittel and Metaxoglou (2012). The Newton-Raphson method uses the actual Hessian matrix during the optimization, while the Quasi-Newton methods use only a rough approximation of the Hessian.

⁹³ Judd and Skrainka (2011).

⁹⁴ Reynaert and Verboven (2012).

⁹⁵ See also Dubé, J-P. H., J. T. Fox and C-L. Su., (2012): "Improving the Numerical Performance of Static and Dynamic Aggregate Discrete Choice Random Coefficients Demand Estimation," *Econometrica*, 80(5), pages 2231-2267, Doc ID 4391.

both statistically and numerically different from zero (see Section 4.4.5 below) it is evident that the problem does not occur in the case of these estimated models.

4.4.2. *Controlling for unobserved tariff characteristics*

(235) The Notifying Party claims that an improved implementation of the nested logit model leads to lower price predictions than the Commission's original model specifications.^{96,97,98} In particular, the Notifying Party considers excluding negative prices from the sample and adding brand indicator variables to the explanatory variables of the model.

(236) The Commission notes that although the proposed sample and specification changes have some merit from a modelling point of view, the models, even after implementing the changes, predict non-negligible price increases. In particular, the refined nested logit models predict [...] * overall price increase for the private segment, with a [...] * range for Telefónica and a [...] * range for E-Plus.⁹⁹ Also, these ranges are not in contradiction with those predicted by the random coefficient models above.

4.4.3. *Treating ALDI as an independent competitor*

(237) The Notifying Party claims that if treating Aldi as a fully independent competitor the price increase predicted by the model is further reduced by roughly a half.^{100,101}

(238) The Commission refers to its discussion in the Decision (in Section 6.3.1.6) on Branded Resellers. In particular, the Commission considers that Branded Resellers do not exercise a significant competitive pressure on MNOs. As a result, any model simulation treating a Branded Reseller, and in particular a Branded Reseller like Aldi that directly depends on the merging parties separately, is not indicative of the likely price effect of the transaction.

4.4.4. *Numerical issues of the nested logit simulations*

(239) The Notifying Party claims that the results of the demand estimation based modelling cannot be reconciled with the changes stated in the Letter of Facts.^{102,103} This is because, when using the original code of the nested logit model used in the Statement of Objections and applied to the data used in the Letter of Facts, the results are numerically slightly different than when using the code of the nested logit model used in the Letter of Facts. Meanwhile, according to the Letter of Facts the changes (related to the handling of the VAT rate in the model simulations) should have affected only the results of the simple logit model and not those of the nested logit model. This is reported in Table 4 of the Notifying Party's economic submission attached to its Reply to the Letter of Facts.¹⁰⁴ The three columns of this table report results using the Statement of Objections code ("old code"), the code used by the Letter of Facts as used by the Notifying Party ("new code"), and the results of the

⁹⁶ Reply to the Statement of Objections, paragraph 64-65.

⁹⁷ Reply to the Letter of Facts, paragraph 91, second hyphen.

⁹⁸ Submission of the Notifying Party, "M.7018: Taking into account time invariant brand effects", 19 March 2014, ID02404.

⁹⁹ These results already take into account the data corrections included in the Letter of Facts (see above in point (218)).

¹⁰⁰ Reply to the Statement of Objections, paragraph 66.

¹⁰¹ Reply to the Letter of Facts, paragraph 91, third hyphen.

¹⁰² Reply to the Letter of Facts, paragraphs 88-90.

¹⁰³ Reply to the Letter of Facts, Memorandum by E.CA, pages 20-21.

¹⁰⁴ Reply to the Letter of Facts, Memorandum by E.CA, page 21.

Letter of Facts. The results show a discrepancy between the first two columns and a smaller deviation between the second and third. The Notifying Party submits that these shortcomings do not meet the necessary legal standard and do not comply with the Notifying Party's right to be heard.

- (240) The Commission notes that the discrepancy described by the Notifying Party in relation to the nested logit model had arisen because of the same reason as in the case of the simple logit model. Namely, the VAT rate was not properly taken into account in the marginal cost calculation stage of the modelling. The computer code used in the Letter of Facts, and available to the Notifying Party in the data room, solved this problem for both the simple logit and nested logit models. In the case of the nested logit model, on which the Commission relies in its assessment, the results do not change significantly. The small discrepancy between the last two columns of the Notifying Party's table referred to above, is because the Letter of Facts reported the average price increase results from the full sample, while the Notifying Party reported results from a more restricted sample. This restriction excluded those observations where the implied marginal costs were negative. Negative marginal costs might occur as in the estimation sample there were a few observations with negative prices. The difference between the two results is small ([...]* overall price increase) and does not change the qualitative conclusion.
- (241) In any event, the results presented in the Letter of Facts and the subsequent refinements, generated by the correct code, are the relevant ones. The Commission notes that these changes were transparent to the Notifying Party as all the codes, original and corrected, were made available to the Notifying Party in the context of the data room. Hence, the Notifying Party was sufficiently able to take note of and to comment on the evidence the Commission relies on in the context of these merger simulations.

4.4.5. *Revised results from the demand estimation based approach*

- (242) As a further assessment of the Notifying Party's comments, the Commission estimated a set of revised models. In particular, it used the following refinements. First, it used the corrected data that was used in the Letter of Facts. Second, it excluded the negative price observations as proposed by the Notifying Party. Third, it included brand dummy variables into the models as proposed by the Notifying Party. Fourth, for the random coefficient model it used the extended instrument set of the Letter of Facts.
- (243) The estimates of the refined models are presented in Table 19. All models provide a good fit of the data and pass the necessary specification tests (Rank-, Hansen- and weak identification tests). The coefficient on price ($-a$) is estimated to be negative and statistically significant in all models. The σ coefficients are statistically significant in both the random coefficient and nested logit models.
- (244) The predicted price increases of the refined models are displayed in Table 20. The results show price increases for Telefónica in the private segment that tend to be around or above 10%, and in the range of 7-12% for E-Plus. The predicted overall price increases are in the range of 4-8% in the segment. These ranges are consistent with those of price increase estimates of the first approach's sensitivity scenario.

Table 19: Parameter estimates of demand models, private segment (refined models)

	Model II refined		Model IV refined		Model VI refined		Model VIII refined	
	random coef		nested logit		random coef		nested logit	
sigma price (σ^{price})	0 094**	(0 013)			0 121**	(0 017)		
sigma tariff type (σ^G)			0 861***	(0 000)			0 744***	(0 001)
price (- α)	-0 207***	(0 000)	-0 043***	(0 000)	-0 240***	(0 000)	-0 043***	(0 001)
prepaid	7 501***	(0 000)	2 557***	(0 000)	7 794***	(0 000)	3 137***	(0 005)
commitment	0 372***	(0 000)	0 079**	(0 013)	0 387***	(0 000)	0 102**	(0 034)
sim only	-0 613***	(0 001)	-0 307***	(0 004)	-0 464**	(0 014)	-0 371**	(0 017)
Deutsche Telekom	0 423***	(0 001)	0 111**	(0 018)	0 482***	(0 000)	0 094	(0 118)
Telefónica	-0 505***	(0 001)	-0 229**	(0 013)	-0 388**	(0 015)	-0 292**	(0 034)
E-Plus	-0 555	(0 647)	1 806***	(0 001)	-1 673	(0 180)	1 630**	(0 017)
Freenet	-6 238***	(0 000)	-0 355	(0 435)	-6 041***	(0 000)	-0 741	(0 320)
Freenet own	0 978***	(0 000)	0 159	(0 388)	0 873***	(0 000)	0 315	(0 294)
allowance variables	yes		yes		yes		yes	
brand indicator variables	yes		yes		yes		yes	
month, year fixed effects	yes		yes					
time effects					yes		yes	
Number of observations	2957		2957		2957		2957	
R-squared	0 953		0 967		0 968		0 952	
Rank test, p-value	0 000		0 000		0 000		0 080	
Weak identification test	937 964		132 723		707 690		1 624	
Hansen test, p-value	0 299		0 716		0 633		0 962	

*Robust p-values in parentheses: * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$. Source: Commission calculations based on data provided by Deutsche Telekom, Vodafone, Telefónica, E-Plus and Freenet. The segment is modelled as all pre-paid, new+retained post-paid. Negative prices excluded from the estimation sample.*

Table 20: Predicted post-merger price increases, refined models, private segment (%)

	Model II refined	Model IV refined	Model VI refined	Model VIII refined
	random coef.	nested logit	random coef.	nested logit
Deutsche Telekom	-0.3%	0.6%	-0.2%	1.1%
Telefónica	11.9%	9.4%	10.4%	16.5%
E-Plus	7.8%	6.9%	6.9%	12.2%
Vodafone	0.4%	1.1%	0.2%	2.0%
Overall	4.8%	4.4%	4.1%	7.7%

Based on the models displayed in Table 19.

4.4.6. Other comments

4.4.6.1. Implied vs. observed margins

- (245) The Notifying Party further argues that the divergence between the results of the Commission's first and second approaches is largely driven by the divergence in the margin inputs.^{105,106} The margins implied by the demand estimation based model are lower than the observed incremental (and direct) margins. The Notifying Party concludes that the margins from the demand estimation based approach are preferred.
- (246) The Commission first notes that it cannot be said unambiguously that the demand based approach is able to identify the *overall* level of the "true" economic pre-merger margin. The overall level of the margins implied by the estimated demand model depends on the potential market size assumption used. The smaller the potential market the higher the average implied margin. The Commission used quite a large potential market size (about 117% of the sum of contestable subscribers¹⁰⁷). Second, the Commission also notes that in a merger simulation framework the pre-merger margins are inputs, and, all else equal, the resulting predicted price increases are larger the larger the pre-merger margins used are. Hence, if the implied margins under-estimate the true economic pre-merger margins, the resulting price increase predictions of the second approach also under-estimate the post-merger price increases. In fact, the refined model with implied margins closest to the observed incremental margins (nested logit Model VIII in Table 19 and Table 20) predicts the highest price increase, 7.7%, among the refined demand estimation based models.¹⁰⁸ But even this model's implied average margin level is somewhat below the average observed incremental margin. In sum, the fact that the implied margins are below the observed margins might indicate that the demand estimation based price increase predictions are under-estimating the merger's price effects.

4.4.6.2. Trend in predicted price increases

- (247) The Notifying Party also argues that regressing the price increases predicted by the Commission's Model IV on month and product indicators results in a downward sloping trend.¹⁰⁹ The Notifying Party considers that the slope of this trend is statistically significant. The slope is estimated to be [...]*
- (248) The Commission notes that the Notifying Party's calculations are flawed and hence unreliable. Despite saying so, the Notifying Party does not regress the predicted price increases on the trend variable.¹¹⁰ Instead, the regressed variable is the predicted post-merger price *level*. Hence, the Notifying Party's finding is simply that the implied post-merger price level might have a decreasing trend. However, this does not imply that the percentage gap between the predicted post-merger price level and

¹⁰⁵ Reply to the Statement of Objections, Annex 5, "Comments on quantitative analysis SO," page 8.

¹⁰⁶ Reply to the Letter of Facts, Memorandum by E.CA, page 2.

¹⁰⁷ Reply to the Statement of Objections, Annex 5, "Comments on quantitative analysis SO," page 18.

¹⁰⁸ These models are based on the first type of share definition (see point (199) above). The third definition leads to similar results, while from the second the implied margins are implausibly low (below 10%) rendering their results unreliable. The implied margins from the first and third method are also considered by the Notifying Party as very close to the margins relevant for pricing decisions (Reply to the Letter of Facts, Memorandum by E.CA, page 25).

¹⁰⁹ Reply to the Statement of Objections, Annex 5, "Comments on quantitative analysis SO," page 33.

¹¹⁰ File File "ID02129_Draft analysis_log.log" (ID02129).

the pre-merger price level (that is to say, the predicted price increase) is also decreasing over time.

4.4.6.3. Model misspecification

(249) The Notifying Party further argues that the Commission's models are misspecified. This is because the models assume that the price of a given tariff is the same for all customers. But, in reality, this is said not to be the case as the price paid by the customer depends on usage and, hence, customers with different usage end up paying different bills, even on the same tariff. This and the exogeneity assumption of usage leads to a measurement error in the price variable, which is another reason why prices might be correlated with the error term. The Notifying Party also notes that in academic applications this type of models was typically applied to industries where prices are the same for each customer.¹¹¹

(250) The Commission first notes that, in general, any economic model by construction is but an approximation of the real world economic phenomena to be captured. In this sense, every economic model is misspecified. The relevant questions are whether the misspecification is so strong that the model is not able capture the core modelled economic phenomena without serious bias, and whether the applied particular modelling/estimation technique allows for making the results robust to the consequences of the misspecification. A model answering to these problems to a reasonable degree can be informative and reliable. The types of discrete choice models and estimation techniques applied by the Commission were developed precisely so that despite the lack of available consumer level data valid *market level* inferences could be made.¹¹² Second, in fact, the Notifying Party itself refers to and relies upon academic studies that are subject to the same misspecification issue.^{113, 114} Third, the Commission's models do answer to this possible misspecification issue. This is because the applied estimation technique (the so-called instrumental variables estimation) takes into account the bias arising from the potential correlation between the price variable and the error term. In fact, this potential correlation is the very reason why this estimation technique was chosen (see the discussion in point (216) and the academic literature referred to therein). While the Commission's models might not be designed to capture all aspects of consumer heterogeneity, their predictions about the *average* consumer behaviour and, hence, the expected market outcomes, are unbiased in a statistical sense. Hence, the models' results are reliable for the purposes of supporting the Commission's Decision.

4.4.6.4. Unreliable calculated prices

(251) The Notifying Party also argues that the weighted average prices calculated by the Commission do not reflect the reality. According, to the Notifying Party, this can be, at least partially, driven by the mishandling of the activation fees which were treated as if they are due every month. This further leads to an allegedly distorted elasticity structure. In particular, the estimated demand for Aldi is said to be inelastic, while the market investigation supports that Aldi's customers are price sensitive.¹¹⁵

¹¹¹ Reply to the Statement of Objections, Annex 5, "Comments on quantitative analysis SO," page 20.

¹¹² See, for example, Berry (1994).

¹¹³ Doganoglu and Grzybowski (2007).

¹¹⁴ Iimi, A., (2005): "Estimating demand for cellular phone services in Japan," *Telecommunications Policy*, 29(1), pages.3-23, SDoc ID 4395.

¹¹⁵ Reply to the Statement of Objections, Annex 5, "Comments on quantitative analysis SO," pages 18-20.

- (252) The Commission notes that the calculated prices do reflect the reality. These prices reflect not only the different tariff structures (including activation and access fees) but also the typical handset subsidies. The latter are particularly important and can often be the primary driving force behind the overall tariff level differences. Moreover, the Commission's models attempt to capture the behaviour of those consumers who contemplate to choose a new tariff. As such, when evaluating the cost of a new tariff, the value of the activation fee has to be taken into account. This validates the Commission's approach. Finally, the Commission considers that its modelling results are not inconsistent with those of the market investigation. Aldi's customers being price sensitive means, from an economic modelling point of view, that their own-price elasticity is larger (in absolute value) than that of other brands for *any* given price level. As the elasticity's (absolute) value is increasing with the price level, it can be that the elasticity of a brand, whose customers are price sensitive, is low at the *actual* price level. The reason for this is precisely that the price is set by the operator of the tariff who in its decision takes into account the elasticity of demand for its products. The demand functions and, hence the resulting price levels, of all products are interrelated. This is precisely the economic structure that is captured by the Commission's modelling framework.

5. CONCLUSIONS

- (253) The Commission carried out a quantitative assessment of the likely price effects resulting from the elimination of horizontal competition between Telefónica and E-Plus. This assessment used two complementary approaches, the calibration based and demand estimation based approach. In generating these price predictions, the Commission took into account a number of arguments raised by the Notifying Party in its Replies to the Statement of Objections and to the Letter of Facts.
- (254) Taking into account these arguments, the Commission's first quantitative approach based on diversion ratios and margins predicts segment wide price increases around 12%-20% in the pre-paid segment and around 4%-6% in the post-paid residential segment. When looking at the average effects across the pre-paid and post-paid residential segments the predicted price increases range between 6%-10%. In the sensitivity scenario based on incremental margins, the corresponding predicted average price effects are in the range of 9%-15% in the pre-paid segment, 4%-6% in the post-paid residential segment, with an average effect across the pre-paid and post-paid residential segments at 5%-8%.
- (255) The Commission's second quantitative approach predicts average price increases in the range of 4-8% for the overall private retail market. This range is consistent with the price increase estimates of the first approach's sensitivity scenario.
- (256) Overall, the Commission's quantitative assessment indicates that (absent synergies) the merger would lead to significant price increases in the pre-paid and post-paid residential segments.

Table 21: Parameter estimates of demand models, private segment (all pre-paid, new+retained post-paid, Letter of Facts)

	Model I	Model II	Model III	Model IV	Model V	Model VI	Model VII	Model VI II
	simple logit	random coefficient	random coefficient	nested logit	simple logit	random coefficient	random coefficient	nested logit
sigma price (σprice)		0 068 (0 306)	0 053 (0 470)			0 000 (1 000)	0 059 (0 855)	
sigma tariff type (σG)				0 822*** (0 001)				0 689 (0 133)
price (-α)	-0 051 (0 129)	-0 142*** (0 000)	-0 111*** (0 001)	-0 032*** (0 003)	-0 047 (0 153)	-0 047 (0 142)	-0 123*** (0 000)	-0 035** (0 028)
prepaid	5 251*** (0 000)	5 298*** (0 000)	5 351*** (0 000)	2 252** (0 012)	5 308*** (0 000)	5 306*** (0 000)	5 341*** (0 000)	2 739 (0 108)
commitment	0,192*** (0 000)	0 235*** (0 000)	0 218*** (0 000)	0 059 (0 146)	0 188*** (0 000)	0 188*** (0 000)	0 224*** (0 000)	0 080 (0 287)
sim only	-0 980*** (0 000)	-0 533** (0 014)	-0 614*** (0 004)	-0 309 (0 132)	-0 958*** (0 000)	-0 959*** (0 000)	-0 577*** (0 008)	-0 417 (0 270)
Deutsche Telekom	-0,470*** (0 000)	-0 389*** (0 001)	-0 408*** (0 000)	-0 085 (0 464)	-0 468*** (0 000)	-0 468*** (0 000)	-0 399*** (0 000)	-0 147 (0 499)
Telefónica	-0 878*** (0 000)	-1 024*** (0 000)	-0 982*** (0 000)	-0 170 (0 419)	-0 875*** (0 000)	-0 875*** (0 000)	-0 997*** (0 000)	-0 284 (0 474)
E-Plus	-0 791 (0 272)	-1 493** (0 041)	-1 448** (0 046)	0 349 (0 374)	-0 868 (0 220)	-0 865 (0 212)	-1 482** (0 044)	0 165 (0 813)
Freenet	-0 712 (0 150)	-0 660 (0 188)	-0 763 (0 125)	0 206 (0 499)	-0 767 (0 116)	-0 765 (0 107)	-0 734 (0 144)	0 057 (0 917)
Freenet own	0 722*** (0 000)	0 735*** (0 000)	0 761*** (0 000)	0 047 (0 816)	0 737*** (0 000)	0 736*** (0 000)	0 755*** (0 000)	0 157 (0 683)
constant	-5 427*** (0 000)	-3 099*** (0 007)	-3 889*** (0 001)	-0 574 (0 692)	-5 944*** (0 000)	-5 940*** (0 000)	-4 015*** (0 000)	-1 520 (0 599)
allowance variables	yes	yes	yes	yes	yes	yes	yes	yes
month, year fixed effects	yes	yes	yes	yes				
time effects					yes	yes	yes	yes
Number of observations	2965	2965	2965	2965	2965	2965	2965	2965
R-squared	0 410	0 887	0 853	0 949	0 423	0 657	0 869	0 910
Rank test, p-value	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 080
Weak identification test	610 245	1010 775	1407 636	136 934	1338 036	848 440	817 047	1 633
Hansen test, p-value	0 971	0 836	0 760	0 998	0 998	0 821		0 949

Robust p-values in parentheses * p<0.1 ** p<0.05 *** p<0.01. Source Commission calculations based on data provided by Deutsche Telekom, Vodafone, Telefónica, E-Plus and Freenet.

Table 22: Parameter estimates of demand models, private segment (contestable pre-paid and post-paid, Letter of Facts)

	Model I	Model II	Model III	Model IV	Model V	Model VI	Model VII	Model VI II
	simple logit	random coefficient	random coefficient	nested logit	simple logit	random coefficient	random coefficient	nested logit
sigma price (σ_{price})		0 000 (1 000)	0 000 (1 000)			0 000 (1 000)	0 000 ()	
sigma tariff type (σ_G)				1 010*** (0 000)				0 807* (0 075)
price ($-\alpha$)	-0 067* (0 054)	-0 067* (0 051)	-0 063* (0 075)	-0 045*** (0 000)	-0 063* (0 064)	-0 064* (0 057)	-0 062* (0 076)	-0 048*** (0 003)
prepaid	3 441*** (0 000)	3 444*** (0 000)	3 507*** (0 000)	-0 248 (0 805)	3 500*** (0 000)	3 497*** (0 000)	3 519*** (0 000)	0 506 (0 764)
commitment	0 209*** (0 000)	0 209*** (0 000)	0 204*** (0 000)	0 046 (0 315)	0 206*** (0 000)	0 206*** (0 000)	0 204*** (0 000)	0 078 (0 300)
sim only	-1 077*** (0 000)	-1 076*** (0 000)	-1 049*** (0 000)	-0 254 (0 276)	-1 054*** (0 000)	-1 056*** (0 000)	-1 046*** (0 000)	-0 413 (0 274)
Deutsche Telekom	-0 473*** (0 000)	-0 473*** (0 000)	-0 472*** (0 000)	0 001 (0 996)	-0 471*** (0 000)	-0 471*** (0 000)	-0 471*** (0 000)	-0 093 (0 665)
Telefónica	-0 889*** (0 000)	-0 889*** (0 000)	-0 887*** (0 000)	-0 018 (0 938)	-0 885*** (0 000)	-0 885*** (0 000)	-0 885*** (0 000)	-0 192 (0 626)
E-Plus	-0 437 (0 561)	-0 441 (0 552)	-0 537 (0 478)	0 970** (0 026)	-0 515 (0 487)	-0 510 (0 481)	-0 544 (0 472)	0 671 (0 330)
Freenet	-0 471 (0 362)	-0 473 (0 352)	-0 539 (0 298)	0 662* (0 050)	-0 526 (0 303)	-0 523 (0 291)	-0 546 (0 292)	0 423 (0 437)
Freenet own	0 664*** (0 001)	0 664*** (0 001)	0 681*** (0 001)	-0 166 (0 462)	0 679*** (0 001)	0 678*** (0 001)	0 684*** (0 001)	0 003 (0 993)
constant	-3 726*** (0 002)	-3 731*** (0 002)	-3 862*** (0 001)	2 247 (0 163)	-4 220*** (0 000)	-4 216*** (0 000)	-4 261*** (0 000)	0 931 (0 744)
allowance variables	yes	yes	yes	yes	yes	yes	yes	yes
month, year fixed effects	yes	yes	yes	yes				
time effects					yes	yes	yes	yes
Number of observations	2965	2965	2965	2965	2965	2965	2965	2965
R-squared	0 145	0 466	0 477	0 909	0 167	0 475	0 479	0 872
Rank test, p-value	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 080
Weak identification test	610 245	1010 775	1407 636	136 934	1338 036	848 440	817 047	1 633
Hansen test, p-value	0 966	0 414	0 089	0 569	0 989	0 555		0 458

Robust p-values in parentheses * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$. Source Commission calculations based on data provided by Deutsche Telekom, Vodafone, Telefónica, E-Plus and Freenet.

Table 23: Parameter estimates of demand models, private segment (adjusted shares, Letter of Facts)

	Model I	Model II	Model III	Model IV	Model V	Model VI	Model VII	Model VI II
	simple logit	random coefficient	random coefficient	nested logit	simple logit	random coefficient	random coefficient	nested logit
sigma price (σ _{price})		0.047 (0.447)	0.039 (0.577)			0.000 ()	0.053 (0.882)	
sigma tariff type (σ _G)				0.770*** (0.003)				0.724* (0.057)
price (-α)	-0.042 (0.216)	-0.091*** (0.005)	-0.074** (0.026)	-0.032*** (0.004)	-0.042 (0.209)	-0.039 (0.231)	-0.095*** (0.004)	-0.033** (0.010)
prepaid	4.745*** (0.000)	4.850*** (0.000)	4.902*** (0.000)	2.316*** (0.007)	4.749*** (0.000)	4.790*** (0.000)	4.937*** (0.000)	2.456** (0.045)
commitment	0.172*** (0.000)	0.192*** (0.000)	0.182*** (0.000)	0.064 (0.101)	0.172*** (0.000)	0.169*** (0.000)	0.191*** (0.000)	0.071 (0.203)
sim only	-1.002*** (0.000)	-0.692*** (0.001)	-0.724*** (0.001)	-0.362 (0.112)	-1.002*** (0.000)	-0.984*** (0.000)	-0.614*** (0.004)	-0.403 (0.215)
Deutsche Telekom	-0.331*** (0.005)	-0.277** (0.014)	-0.289** (0.011)	-0.077 (0.409)	-0.330*** (0.005)	-0.330*** (0.005)	-0.266** (0.018)	-0.092 (0.484)
Telefónica	-0.578*** (0.000)	-0.659*** (0.000)	-0.640*** (0.000)	-0.146 (0.339)	-0.577*** (0.000)	-0.576*** (0.000)	-0.668*** (0.000)	-0.171 (0.433)
E-Plus	-0.507 (0.492)	-1.075 (0.128)	-1.087 (0.130)	0.366 (0.331)	-0.504 (0.489)	-0.568 (0.424)	-1.255* (0.082)	0.322 (0.520)
Freenet	-0.521 (0.306)	-0.583 (0.229)	-0.659 (0.181)	0.208 (0.482)	-0.522 (0.301)	-0.565 (0.248)	-0.654 (0.186)	0.170 (0.673)
Freenet own	0.445** (0.025)	0.486** (0.010)	0.501*** (0.009)	0.022 (0.887)	0.446** (0.024)	0.457** (0.018)	0.506*** (0.008)	0.046 (0.833)
constant	-5.562*** (0.000)	-4.344*** (0.000)	-4.786*** (0.000)	-0.959 (0.546)	-5.867*** (0.000)	-6.016*** (0.000)	-4.622*** (0.000)	-1.355 (0.573)
allowance variables	yes	yes	yes	yes	yes	yes	yes	yes
month, year fixed effects	yes	yes	yes	yes				
time effects					yes	yes	yes	yes
Number of observations	2965	2965	2965	2965	2965	2965	2965	2965
R-squared	0.342	0.807	0.774	0.928	0.343	0.600	0.833	0.912
Rank test, p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045
Weak identification test	610.245	1010.775	1407.636	146.218	1338.036	848.440	817.047	1.941
Hansen test, p-value	0.977	0.742	0.775	0.953	0.995	0.765		0.730

Robust p-values in parentheses * p<0.1 ** p<0.05 *** p<0.01. Source Commission calculations based on data provided by Deutsche Telekom, Vodafone, Telefónica, E-Plus and Freenet.

Table 24: Predicted post-merger price increases (% , Letter of Facts)

	Model_I simple logit	Model_II random coefficient	Model_III random coefficient	Model_IV nested logit	Model_V simple logit	Model_VI random coefficient	Model_VII random coefficient	Model_VIII nested logit
<i>all pre- & contestable post-paid</i>								
Deutsche Telekom	2.2%	-0.2%	-0.5%	1.1%	2.3%	2.3%	0.6%	1.6%
Telefónica	40.9%	16.8%	20.6%	16.0%	44.2%	44.3%	27.4%	24.4%
E-Plus	29.5%	11.0%	13.3%	11.8%	31.8%	31.9%	27.9%	18.0%
Vodafone	3.7%	0.7%	0.7%	1.9%	4.0%	4.0%	2.4%	2.9%
Overall	18.4%	6.8%	8.2%	7.5%	19.9%	19.9%	14.4%	11.4%
<i>contestable pre- & post-paid</i>								
Deutsche Telekom	1.0%	1.0%	1.1%		1.1%	1.1%	1.1%	0.4%
Telefónica	16.0%	16.1%	17.2%		17.0%	17.0%	17.4%	6.5%
E-Plus	14.4%	14.5%	15.5%		15.2%	15.2%	15.6%	5.8%
Vodafone	1.6%	1.6%	1.7%		1.7%	1.7%	1.7%	0.7%
Overall	6.4%	6.4%	6.9%		6.7%	6.8%	6.9%	2.6%
<i>adjusted shares</i>								
Deutsche Telekom	1.9%	-0.1%	0.1%	1.1%	1.9%	2.0%	1.2%	1.3%
Telefónica	31.9%	19.1%	23.7%	12.0%	31.9%	34.3%	15.9%	13.9%
E-Plus	23.5%	11.2%	13.5%	9.0%	23.5%	25.3%	11.9%	10.4%
Vodafone	4.8%	2.1%	2.5%	2.7%	4.8%	5.1%	2.9%	3.1%
Overall	14.2%	7.3%	8.9%	5.8%	14.2%	15.3%	7.4%	6.7%

Source Commission calculations based on data provided by Deutsche Telekom, Vodafone, Telefónica, E-Plus and Freenet.

Table 25: Compensating marginal cost reductions (€/subscriber, Letter of Facts)

	Model_I	Model_II	Model_III	Model_IV	Model_V	Model_VI	Model_VII	Model_VIII
	simple logit	random coefficient	random coefficient	nested logit	simple logit	random coefficient	random coefficient	nested logit
<i>all pre- & contestable post-paid</i>								
Telefónica	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
E-Plus	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
<i>contestable pre- & post-paid</i>								
Telefónica	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
E-Plus	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
<i>adjusted shares</i>								
Telefónica	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
E-Plus	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source Commission calculations based on data provided by Deutsche Telekom, Vodafone, Telefónica, E-Plus and Freenet

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ANNEX B: DETAILED ASSESSMENT TO QUANTIFY CONSUMER BENEFITS FROM IMPROVED NETWORK QUALITY ON THE BASIS OF CONNECT TEST SCORES

1. INTRODUCTION

- (1) As part of their economic submissions aimed at quantifying the efficiencies arising from the merger, the Notifying Party provided an econometric study (the "study") aimed at quantifying the consumer benefit brought about by network quality.
- (2) ¹ The analysis relies on the estimation of the relationship between the quality of the network, as approximated by the voice CONNECT test score, and the price. In their study, the Notifying Party finds a positive and significant effect of network quality on price.
- (3) The aim of this Annex is to complement the assessment of the submitted study made in the main text of the Decision. The Annex provides first a summary of the study of the Notifying Party and of its results; it then proceeds illustrating the assessment made by the Commission in the Statement of Objections, focussing on the more technical aspects. Certain arguments raised by the Notifying Party in its reply to the Statement of Objections are also presented and discussed in this section. Not all the aspects of the study and arguments raised by the Notifying Party are presented, as some are discussed at length in the Decision. For this reason, the Annex should be read in conjunction with the main text of the Decision.

2. DETAILED SUMMARY OF NOTIFYING PARTY'S VIEW

- (4) In its econometric analysis, they used a model in which the deflated² effective price per minute (EPPM) for voice services was regressed on the network quality, as approximated by the normalized voice CONNECT test score. For this purpose, the voice CONNECT test score was normalized so that in each year the maximum achievable test score is 100. The voice EPPM is obtained by dividing the voice ARPU by voice minutes of use ("MoU"). MoU is used directly as provided by Yankee's "EMEA Mobile Carrier Monitor June 2013", except for Deutsche Telekom. According to the Notifying Party, Deutsche Telekom reports MoU on the basis of "on-net and outgoing minutes alone". The Notifying Party therefore corrects the data by assuming that Deutsche Telekom's MoU is 20% higher than reported by Yankee.³
- (5) The Notifying Party provided different versions of their econometric analysis. In particular, the Notifying Parties considered the two following modification of their baseline model:

¹ See Annex A to Form CO, sections 2.3.

² "Deflated" means that prices have been adjusted for inflation.

³ The whole analysis is based on the MoU-corrected figures if not specifically mentioned otherwise.

- (a) the inclusion, or exclusion, from the econometric specification of a set of variables controlling for underlying differences across operators not related to the network quality ("MNO fixed effects")⁴;
 - (b) the restriction of the sample to exclude year 2003 from the analysis.
- (6) The Notifying Party submitted that the specifications which include MNO fixed effects should be regarded as giving a lower-bound estimate of the effect of the CONNECT test score on EPPM. As the ranking of operators according to CONNECT test score being quite stable over time, the MNO fixed effects would unduly pick up some of the effect that should be associated with network quality. For the same reason, the Notifying Party further considered that the estimated values without MNO fixed effects should be regarded as an upper bound of the results.
- (7) The Notifying Party also conducted several other robustness checks, none of which leads to any significant change in the results. These include in particular:⁵
- (a) using an "undeflated" voice EPPM, i.e. not correcting for inflation;
 - (b) using aggregated yearly data instead of quarterly data of the voice EPPM.
- (8) In its reply to [...] the Notifying Party provides an analysis using the preceding year's CONNECT test score instead of the contemporaneous value in the regression. This change in the specification decreases the coefficients for quality, whilst still finding a positive and statistically significant effect of quality.⁶
- (9) To eliminate the bias originating from the fact that since 2009, E-Plus and Telefonica –as opposed to their competitors– significantly reduced handset subsidies, the Notifying Party repeated its original analysis using a corrected voice ARPU. This correction is done by adding the handset revenues per user from Telefónica's complementary MyHandy program (whereby customers can effectively rent handsets) to the ARPUs of E-Plus and of Telefónica. This increases the ARPUs of the corresponding operators by [...] (2009) to [...] (2013). The re-assessment of the impact of the CONNECT score on the adjusted new voice EPPM leads to a small decrease in the estimated value of network quality, which remain however positive and significant.⁷
- (10) In its reply to [...] the Notifying Party also provided some robustness checks on this correction. In response to the Commission's questions the Notifying Party further increased the initial upward adjustment of the ARPUs by 20%, 40%, 60%, 80%. This leads to further small decreases of the estimated values of network quality.⁸

⁴ MNO fixed effects take into account all those time-invariant features of MNOs that are not included in the specification. The inclusion of MNO fixed effects assures that the estimated coefficient on the network quality, that measures consumer benefits, of is not biased by differences between MNOs that are unrelated to network quality. As an example, the Notifying Party points out that Deutsche Telekom's customer services are generally perceived as better than at E-Plus'.

⁵ Annex A to Form CO, Doc ID 416.

⁶ Reply to [...], p.26.

⁷ Reply to [...], p.27 et seq.

⁸ Reply to [...], p.57 et seq.

- (11) Based on these results, the Notifying Party concludes that the submitted study together with the robustness test shows that there is a significantly positive benefit to consumers of improved network quality.

3. *ASSESSMENT OF THE COMMISSION*

- (12) As part of its assessment of the study, The Commission has tested for the robustness of the results to modifications in the time period used to estimate the benefits of network quality. In particular, the Commission has focussed on two periods: the one between q1/2005 and q4/2012 and the one between q1/2008 and q4/2012. These results are reported in Table 1 and table 2 below, respectively without and with MNO fixed effects. These results table report estimated consumer values for voice network quality, as measured by the CONNECT score. The estimated values indicate by how much (in %) the voice EPPM would increase if the normalized test score increases by one unit. For example, the estimated coefficient of 0.0118 means that the voice EPPM would increase by 1.18% for each additional normalized voice CONNECT test score a network obtains.
- (13) The estimated consumer values of voice network quality estimated for the specification which does not control for MNO brand effects (Table 1) vary from [...]*, depending on the period over which the values were estimated. For the specification which controls for MNO brand effects in Table 2, the estimated coefficients range from [...]* and become statistically less significant if the sample is restricted to the samples including the period from q1/2005 to q4/2012 and the one from q1/2008 to q4/2012.⁹ This suggest that the results are not robust to the restriction of the sample to cover only more recent years, and this problem is particularly present in the model including MNO fixed effects.

⁹ More precisely, from a statistical perspective, for the periods 2005-2012 and 2008-2012, the probability that the estimated values are obtained despite the true value for network quality being zero is larger than 10%.

Table 26. EPPM voice on CONNECT test score without MNO fixed effects

	EPPM voice			
	q1/2003- q4/2012	q1/2004- q4/2012	q1/2005- q4/2012	q1/2008- q4/2012
CONNECT	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
2004	[...]*	[...]*	[...]*	[...]*
2005	[...]*	[...]*	[...]*	[...]*
2006	[...]*	[...]*	[...]*	[...]*
2007	[...]*	[...]*	[...]*	[...]*
2008	[...]*	[...]*	[...]*	[...]*
2009	[...]*	[...]*	[...]*	[...]*
2010	[...]*	[...]*	[...]*	[...]*
2011	[...]*	[...]*	[...]*	[...]*
2012	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
Constant	[...]*	[...]*	[...]*	[...]*
Observations	[...]*	[...]*	[...]*	[...]*
R-squared	[...]*	[...]*	[...]*	[...]*
<p>*** p<0.01, ** p<0.05, * p<0.1; the dependent variable is in logarithm, deflated and corrected with the my handy + 60% correction proposed by the Notifying Party in Reply to RFI 9, the CONNECT test score for voice was standardised to a maximum value of 100</p>				

Table 2. EPPM voice on CONNECT test score with MNO fixed effects

	EPPM voice			
	q1/2003- q4/2012	q1/2004- q4/2012	q1/2005- q4/2012	q1/2008- q4/2012
CONNECT	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
O2	[...]*	[...]*	[...]*	[...]*
DTAG	[...]*	[...]*	[...]*	[...]*
vodafone	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
2004	[...]*	[...]*	[...]*	[...]*
2005	[...]*	[...]*	[...]*	[...]*
2006	[...]*	[...]*	[...]*	[...]*
2007	[...]*	[...]*	[...]*	[...]*
2008	[...]*	[...]*	[...]*	[...]*
2009	[...]*	[...]*	[...]*	[...]*
2010	[...]*	[...]*	[...]*	[...]*
2011	[...]*	[...]*	[...]*	[...]*
2012	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
Constant	[...]*	[...]*	[...]*	[...]*
Observations	[...]*	[...]*	[...]*	[...]*
R-squared	[...]*	[...]*	[...]*	[...]*
*** p<0.01, ** p<0.05, * p<0.1; the dependent variable is in logarithm, deflated and corrected with the my handy + 60% correction proposed by the Notifying Party in Reply to RFI 9, the CONNECT test score for voice was standardised to a maximum value of 100				

- (14) The Commission has also carried out the estimation of the value of quality using an alternative econometric model with the (voice) ARPU as a dependent variable and MoU added as a control variable. The Commission considers this to be a more flexible and possibly more appropriate model than the one originally presented by the Parties. This is because regressing the voice EPPM on the voice CONNECT test score effectively amounts to imposing an additional restriction compared to the model based on the voice ARPU and the MoU. This in turn follows from the fact that the logarithm of the EPPM is mathematically equivalent to the logarithm of the voice ARPU minus the logarithm of the MoU. Hence using the logarithm of the EPPM is equivalent to implicitly restricting the coefficient of the logarithm of the MoU to one in a model with the ARPU as dependent variable and the MoU as an explanatory variable.

- (15) Based on the results of this revised model, the Commission has also examined econometrically whether the implicitly imposed restriction by using the voice EPPM is justified. When using the (logarithm of the) voice ARPU as dependent variable, the estimated coefficient of MoU significantly differs from one, that is, it differs from the implicitly imposed restriction by using the EPPM. For example, considering the period q1/2003 to q4/2012 and accounting for MNO specific effects, the estimated coefficient for MoU is 0.297, which significantly differs from one from a statistical point of view.¹⁰ Hence, the restriction implicitly imposed by using the EPPM instead of the voice ARPU and accounting for the MoU appears neither necessary nor well justified.
- (16) In its reply to the Statement of Objection, the Notifying Party raised various criticisms to the alternative proposed by the Commission. Among other things, the Notifying Party argued that the inclusion of MOU as an additional independent variable would lead to an endogeneity problem with respect to this variable. This would be the case because MOU that is included in the model by the Commission as a factor affecting ARPU, would be at the same time a function of the price portion embedded in ARPU, as usage would tend to reduce as price increases. This latter feature would lead the effect of network quality improvement to be captured by the MOU variable, understating in this way the effect reported by the CONNECT variable.
- (17) In light of this criticism, the Commission acknowledges that an endogeneity problem as the one identified by the Notifying Party can arise in case the assumption of the exogeneity of MOU with respect to prices does not hold. The Commission notices that, even considering this possibility, this would not have a direct impact on the estimate for the CONNECT test score. In particular, this would not automatically imply that, as a result, the estimated effect of the CONNECT test score would be understated, as the Notifying Party argues. This would in fact be the case only if one thinks that a higher quality of the network, as captured by the CONNECT test score, would also lead to an increase in usage at the single user level.
- (18) As testing for endogeneity in abstract, and in absence of a candidate instrument, is not generally feasible, the Commission has introduced this additional model with the aim of testing the robustness of the Notifying Party's model to a simple modification. The model of the Commission, while relying of the assumption described above, nevertheless represents a generalization as compared to the one proposed by the Notifying Party; the latter in fact, as also acknowledged by the Notifying Party in their reply to the Statement of Objections, implicitly imposes a constraint on the MOU coefficient.
- (19) The Commission has estimated the value of voice network quality using the voice ARPU as dependent variable and controlling for voice usage by using MoU as an additional explanatory variable, again without and with the inclusion of MNO fixed effects. The Commission notices that the econometric model that takes into account MNO brand effects is broadly robust to this modification. The estimated coefficient

¹⁰ The significance of the difference has been tested applying a so-called Wald test. The test reports that the probability that the estimated value is obtained despite the true coefficient for the logarithm of MoU being one is 0%.

goes in fact from [...]*, considering the estimation on the whole 2003-2013 sample. In the case of the model that does not control for MNO brand effects, the estimated value drops by roughly a factor of four, as shown by the results reported in Table 3. The MNO specific effects report highly significant coefficients, and the overall explanatory power of the regression increases once these controls are included. This strongly suggests that the model should include MNOs specific effects, which would translate into a significantly lower estimated effect of the CONNECT test score on EPPM/ARPU.

Table 3. ARPU voice on CONNECT test score and MoU without MNO fixed effects

	ARPU voice			
	q1/2003- q4/2012	q1/2004- q4/2012	q1/2005- q4/2012	q1/2008- q4/2012
CONNECT	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
MoU	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
2004	[...]*	[...]*	[...]*	[...]*
2005	[...]*	[...]*	[...]*	[...]*
2006	[...]*	[...]*	[...]*	[...]*
2007	[...]*	[...]*	[...]*	[...]*
2008	[...]*	[...]*	[...]*	[...]*
2009	[...]*	[...]*	[...]*	[...]*
2010	[...]*	[...]*	[...]*	[...]*
2011	[...]*	[...]*	[...]*	[...]*
2012	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
Constant	[...]*	[...]*	[...]*	[...]*
Observations	[...]*	[...]*	[...]*	[...]*
R-squared	[...]*	[...]*	[...]*	[...]*
*** p<0.01, ** p<0.05, * p<0.1; the dependent variable is in logarithm, deflated and corrected with the my handy + 60% correction proposed by the Notifying Party in Reply to RFI 9, the CONNECT test score for voice was standardised to a maximum value of 100, the MoU is in logarithm and was corrected by the Notifying Party for DTAG adding 20% to account for incoming minutes				

Table 4. ARPU voice on CONNECT test score and MoU with MNO fixed effects

	ARPU voice			
	q1/2003- q4/2012	q1/2004- q4/2012	q1/2005- q4/2012	q1/2008- q4/2012
CONNECT	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
MoU	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
2004	[...]*	[...]*	[...]*	[...]*
2005	[...]*	[...]*	[...]*	[...]*
2006	[...]*	[...]*	[...]*	[...]*
2007	[...]*	[...]*	[...]*	[...]*
2008	[...]*	[...]*	[...]*	[...]*
2009	[...]*	[...]*	[...]*	[...]*
2010	[...]*	[...]*	[...]*	[...]*
2011	[...]*	[...]*	[...]*	[...]*
2012	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
O2	[...]*	[...]*	[...]*	[...]*
DTAG	[...]*	[...]*	[...]*	[...]*
Vodafone	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*
Constant	[...]*	[...]*	[...]*	[...]*
Observations	[...]*	[...]*	[...]*	[...]*
R-squared	[...]*	[...]*	[...]*	[...]*
*** p<0.01, ** p<0.05, * p<0.1; the dependent variable is in logarithm, deflated and corrected with the my handy + 60% correction proposed by the Notifying Party in Reply to RFI 9, the CONNECT test score for voice was standardised to a maximum value of 100, the MoU is in logarithm and was corrected by the Notifying Party for DTAG adding 20% to account for incoming minutes				

(20) The Commission considers that the possible presence of serial correlation in the error terms of the regression could lead to an underestimation of the standard errors. To test this hypothesis, the Commission applied the Wooldridge test¹¹ which is suited to

¹¹ See Wooldridge, J. M. 2002. *Econometric Analysis of Cross Section and Panel Data*. Cambridge, MA: MIT Press. The Wooldridge test is based on assessing the serial correlation of residuals from an

detect autocorrelation in panel data. Indeed, the hypothesis of no serial correlation can be rejected based on statistical grounds.¹² This raises serious concerns on the reliability of the estimated standard errors. The Commission is aware that due to the small number of clusters, standard methods of accounting for serial correlation may not be feasible in this context. Nevertheless, the Commission points out that not taking into account serial correlation may lead to an overstatement of the robustness of the results.

- (21) The Commission has also noted in its 6(1)(c) decision that there are further issues linked to the definition of the used variables. In particular, there is a risk of overestimating the EPPM of Deutsche Telekom since Deutsche Telekom in contrast to the other German MNOs does not report incoming voice minutes. The Notifying Party has meanwhile submitted robustness checks indicating that the submitted study when accounting for MNO specific effects appears to sufficiently address this problem.¹³

Quantification of consumer benefits of network quality including mobile data

- (22) Inferring the future user benefits of network quality from the benefits of voice network quality appears not to be fully justified given that future network quality will be to a large extent determined by the quality of data transmission. As part of its investigation, the Commission has asked German MNOs for information on historic mobile data and SMS traffic and has conducted a similar analysis to the one submitted by the Notifying Party. More precisely, the Commission has estimated the value of an increase in the *total* CONNECT test score (that is, the sum of the voice and the data test score) when considering the total ARPU and controlling for data usage, SMS usage and MoU. The Commission has rescaled the total CONNECT test so that the maximum test score is 100 in every year. The estimation of this model yields coefficients between [...] and [...], with varying levels of statistical significance, depending on the time period considered. This estimation has been carried out with MNO fixed effects. Results are reported in Table 5 below.

auxiliary regression of the first-differences of the EPPM voice on inter alia the first-differences of the voice CONNECT test score.

¹² The so called p-value of [...] is very close to zero, implying that the obtained statistics would be very unlikely if there was indeed no serial correlation.

¹³ Reply to [...], question 23.

Table 5. ARPU on total CONNECT test score MoU, Data and SMS per subscriber with MNO fixed effects

	Total ARPU				
	q1/2003- q4/2012	q1/2004- q4/2012	q1/2005- q4/2012	q1/2006- q4/2012	q1/2008- q4/2012
CONNECT	[...]*	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*	[...]*
MoU	[...]*	[...]*	[...]*	[...]*	[...]*
SMS per subscriber	[...]*	[...]*	[...]*	[...]*	[...]*
Data per subscriber	[...]*	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*	[...]*
2004	[...]*	[...]*	[...]*	[...]*	[...]*
2005	[...]*	[...]*	[...]*	[...]*	[...]*
2006	[...]*	[...]*	[...]*	[...]*	[...]*
2007	[...]*	[...]*	[...]*	[...]*	[...]*
2008	[...]*	[...]*	[...]*	[...]*	[...]*
2009	[...]*	[...]*	[...]*	[...]*	[...]*
2010	[...]*	[...]*	[...]*	[...]*	[...]*
2011	[...]*	[...]*	[...]*	[...]*	[...]*
2012	[...]*	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*	[...]*
O2	[...]*	[...]*	[...]*	[...]*	[...]*
DTAG	[...]*	[...]*	[...]*	[...]*	[...]*
Vodafone	[...]*	[...]*	[...]*	[...]*	[...]*
	[...]*	[...]*	[...]*	[...]*	[...]*
Constant	[...]*	[...]*	[...]*	[...]*	[...]*
Observations	[...]*	[...]*	[...]*	[...]*	[...]*
R-squared	[...]*	[...]*	[...]*	[...]*	[...]*

*** p<0.01, ** p<0.05, * p<0.1; the dependent variable is in logarithm, deflated and corrected with the my handy + 60% correction proposed by the Notifying Party in Reply to RFI 9, the total CONNECT test score was standardised to a maximum value of 100, the MoU is in logarithm and was corrected by the Notifying Party for DTAG adding 20% to account for incoming minutes, data per subscriber is in logarithm

(23) The Commission has also analysed by how much the data ARPU increases for each additional point of rescaled CONNECT data test score (with 100 points being the maximum score in every year), when accounting for data and SMS usage. The results of this specification mostly report a negative coefficient for the CONNECT data test

score. Taken at face value, this result would suggest the presence of a negative relationship between variation in the data ARPU and data CONNECT test score, once other factors are taken into account.

Table 6. ARPU data on data CONNECT test score SMS and Data per subscriber with MNO fixed effects

	ARPU data			
	q1/2004- q4/2012	q1/2005- q4/2012	q1/2006- q4/2012	q1/2008- q4/2012
CONNECT	[...]*	[...]*	[...]*	[...]*
SMS per subscriber	[...]*	[...]*	[...]*	[...]*
Data per subscriber	[...]*	[...]*	[...]*	[...]*
2005	[...]*	[...]*	[...]*	[...]*
2006	[...]*	[...]*	[...]*	[...]*
2007	[...]*	[...]*	[...]*	[...]*
2008	[...]*	[...]*	[...]*	[...]*
2009	[...]*	[...]*	[...]*	[...]*
2010	[...]*	[...]*	[...]*	[...]*
2011	[...]*	[...]*	[...]*	[...]*
2012	[...]*	[...]*	[...]*	[...]*
O2	[...]*	[...]*	[...]*	[...]*
DTAG	[...]*	[...]*	[...]*	[...]*
Vodafone	[...]*	[...]*	[...]*	[...]*
Constant	[...]*	[...]*	[...]*	[...]*
Observations	[...]*	[...]*	[...]*	[...]*
R-squared	[...]*	[...]*	[...]*	[...]*

*** p<0.01, ** p<0.05, * p<0.1; the dependent variable is in logarithm, deflated and corrected with the my handy + 60% correction proposed by the Notifying Party in Reply to RFI 9, the CONNECT test score for data was standardised to a maximum value of 100, data per subscriber is in logarithm

(24) [...]*.

- (25) In its reply to the Statement of Objections, the Notifying Party raises several criticisms to the expansion of the scope of the model to include data service. In particular, the Notifying Party points out that the model leads to implausible results for what concerns SMS and data usage. This may be due, in the Notifying Party's view, to shortcomings to be found in the data quality, especially with respect to the variable accounting for data usage and data ARPU.
- (26) The Commission considered the criticisms raised by the Notifying Party and further analysed the data used in the econometric exercise. The Commission acknowledged in the Statement of Objections that it cannot be excluded that the results, which appear to be counterintuitive, may be in part linked to methodological inconsistencies when splitting the total ARPU into voice and data ARPU across MNOs. Despite this problem, and following further scrutiny, the Commission has not found any clear-cut evidence this or other features of the data would preclude the estimation of the model including data services. In addition, the Notifying Party has not provided, either before or after the issuing of the Statement of Objections, any substantial economic reason why the present model should not be used for data usage, while it should be suitable for voice usage. For these reasons, the Commission considers that the results of the application of the model to data usage, either included as part of total ARPU, or considered in isolation, does not confirm the positive relationship between EPPM/ARPU and the CONNECT test score found for voice service.

4. CONCLUSION

- (27) For the above-mentioned reasons and for the further reasons mentioned in the Decision, the Commission considers that the submitted study which relates voice EPPM across MNOs to their respective mobile network quality, has several significant shortcomings. As a result of these shortcomings, the model has not proven to be sufficiently robust to be considered suitable for a proper quantification of the benefit brought about by the Merger in terms of improved network quality.

ANNEX C

European Commission
DG Competition
Place Madou 1
1210 Saint-Josse-ten-Noode
Case M.7018 – Telefónica Deutschland / E-Plus
Commitments to the European Commission
29 May 2014

**Case
M.7018**

**Telefónica Deutschland /
E-Plus**

COMMITMENTS TO THE EUROPEAN COMMISSION

**29 May
2014**

Pursuant to Article 8(2) of Council Regulation (EC) No 139/2004 (the "**Merger Regulation**"), Telefónica Deutschland Holding AG ("**TEF DE**") hereby enters into the following Commitments (the "**Commitments**") vis-à-vis the European Commission (the "**Commission**") with a view to rendering acquisition of E-Plus Mobilfunk GmbH & Co. KG (the "**Concentration**") compatible with the internal market and the functioning of the EEA Agreement.

The Commitments shall take effect upon the date of adoption of the Decision ("**Effective Date**")

This text shall be interpreted in light of the Commission's Decision pursuant to Article 8(2) of the Merger Regulation to declare the Concentration compatible with the internal market and the functioning of the EEA Agreement (the "**Decision**"), in the general framework of European Union law, in particular in light of the Merger Regulation, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004.

A. Definitions

For the purpose of the Commitments, the following terms shall have the following meaning:

Additional Capacity: Adjusted Capacity minus Reference Capacity.

Adjusted Capacity: The capacity foreseen in the most current Network Forecast for a month in the Adjustment Period multiplied (i) with the Adjustment Factor, (ii) with the percentage foreseen in the Glide Path for the respective month and (iii) with the share of the MBA Minimum Capacity purchased by the individual Upfront MBA MVNO.

Adjustment Factor: The ratio between the actual measured Total Capacity of the New Merged Entity and the capacity foreseen in the most current Network Forecast for the month of measurement.

Adjustment Period: Period between the next month following the month of measurement until and including the month the next measurement takes place.

Affiliated Undertakings: Any entity holding a controlling interest in TEF DE as well as any undertaking directly or indirectly controlled by TEF DE and/or by the ultimate parent companies of TEF DE. The notion of control and controlling interest shall be interpreted pursuant to Article 3 of the Merger Regulation in light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings ("the Consolidated Jurisdictional Notice").

Answer: As specified in Section F. 4.

Arbitrational Institution: As specified in Section F. 3.

Arbitral Tribunal: As specified in Section F. 5.

BNetzA: German Federal Network Agency (*Bundesnetzagentur*)

BNetzA's Cornerstone Paper: The cornerstone paper BNetzA published on 31 March 2014 regarding the proceeding BK1-13/002

Commission: The European Commission

Commitments: TEF DE's commitments under this document

Concentration: The acquisition of E-Plus Mobilfunk GmbH & Co. KG by TEF DE

Confidential Information: Any business secrets, know-how, commercial information, or any other information of a proprietary nature that is not in the public domain.

Conflict of Interest: Any conflict of interest that impairs the Monitoring Trustee's objectivity and independence in discharging its duties under the Commitments.

CS: Circuit switched

Date of Closing: Date of the transfer of the legal title by the Purchaser

Decision: Merger Clearance Decision of the Commission in case M.7018.

Dispute: As specified in Section F. 3.

Effective Date: The date of adoption of the Decision

E-Plus: E-Plus Mobilfunk GmbH & Co. KG

E-Plus Legacy Network: The remaining, not yet consolidated part of the network operated by E-Plus prior to the Date of Closing.

Existing MBA Customers: Customers of MVNO(s)/SP(s) becoming Upfront MBA MVNO(s) hosted already on TEF DE's or E-Plus network on 30 June 2014

Full MVNO(s): (A) Provider(s) of mobile telecommunication services which operate(s) its own full mobile core network and use(s) only the access network of a notified mobile network operator.

Gbps: Gigabyte per second

Glide Path: A predefined percentage of capacity per year end as specified in Section C.1.a and Annex 2

Indemnified Party: As specified in Section E. 3.

Initial Term: The initial term of the MBA Agreement(s) as from the Technical Launch Date until [...] (or, if the Technical Launch Date is after 1 July 2015, [...]) years after any such subsequent date) as specified in Section C. 1. d

LAC/RAC/TAC-area: Local Area Code/Routal Area Code/Type Approval Code

MBA: Mobile Bitstream Access

MBA Agreement: An agreement with an Upfront MBA MVNO on the MBA Model

MBA Model: The concept of an MBA as foreseen in the Commitments

MBA Minimum Capacity: MBA Minimum Throughput Capacity, MBA Minimum Voice Capacity and MBA Minimum SMS Capacity

MBA Minimum SMS Capacity: The minimum aggregate SMS capacity which has to be purchased by the Upfront MBA MVNO(s) as specified in Annex 2

MBA Minimum Throughput Capacity: The minimum aggregate throughput capacity which has to be purchased by the Upfront MBA MVNO(s) and which amounts to 20% of the throughput capacity of the New Merged Entity as specified in Annex 2

MBA Minimum Voice Capacity: The minimum aggregate voice capacity which has to be purchased by the Upfront MBA MVNO(s) as specified in Annex 2

Merger Regulation: Council Regulation (EC) No 139/2004

MNO: Mobile Network Operator

MNO Agreement: Agreement under the MNO Remedy

MNO Remedy: As specified in Section C. 2.

Monitoring Trustee: One or more natural or legal person(s) who is/are approved by the Commission and appointed by TEF DE, and who has/have the duty to monitor TEF DE's compliance with the conditions and obligations attached to the Decision.

MVNOs/SP(s): Mobile Virtual Network Operator(s) and Service Provider(s) who provide telecommunication services to end customers in their own name and their own account based on the network of a notified network operator and without own network infrastructure (neither access nor core network).

NDA: Non-disclosure agreement

Network Forecast : 5 year monthly forecast of the Total Capacity of the New Merged Entity provided by TEF DE to the upfront MBA MVNOs and the Monitoring Trustee at the latest at the signing of the MBA Agreement with subsequent updates in December 2015 and in December of every subsequent year for as long as the MBA Agreement is in place, taking into account the actual development of the Total Capacity of the New Merged Entity.

New Merged Entity: TEF DE after it acquired sole control over E-Plus

New MNO Entrant: The third party, which has concluded with TEF DE a legally binding agreement in relation to the Spectrum Offer

Non-MNO(s): Mobile Virtual Network Operator(s) and Service Provider(s)

Non-MNO Remedy: As specified in Section C. 3.

Notice: As specified in Section F. 3.

Obligatory Purchase Commitment: The commitment to enter into MBA Agreements under which the Upfront MBA MVNO(s) will be obliged to purchase in total 20% of the total capacity of the networks under the legal control of TEF DE post transaction, that is to say the sum of the capacity of the Telefónica Consolidated Network and of the E-Plus Legacy Network as specified in Section C. 1. a

Optional Capacity: Optional Throughput Capacity, Optional Voice Capacity and Optional SMS Capacity

Optional SMS Capacity: The offer to all Upfront MBA MVNOs to purchase additional 10% of TEF DE's Consolidated Network SMS capacity and the E-Plus Legacy Network SMS capacity as specified in Annex 2

Optional Throughput Capacity: The offer to all Upfront MBA MVNOs to purchase additional 10% of the throughput capacity of the TEF DE's Consolidated Network and the E-Plus Legacy Network as specified in Annex 2.

Optional Voice Capacity: The offer to all Upfront MBA MVNOs to purchase 10% of the TEF DE's Consolidated Network voice capacity and E-Plus Legacy Network voice capacity as specified in Annex 2

Parties: TEF DE and E-Plus

Parties to the Arbitration: As specified in Section F. 3.

Prolongation Option: The option for Upfront MBA MVNO(s) to extend the term of the MBA Agreement [...] as specified in Section C. 1. d

Quarterly Site List: As specified in Section C. 2. c

QoS: Quality of Service

Reference Capacity: Capacity foreseen in the most current Network Forecast for a month of an Adjustment Period multiplied (i) with the Adjustment Factor of the previous Adjustment Period (or by 1 if there is no previous Adjustment Period) (ii) with the percentage foreseen in the Glide Path for the respective month and (iii) and the share of the MBA Minimum Capacity purchased by the individual Upfront MBA MVNO.

Request: As specified in Section F. 2.

Requesting Party: A party which (i) has expressed its interest to enter into or (ii) has entered into an agreement under any of the remedies forming part of these Commitments.

Returned Spectrum: As specified in Section C. 2. a

Rules: As specified in Section F. 6.

Rural Areas: All areas of the Federal Republic of Germany not defined as Urban Areas

Site Offer Period: As specified in Section C. 2. c

Spectrum Offer: TEF DE's offer under Section C.2.a

SP(s): Service Provider(s). Service Providers sell mobile telecommunications services under their own name and for their own account on the downstream retail market. On the upstream market Service Providers obtain wholesale access and, depending on the individual case, possibly certain back-office functions from MNOs, but do not own any network infrastructure.

Suitability: In order to be approved by the Commission, a party interested in entering into an MBA Agreement must

- be independent of and unconnected to TEF DE and its Affiliated Undertakings;
- have the financial resources, proven expertise and incentive to use the respective agreement in which it is interested to act as a viable and active competitive force in competition with the Parties and other competitors;
- be likely neither to create, in light of the information available to the Commission, prima facie competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed, in particular shall be reasonably expected to obtain all necessary approvals from the relevant regulatory authorities.

TB: Terabytes

Technical Launch Date: For each Upfront MBA MVNO, the date on which the Up- front MBA MVNO is technically ready to offer services to customers as specified in Section C.1.d

TEF DE: Telefónica Deutschland Holding AG

TEF DE's Consolidated Network: Consolidated 2G/3G/4G network of TEF DE and E-Plus in Germany as existing from time to time and with regard to the current E-Plus network only to the degree that the network is already consolidated with TEF DE's network; consolidation is reached when both access and core network, and not only one of them, are consolidated.

Total Capacity of the New Merged Entity: Total Throughput Capacity of the New Merged Entity, Total Voice Capacity of the New Merged Entity and Total SMS Capacity of the New Merged Entity

Total SMS Capacity of the New Merged Entity: The total SMS capacity of the New Merged Entity which includes the networks under the legal control of TEF DE post transaction as specified in Annex 2

Total Throughput Capacity of the New Merged Entity: The total throughput capacity of the New Merged Entity which includes the networks under the legal control of TEF DE post transaction as specified in Annex 2

Total Voice Capacity of the New Merged Entity: The total voice capacity of the New Merged Entity which includes the networks under the legal control of TEF DE post transaction as specified in Annex 2

Trustee Proposal: As specified in Section F. 2.

Upfront MBA MVNO: An MVNO or SP entering into an agreement with TEF DE to get access to the MBA Model

Upfront MBA MVNO Remedy: As specified in Section C. 1.

Urban Areas: All cities listed in Annex 1

B. Overall concept

TEF DE commits to offer a remedy package which consists of three separate elements: 1

- an Upfront MBA MVNO Remedy (Section C. 1.)
- an MNO Remedy (Section C. 2.)
- a Non-MNO Remedy (Section C. 3.).

C. Details of the three elements of the overall remedy concept

1. Upfront MBA MVNO Remedy

TEF DE commits to enter into MBA Agreements under the Upfront MBA MVNO Remedy prior to the Date of Closing (upfront remedy) with up to three Upfront MBA MVNOs foreseeing access to TEF DE's Consolidated Network and the E-Plus Legacy Network capacity as specified further in **Annex 2**, provided that any such Upfront MBA MVNO is offering or intends to offer mobile telecommunications services on a nation-wide basis. 2

For the avoidance of doubt, TEF DE shall not be required to enter into more than one MBA Agreement with more than one Upfront MBA MVNO if the MBA Agreement entered is in line with this Section C. 1 and **Annex 2** and covers the entire Obligatory Purchase Commitment as well as provides for the Additional Capacity Option, both as set out below. 3

a) Capacity Commitment

TEF DE commits to enter into MBA Agreements under which the Upfront MBA MVNO(s) will be obliged to purchase in total 20% of the total capacity of the networks under the legal control of TEF DE post transaction, that is to say the sum of the capacity of the Telefónica Consolidated Network and of the E-Plus Legacy Network (Obligatory Purchase Commitment) under a specified glide path. The capacity of the E-Plus Legacy Network will take into account the decommissioning process on the actual capacity available and, therefore, will only capture capacity that is or can effectively be utilized to serve customers. The Glide Path is described in more detail in Appendix 1 of Annex 2. 4

TEF DE further commits to offer under the MBA Agreements the purchase of additional 10% of the capacity of TEF DE's Consolidated Network and the E-Plus Legacy Network to all Upfront MBA MVNOs (Optional Capacity). 5

The capacity under the Optional Capacity will be offered to all Upfront MBA MVNOs based on a "first come, first served" principle. For the Optional Capacity the same terms and conditions (per unit of component 1, 2 and 3, respectively) as already agreed with the Upfront MBA MVNO(s) for (their share of) the MBA Minimum Throughput Capacity shall apply. 6

The Obligatory Purchase Commitment is strictly incremental. Capacity necessary to serve Existing MBA Customers of the MVNOs/SPs converting into Upfront MBA MVNOs will be offered and needs to be purchased in addition.	7
Base Case 1 - In case all Upfront MBA MVNOs do not have any existing customer base with TEF DE and/or E-Plus on 30 June 2014 they shall be offered and have to purchase in total 20% of TEF DE's Consolidated Network and the E-Plus Legacy Network applying the Glide Path.	8
Base Case 2 - In case all Upfront MBA MVNOs do have an existing customer base with TEF DE and/or E-Plus on 30 June 2014 they shall be offered and need to purchase in total 20% of TEF DE's Consolidated Network and the E-Plus Legacy Network capacity applying the Glide Path plus the capacity necessary to service their Existing MBA Customers.	9
Base Case 3 - In case only some Upfront MBA MVNOs do have an existing customer base with TEF DE and/or E-Plus on 30 June 2014 (while others do not) all Upfront MBA MVNOs shall be offered and need to purchase in total 20% of TEF DE's Consolidated Network and E-Plus Legacy Network capacity applying the Glide Path while any Upfront MBA MVNOs already having an Existing MBA Customer base need to be offered and purchased in addition the capacity necessary to service their Existing MBA Customers.	10
Under the Additional Capacity Option, capacity necessary to serve Existing MBA Customers of the MVNOs/SPs converting into MBA MVNOs will be deducted from the capacity available under the option.	11
In order to ensure the effective implementation of the above commitment by TEF DE, an adjustment mechanism will apply as specified in Annex 2.	12
As further specified in Annex 2 , the adjustment mechanism applies to each of the MBA Minimum Throughput Capacity and the Optional Throughput Capacity, the MBA Minimum Voice Capacity, the MBA Minimum SMS Capacity, the Optional Voice Capacity and the Optional SMS Capacity.	13
In the event an Upfront MBA MVNO enters into an MNO Agreement, TEF DE's capacity commitments under the Upfront MBA MVNO Remedy and the relevant Upfront MBA MVNO's purchase commitment under the MBA MVNO Remedy shall be adjusted as set out in Section C. 2. b, ee below.	14

b) Mobile Bitstream Access (MBA) services

The MBA Model reflects: 15

- Data throughput capacity (Bitstream Component 1)
- Data volume capacity (Bitstream Component 2)
- Voice capacity and SMS (Bitstream Component 3).

aa) Bitstream Component 1

Under the Bitstream Component 1, the Upfront MBA MVNO(s) purchases data network capacity in the form of data throughput for its customers to use. Throughput capacity is the amount of data consumed in downlink and uplink by all customers over a specified period of time. **Annex 2** includes a detailed description of the terms and conditions of Bitstream Component 1. 16

bb) Bitstream Component 2

Under Bitstream Component 2 the Upfront MBA MVNO purchases the amount of data volume which allows the Upfront MBA MVNO(s) to fully utilize the complete throughput capacity purchased under Bitstream Component 1. Data volume is measured in Terabytes (TB) per month. The amount of data necessary to fully utilize the capacity for Bitstream Component 1 in each month will be set out in the MBA Agreement. The Bitstream Component 2 can be utilized by the Upfront MBA MVNO(s) to provide 2G, 3G or 4G services. 17

TEF DE commits that any enhancement, including, but not limited to, the network download speed, available on TEF DE' Consolidated Network and the E-Plus Legacy Network will be made available to the Upfront MBA MVNO(s). 18

Annex 2 includes a detailed description of the terms and conditions of Bitstream Component 2. 19

cc) Bitstream Component 3

Under the Bitstream Component 3, the Upfront MBA MVNO(s) purchases voice capacity and SMS. **Annex 2** includes a detailed description of the terms and conditions of Bitstream Component 3. 20

dd) Scope of ancillary services under the MBA Model and additional services

(i) Ancillary services

Under the MNO Remedy TEF DE commits to offer ancillary services in addition to the services under Bitstream Component 1 to 3, both for MVNOs/SPs as well as for Full MVNOs as per the following list. A more detailed list of ancillary services available to SP is attached in **Annex 3**. These services will be included in the price paid by the Upfront MBA MVNOs for Bitstream Components 1 to 3 unless otherwise set out below and excluding any termination and interconnection fees which will be passed on based on actual cost: 21

- In case the Upfront MBA MVNO is an MVNO/SP:
 - wholesale access to TEF DE's Consolidated Network and the E-Plus Legacy Network for the origination and termination of circuit switched voice, SMS, packet switched data (including MMS) services to Upfront MBA MVNO customers. Such wholesale access will enable the Upfront MBA MVNO to provide services to Upfront MBA MVNO customers such as call forwarding, caller line identification services, multi-party call services, call waiting, and call transfer;
 - wholesale access to TEF DE's Consolidated Network and the E-Plus Legacy Network for the provision by Upfront MBA MVNO(s) of its own value added services to Upfront MBA MVNO customers;
 - and access to third party value added services which will be charged extra at [...]*
 - the provision of the core network infrastructure including the interconnection to other mobile or fixed network operators;

- the provision of throttle ability for individual customers of Upfront MBA MVNOs;
 - the provision of mobile number portability services. The provision of any such services shall be charged at [...]*
 - emergency call delivery services; and
 - lawful interception services with respect to the Upfront MBA MVNO customers. Individual interception requests by authorities will be charged separately [...]*
 - making available the technical specification for the services and the network access requirements of the Upfront MBA MVNO on request and without undue delay.
- In case the Upfront MBA MVNO is a Full MVNO:
- call routing to Upfront MBA MVNO(s) and location data for emergency call delivery services;
 - location data and real time CDRs for lawful interception services with respect to the Upfront MBA MVNO customers.
 - jointly develop with the Upfront MBA MVNO a technical specification and implementation plan.

The above services are available using the same mobile network technologies which TEF DE uses to simultaneously deliver services to its own customers at no discriminatory conditions. 22

(ii) Additional services

In case of a Full MVNO TEF DE commits, in response to reasonable requests, to offer services with respect to number porting by Upfront MBA MVNO(s) and assistance with respect to the Upfront MBA MVNO's integration into and participation in the German mobile industry's number porting database. 23

Moreover, TEF DE commits to consider in good faith reasonable requests for additional services other than those set out above to the extent that it is within TEF DE's technical capability, functionality and capacity to provide such additional services including: 24

- in case the Upfront MBA MVNO is a Full MVNO transit or routing services;

- international roaming services;
- in case the Upfront MBA MVNO is a Full MVNO, enablement of a voice over IP platform (VoIP) which is subject to technical alignment. TEF DE will support the Upfront MBA MVNO's solution, however, TEF DE may not be able to distinguish different protocols or applications within the Upfront MBA MVNO's data stream. For the avoidance of doubt, the Upfront MBA MVNO is responsible for the offer of a VoIP service to its customers from an end-to-end perspective whereby TEF DE will support the Upfront MBA MVNO in the following aspects:
 - provide a data interconnection with appropriate bandwidth, level of redundancy and industry standard latency (considering technologies in use and locations);
 - in case the Upfront MBA MVNO's VoIP design allows for a distinction of its VoIP data packages, TEF DE will support the Upfront MBA MVNO to apply a QoS (Quality of Service) concept at the data interconnect (if associated with reasonable invest and effort for TEF DE); and
 - as soon as TEF DE supports mobile voice over LTE (mVoLTE) for its own subscribers, it will make access available to the MBA MVNOs so that mVoLTE can also be used by the MBA MVNOs without delay.

The provision of any such additional services by TEF DE shall be subject to separate agreement between TEF DE and the respective Upfront MBA MVNO(s) at terms [...]*. 25

ee) Non-discrimination

TEF DE commits to supply the same levels of quality of technical service and of coverage to the Upfront MBA MVNO(s) in respect of the Upfront MBA MVNO(s)' customers as it does to TEF DE's own customers. 26

c) Prices

Prices and commercial terms are subject to negotiations with each Upfront MBA MVNO. [...]*. 27

d) Additional terms

Further specifications of the MBA Model are set out in **Annex 2** which supplements the above descriptions. 28

e) **Term and option to extend**

The Technical Launch Date is as soon as possible, the earliest on 1 January 2015 and ideally no later than 1 July 2015. MBA under the MBA Agreement(s) will be granted to the Upfront MBA MVNO(s) as from the Technical Launch Date until [...] (or, if the Technical Launch Date is after [...] five years after any such subsequent date) (the Initial Term). 29

At the end of the Initial Term, the Upfront MBA MVNO(s) will have the option to extend the term of the MBA Agreement once for a maximum additional period of five years (Prolongation Option). The Upfront MBA MVNO(s) will be entitled to exercise the Prolongation Option no later than by [...]. If the Prolongation Option is exercised, the following will apply during the additional term: 30

- The prices for Bitstream Component 1 (per Gbps), Bitstream Component 2 (per TB) and Bitstream Component 3 (per voice minute and SMS) capacity for the additional term will be set out in the Prolongation Option as to be specified in the MBA Agreement(s). These prices amount to [...].
- Each Upfront MBA MVNO shall be entitled to purchase the same capacity (in Gbps) of TEF DE's Consolidated Network which it has purchased during the last 12 months prior to the expiry of the Initial Term (taking into account the capacity additionally purchased to serve the Existing MBA Customers).
- The Upfront MBA MVNO(s) shall be entitled to (i) increase its/their aggregate annual capacity (including the capacity required to serve the existing MBA Customers) up to a total of 30% of Total Capacity of the New Merged Entity based on a first come, first served principle or (ii) reduce its/their aggregate annual capacity in each year to an amount equivalent to its/their actual usage of Total Capacity of the New Merged Entity in the immediately preceding contractual year.

2. **MNO Remedy**

TEF DE commits to offer one MNO Agreement to be concluded with one New MNO Entrant. 31

For this purpose, TEF DE commits to offer the following elements as described in more detail under lit. (a) to (e) below: (a) Spectrum Offer; (b) national roaming offer; (c) di- 32

vestiture of sites offer; (d) passive radio network sharing offer; and (e) sale of shops offer.

TEF DE commits to enter into Non-Disclosure Agreements ("NDAs") and to engage in good faith negotiations with any third party that is interested in the MNO Remedy with the aim to conclude one MNO Agreement as soon as practicable and, in any event, within an indicative timeline of nine months as of the signing of the relevant NDA. 33

TEF DE also commits to enter into a legally binding agreement, subject to approval by BNetzA, which reflects the terms and conditions specified under lit. (a) below, if at any point in time before the expiry date provided for under lit. (a) below, one third party (including one of the Upfront MBA MVNOs) elects to accept TEF DE's spectrum offer. 34

TEF DE further commits to enter into one or more legally binding agreements with the New MNO Entrant, which reflects the terms and conditions specified under lit. (b)-(e) below, if at any point in time before the expiry date provided for under lit. (b)-(e) below, the New MNO Entrant elects to accept TEF DE's offer for one or more of these elements of the MNO Remedy. 35

For the avoidance of doubt, the MNO Agreement necessarily comprises the lease of spectrum as specified under the Spectrum Offer under lit. (a) and possibly one or more elements of the MNO Remedy under lit. (b) - (e) below. The New MNO Entrant will be free to choose in its full discretion whether or not to purchase one or more of the elements of the MNO Remedy under lit. (b)-(e) below. 36

The MNO Agreement will be offered to all third parties until the end of 2014. 37

If no third party has provided TEF DE with a written non-binding offer, according to which it is generally prepared to enter into an MNO Agreement with TEF DE by the end of 2014, the MNO Agreement will only be offered to the Upfront MBA MVNO(s) as of 1 January 2015, and until such time as specified under lit. (a)-(e) below but in any event no longer [...]*. 38

If one or more third parties, which are not Upfront MBA MVNOs, have provided TEF DE with a written non-binding offer, according to which they are generally prepared to enter into an MNO Agreement with TEF DE before the end of 2014, but no MNO Agreement has been signed by that date with one such third party by that date, TEF DE's obligation to negotiate in good faith with these third parties as specified in paragraph 33 continues to apply also after the end of 2014. 39

If and to the extent one or more of the assets or services which are subject of the follow- 40

ing offers are no longer available to TEF DE (in accordance with the Commitments) the respective offer will be reduced accordingly.

a) Spectrum Offer

The spectrum offer includes the following components:

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Spectrum band	Bandwidth, in MHz	Expiry of frequency usage rights	Date of technical handover	Lease price, in m EUR (net)
2.6 GHz	2x10	31 Dec. 2025	[...]*	[...]*
2.1 GHz	2x10	31 Dec. 2020	[...]*	[...]*

The New MNO Entrant may choose to lease only the offered 2.1 GHz spectrum or only the 2.6 GHz spectrum or the entire offered spectrum.	42
The New MNO Entrant must commit to comply with any coverage and/or any frequency usage obligation set forth by BNetzA.	43
If at any point in time BNetzA requests TEF DE to hand back certain spectrum in the spectrum bands offered under the MNO Remedy and the spectrum is effectively returned by TEF DE to BNetzA (the "Returned Spectrum"), TEF DE will no longer be required to offer the Returned Spectrum as part of this Spectrum Offer. TEF DE commits to immediately notify all third parties, with which it entered into an NDA, and the Upfront MBA MVNOs as soon as it becomes aware of any request from the BNetzA to hand back spectrum in the spectrum bands offered under the MNO Remedy.	44
aa) Scope of lease	
(i) 2.6 GHz spectrum	
TEF DE commits to offer to the New MNO Entrant to lease 2x10 MHz in the 2.6 GHz spectrum. The 2.6 GHz spectrum will be handed over technically upon request of the New MNO Entrant, but not earlier than [...]*	45
(ii) 2.1 GHz spectrum	
TEF DE commits to offer to the New MNO Entrant to lease 2x10 MHz in the 2.1GHz spectrum. The 2.1 GHz spectrum will be handed over upon request of the New MNO Entrant with technical handover [...]*	46
bb) Pricing and term of lease agreement	
[...]*	47
- [...]*	
- [...]*	
The lease regarding 2.1 GHz spectrum will terminate end of year 2020 and regarding 2.6 GHz end of year 2025 or when such spectrum is to be handed back to BNetzA.	48
TEF DE commits to enter into a lease agreement, subject to approval by BNetzA, which allows the New MNO Entrant to have full control over the spectrum and to use it in full independence from TEF DE, as if the New MNO Entrant were to be the owner/licensor	49

of the spectrum. The lease of the spectrum shall also be irrevocable for the duration of the lease. The right of extraordinary termination for good cause (as provided by law) shall remain unaffected.

cc) Return of spectrum usage rights

If at any point following the lease of spectrum by TEF DE (i) the New MNO Entrant is 50
(a) no longer independent from all other MNOs currently active in Germany, or (b) is affiliated with or otherwise connected to any other MNO currently active in Germany, (ii) the New MNO Entrant seeks to sublease, transfer or otherwise make available the spectrum to a third party (other than in case of a change of control over the New MNO Entrant), or (iii) the New MNO Entrant intends to close its business as MNO in Germany, TEF DE will have the right to terminate the lease agreement concluded with the New MNO Entrant and, subject to applicable approvals under German and/or European law, the New MNO Entrant shall be required to clear that spectrum in favour of TEF DE without undue delay following request by TEF DE. In this event, TEF DE shall also be entitled to terminate all other agreements entered into with the New MNO Entrant under the MNO Remedy and the MNO Remedy shall continue being deemed fulfilled.

dd) BNetzA involvement

TEF DE commits to provide the necessary required assistance and support to the New 51
MNO Entrant to secure any required approval under applicable law, including, but not limited, from BNetzA, in relation to the lease of spectrum offered under these Commitments.

In the event BNetzA opposes to the lease of spectrum to any specific New MNO En- 52
trant, this shall not be considered a breach by TEF DE of its commitment under the MNO Remedy; however TEF DE shall remain obliged to fulfil such commitment.

b) National roaming offer

TEF DE commits to offer to the New MNO Entrant national roaming on TEF DE's 53
Consolidated Network until end of [...] (or until such earlier date on which TEF DE may terminate to offer 2G, 3G or 4G products to its own clients) which includes

2G/3G/4G services in all areas of Germany as further specified below.

The following scenarios apply:

	Scenario	Roaming Offer	
		Service	Duration
1)	New MNO Entrant rolls out an own 3G / 4G network in Urban Areas (but no 2G network and no 3G / 4G network in Rural Areas)	2G Rural and Urban	[...]*
		3G / 4G Rural	[...]*
		3G / 4G Urban	<ul style="list-style-type: none"> - Gradual switch off following New MNO Entrant's own rollout - Maximum [...]* years after launch of first site by New MNO Entrant
2)	New MNO Entrant rolls out an own 4G network in Urban Areas (but no 2G / 3G network and no 4G network in Rural Areas)	2G / 3G Rural and Urban	[...]*
		4G Rural	[...]*
		4G Urban	<ul style="list-style-type: none"> - Gradual switch off following New MNO Entrant's own rollout - Maximum [...]* years after launch of first site by New MNO Entrant

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TEF DE further commits to offer to negotiate in good faith an extension of the national roaming agreement, in particular regarding the Rural Areas, upon the New MNO Entrant's request, but not earlier than 6 (six) months prior to the expiry of the national roaming agreement.

aa) Capacities and timing

TEF DE commits to a certain capacity allocation to the New MNO Entrant. The duration of this allocation will be different in Urban Areas, where the New MNO Entrant will deploy its own network, compared to Rural Areas where national roaming will be provided during the duration of the national roaming agreement.

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- In Rural Areas, a maximum of 20% of the built capacity of the TEF DE's Consolidated Network and of the E-Plus Legacy Network in 2G/3G/4G will be offered for the New MNO Entrant on a roaming basis. This capacity allocation will be offered until the end of year [...]*
- In Urban Areas, under scenario 1,
 - a maximum of 20% of built capacity of the TEF DE's Consolidated Network and of the E-Plus Legacy Network will be offered for 3G/4G roaming until the expiry of five years after launch of the New MNO Entrant's own network. The New MNO Entrant will be deemed to have launched its own network upon the connection of the first site; and
 - a maximum of 20% of the built capacity of the TEF DE's Consolidated Network and of the E-Plus Legacy Network will be offered for the New MNO Entrant for 2G roaming until the end of year [...]*
- In Urban Areas, under scenario 2,
 - a maximum of 20% of built capacity of the TEF DE's Consolidated Network and of the E-Plus Legacy Network will be offered for 4G roaming until the expiry of five years after launch of the New MNO Entrant's own network. The New MNO Entrant will be deemed to have launched its own network upon the connection of the first site; and
 - a maximum of 20% of the built capacity of the TEF DE's Consolidated Network and of the E-Plus Legacy Network will be offered for the New MNO Entrant for 2G/3G roaming until the end of year [...]*

bb) Gradual activation

The roaming service will be activated without undue delay upon request of the New MNO Entrant. 56

cc) Gradual switch off of 3G/4G or 4G only roaming in Urban Areas

3G/4G or 4G only (depending on the scenarios as described in paragraph 55) national roaming service will be barred progressively in Urban Areas following the network rollout of the New MNO Entrant at latest three years after the start of the rollout in a specific area. The rollout will be considered started in a certain area once the first site is activated in that area. 57

dd) Forecasts

In order to enable TEF DE to properly plan the necessary capacity and prepare the 58

roaming and barring activation process in each area the necessary information will be provided by the New MNO Entrant.

ee) Commercial conditions

If the New MNO Entrant is an Upfront MBA MVNO, the MBA Agreement will continue 59
as the national roaming agreement which means that national roaming traffic will be
handled and invoiced under the Bitstream Component 1, the Bitstream Component 2
and the Bitstream Component 3 of the MBA Model and not under any national roaming
agreement. The capacity commitment under the MBA Agreement and the Upfront
MBA MVNO Remedy will over time decrease proportionately to the New MNO En-
trant's own network rollout measured by the traffic split on its own network and on TEF
DE's Consolidated Network. For the avoidance of doubt, if the New MNO Entrant is an
Upfront MBA MVNO, TEF DE's and the Upfront MBA MVNO's commitments con-
cerning the nationwide scope of services under the MBA Agreement and the Upfront
MBA MVNO Remedy will be adjusted accordingly.

If the New MNO Entrant is not an Upfront MBA MVNO, TEF DE will offer national 60
roaming at [...]*

c) Divesture of sites offer

TEF DE commits to offer to the New MNO Entrant the sale of up to [...]* sites [...]*. 61
The scope of the sale will include permissions, rental con- tracts, power supply devices,
steel, antenna and passive radio frequency elements.

The process for offering sites shall be as follows: 62

- TEF DE will provide a list of the [...]* transferrable sites to any third party,
which signed an NDA with TEF DE in relation to the MNO Remedy as soon as
possible after the signing of the NDA. Not all the sites included in this list will be
immediately available.

- Once the list of transferrable sites is available and at the request of the New MNO
Entrant, TEF DE will provide the New MNO Entrant with a rolling forecast list of
those among the sites indicated in such list which are transferrable in line with the
network consolidation plan of TEF DE in each quarter of a year ("**Quarterly Site
List**"). The first such list will be provided to the New MNO Entrant within one
month of its request. Each following list will be provided every three months.

- Upon receipt of the Quarterly Site List, the New MNO Entrant will have two months to choose and acquire from each such Quarterly Site List with legally binding effect such sites that it requires for its network roll-out.
- The last Quarterly Site List will be provided for the fourth quarter of 2016.

The offer to acquire sites will elapse by the end of 2016 ("**Site Offer Period**"). As far as the New MNO Entrant has not exercised the sites offer within the Site Offer Period, there will be no further obligation on TEF DE under the MNO Remedy to divest sites and the sites not acquired will remain with TEF DE. 63

d) Passive radio network sharing offer

TEF DE commits to offer to sign with the New MNO Entrant an agreement for collaboration in the sharing of passive infrastructure for their radio networks (for the avoidance of doubt, as far as TEF DE is concerned, this means the TEF DE's Consolidated Network). The agreement based on such offer would be reciprocal, allowing each party access to the other party's passive infrastructure. 64

TEF DE commits to engage in good faith negotiations with the interested third parties in relation to the passive radio network sharing agreement as of the signature of the relevant NDAs. 65

aa) Scope

TEF DE commits to allow the New MNO Entrant to: 66

- install and operate RAN components (base stations and antennas) on TEF DE mobile sites;
- use available space in TEF DE's cabinets and/or racks to install RAN equipment and transmission equipment for backhauling;
- use available power connections on these sites;
- use the available air conditioning on these sites; and
- use some of the sites as Pick-up-Points for the backhauling traffic from other sites. The New MNO Entrant will select suitable sites with respect to available space for backhauling equipment (including microwave radio antennas) and with respect to accessibility with fiber to connect to their metro fiber network for aggregation.

If power supplies, steelwork, cabinets or air conditioning need to be upgraded to bear 67

the additional load of RAN equipment of the New MNO Entrant, the latter will have to cover the installation cost. However, TEF DE will be obliged to allow the upgrade work and assign suitable maintenance windows for the installation. The landlord permission for the additional equipment on the site has to be obtained by the New MNO.

TEF DE will offer to the New MNO Entrant a pricing model based on [...]*

68

The passive network sharing agreement ends in any event end of year 2025. Prior to this date, TEF DE commits to negotiate in good faith with the New MNO Entrant a possible extension of the passive network sharing agreement beyond 2025.

69

e) **Sale of shops offer**

TEF DE commits to offer to the New MNO Entrant the acquisition of up to [...]* sales shops in Urban Areas. The shops shall be pre-selected by TEF DE.

70

At the request of the New MNO Entrant, TEF DE commits to provide a database with a list of potential sales shops available for acquisition including all relevant commercial details (e.g. exact location of shop, size in sqm, rental fee, floor plan, remaining rental runtime, overview of existing permanent and temporary staff members).

71

The New MNO Entrant shall have the option to acquire all or only a subset of the offered shops. For all shops where the acquisition offer has been exercised, TEF DE commits to transfer the existing rental contracts or where not possible commits to sublease the shop to the New MNO Entrant at own cost (i.e. without mark-up). The transfer of rental contracts or sublease shall be completed without undue delay after the offer has been exercised by the New MNO Entrant.

72

The New MNO Entrant shall have the option (unless such transfer is mandatory under applicable law) to request the transfer of existing permanent and temporary staff members related to a specific shop. In such event TEF DE shall negotiate with workers' council and existing staff in good faith to achieve successful transfer to New MNO Entrant in timely manner and in accordance with the respective provisions under German law (especially under sec. 613a German Civil Code).

73

The New MNO Entrant shall take over the shops on an "as is" basis, i.e. with existing branding of TEF DE/E-Plus and potentially furniture of TEF DE/E-Plus. There will be [...]* but New MNO Entrant shall have the duty to ensure rebranding and, where necessary, dismantling and bears any transfer, rebranding and dismantling [...]*.

74

	The shops will be offered to the New MNO Entrant until [...]*. Any party interested in this offer needs to give written notice to TEF DE as to which shops it commits to acquire by this date. If the New MNO Entrant does not commit to acquire the shops within the offer period by giving notice as just described, there will be no further obligation on TEF DE under the MNO Remedy to divest shops and the shops will remain with TEF DE.	75
3.	Non-MNO Remedy	
	In addition to the Upfront MBA MVNO Remedy and the MNO Remedy, TEF DE commits to offer a Non-MNO Remedy package.	76
a)	2G/3G/4G access for existing wholesalers	
	TEF DE commits to offer to all MVNOs/SPs which currently procure 2G/3G/4G products from TEF DE and/or E-Plus to prolong their existing contracts from the Date of Closing until end of [...]* (or such earlier date on which TEF DE may terminate to offer 2G, 3G or 4G products to its own clients).	77
	TEF DE will proactively send a self-commitment letter to all existing MVNOs/SPs which have an agreement with TEF DE and/or with E-Plus for 2G, 3G and/or 4G network access as of the Date of Closing, in which it will waive its rights of ordinary termination set out in the respective wholesale agreement until the end of year 2025 (or such earlier date on which TEF DE may terminate to offer 2G, 3G or 4G products to its own clients). The right of extraordinary termination for good cause (as provided by law) shall remain unaffected.	78
b)	4G access for all MVNOs/SPs	
	With regard to 4G access, TEF DE commits to provide access to 4G on the basis of an MVNO/SP agreement to all MVNOs/SPs [...]* months after the latest of the Technical Launch Dates of the Upfront MBA MVNO(s) as described above under Section C. 1.	79
	Access to 4G (as well as 2G and 3G) under the MVNO/SP agreements will be made available at least until end of year [...]* (or such earlier date on which TEF DE terminates to offer 4G products to its own clients). TEF DE will offer to SPs/MVNOs best prices under benchmark conditions of comparable products, volumes and commercial/operational model, which TEF DE offers to another SP/MVNO (excluding the Upfront MBA MVNO).	80

c) Abolition of customer transfer obligations

TEF DE commits to send out immediately after the Date of Closing letters to all MVNOs/SPs, which currently procure 2G/3G/4G products from TEF DE and/or E-Plus (including, for the avoidance of doubt, the Upfront MBA MVNOs) confirming that the obligation, according to which the respective MVNO/SP has to transfer its customer base to TEF DE and/or E-Plus in case of a change of network or change of business model, is waived. This includes all other contractual conditions which provide direct financial disadvantages in case of a change of network or business model (farewell fees, penalties).

81

D. Compliance with the remedies

1. Upfront MBA MVNO Remedy

2. TEF DE will be deemed to have complied with the commitment in Section C. 1. (Upfront MBA MVNO Remedy) upon compliance with all conditions and/or obligations laid down therein, including in particular: (i) TEF DE having entered into (an) MBA Agreement(s) with up to three Upfront MBA MVNOs based on the principles as described under Section C. 1 as well as Annexes 2 and 3; (ii) the Commission having approved such MBA Agreement(s) by verifying and confirming that such MBA Agreement(s) comply with the principles as described under Section C. 1 and of Annexes 2 and 3; (iii) TEF DE having complied with all obligations provided for under Section C. 1 and of Annexes 2 and 3 for the entire duration of the Commitments. For the avoidance of doubt the notified transaction may be closed once the conditions (i) and (ii) are fulfilled.

82

3. MNO Remedy

TEF DE will be deemed to have complied with the commitment in Section C. 2. (MNO Remedy) upon compliance with all conditions and/or obligations laid down therein, including in particular:

83

- having published its principle offer to enter into an MNO Agreement on TEF DE's website together with contact details to request details of the offer without undue delay after the Date of Closing;
- entering into NDAs with all interested third parties;
- having provided any interested party after signing of an NDA with the commer-

cial and technical terms as set out above in Section C. 2. without undue delay after signing of the NDA;

- having negotiated on the basis of the commercial and technical terms as set out above under Section C. 2. and its Annexes with those interested parties, which have signed an NDA, an MNO Agreement in good faith with the aim to conclude an MNO Agreement within nine months upon signing of the NDA;
- if one interested third party accepts the Spectrum Offer at the terms and conditions provided for under Section C. 2. a, having entered into the MNO Agreement with such interested third party;
- if the New MNO Entrant accepts the terms and conditions for one or more of the elements of the MNO Remedy other than the Spectrum Offer under Section C. 2. b-e, having entered into one or more binding agreements in relation to one or more such elements; and
- having complied with the different obligations under the (a) Spectrum Offer; (b) national roaming offer; (c) divestiture of sites offer; (d) passive radio network sharing offer; and (e) sale of shops offer as described in Section C. 2 for the entire duration of the Commitments;

or

- expiry of the offer periods specified in Section C. 2. without TEF DE having breached any obligation under the MNO Remedy.

4. Non-MNO Remedy

TEF DE will be deemed to have complied with the commitment in Section C. 3. (Non-MNO Remedy) upon compliance with all conditions and/or obligations laid down therein, including in particular:

84

- having sent self-commitment letters concerning TEF DE's waiver of termination rights in 2G/3G/4G wholesale access contracts with the content described under Section C. 3. a) to all MVNOs/SPs which at the Date of Closing procure 2G/3G/4G products from TEF DE and/or E-Plus;
- having published its principle offer to enter into an agreement to provide 4G access to MVNOs/SPs on TEF DE's website together with contact details to request details of the offer at the latest six months after the latest of the Technical Launch Dates of the Upfront MBA MVNO(s);

- having negotiated on the basis of the commercial and technical terms as set out above under Section C. 3. b, a 4G wholesale agreement in good faith with the interested parties which have signed an NDA with TEF DE with the aim to conclude an agreement ; having concluded wholesale agreements with those interested parties, which accept the commercial terms and technical terms resulting from these negotiations; and
- having sent confirmation letters to abolish customer transfer obligations with the content described under Section C. 3. c to all MVNOs/SPs which at the Date of Closing procure 2G/3G/4G products from TEF DE and/or E-Plus.

5. General terms

For the avoidance of doubt, TEF DE would still be in compliance with the Commitments if it enters into agreements with Upfront MBA MVNO(s), New MNO Entrants and/or MVNO/SP, which provide for commercial provisions which are more favourable to the other contractual party than those set out in these Commitments including its Annexes, but which are still in compliance with these Commitments, 85

TEF DE may fulfil any of the remedies also via affiliated entities. 86

E. Monitoring Trustee

1. Appointment procedure

TEF DE shall appoint a Monitoring Trustee to carry out the functions specified in these Commitments for a Monitoring Trustee. TEF DE commits not to close the Concentration before the appointment of a Monitoring Trustee. 87

The Monitoring Trustee shall: 88

- at the time of appointment, be independent of TEF DE and Koninklijke KPN N.V. as well as their respective affiliated undertakings;
- possess the necessary qualifications to carry out its mandate and have sufficient relevant experience, including technical experience in the telecoms sector; and
- neither have nor become exposed to a Conflict of Interest.

The Monitoring Trustee shall be remunerated by TEF DE in a way that does not impede the independent and effective fulfilment of its mandate. 89

a) Proposal by TEF DE

No later than two weeks after the Effective Date, TEF DE shall submit the name or names of one or more natural or legal persons whom TEF DE proposes to appoint as the Monitoring Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the person or persons proposed as Monitoring Trustee fulfil the requirements set out above and shall include: 90

- the full terms of the proposed mandate, which shall include all provisions necessary to enable the Monitoring Trustee to fulfil its duties under these Commitments;
- the outline of a work plan which describes how the Monitoring Trustee intends to carry out its assigned tasks.

b) Approval or rejection by the Commission

The Commission shall have the discretion to approve or reject the proposed Monitoring Trustee and to approve the proposed mandate subject to any modifications it deems necessary for the Monitoring Trustee to fulfil its obligations. If only one name is approved, TEF DE shall appoint or cause to be appointed the person or persons concerned as Monitoring Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, TEF DE shall be free to choose the Monitoring Trustee to be appointed from among the names approved. The Monitoring Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission. 91

c) New proposal by TEF DE

If all the proposed Monitoring Trustees are rejected, TEF DE shall submit the names of at least two more natural or legal persons within one week of being informed of the rejection, in accordance with these Commitments. 92

d) Monitoring Trustee nominated by the Commission

If all further proposed Monitoring Trustees are rejected by the Commission, the Commission shall nominate a Monitoring Trustee, whom TEF DE shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission. 93

2. Functions of the Monitoring Trustee

The Monitoring Trustee shall assume its specified duties and obligations in order to en- 94

sure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Monitoring Trustee or TEF DE, give any orders or instructions to the Monitoring Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

a) Duties and obligations of the Monitoring Trustee

The Monitoring Trustee shall

95

- propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision;
- review and assess TEF DE's compliance with the Upfront MBA MVNO Remedy (Section C. 1.), and in particular:
 - review and assess the Suitability of third parties that are interested in concluding an MBA Agreement;
 - review and assess TEF DE's compliance with its obligations under Annex 2 of the Commitments in relation to the execution of the MBA Agreement(s), in particular, but not limited to:
 - the determination of the MBA Minimum Throughput Capacity;
 - the determination of the Total Throughput Capacity of the New Merged Entity;
 - the application of the Glide Path to the MBA Minimum Throughput Capacity,
 - the determination and offering of the Optional Throughput Capacity,
 - the implementation of the adjustment mechanism under Bitstream Component ;
 - the implementation of the excessive heavy usage clause under Bitstream Component 2;
 - the determination of the MBA Minimum Voice Capacity;
 - the determination of the Total Voice Capacity of the New Merged Entity;
 - the application of the Glide Path to the MBA Minimum

Voice Capacity;

- the determination of the MBA Minimum SMS Capacity;
 - the determination of the Total SMS Capacity of the
New Merged Entity;
 - the application of the Glide Path to the MBA
Minimum SMS Capacity;
 - the determination and offering of the Optional Voice Capacity;
 - the determination and offering of the Optional SMS Capacity; and
 - the implementation of the adjustment mechanism under Bitstream
Component 3.
- measure quarterly the capacity of each of TEF DE's Consolidated Network and of the E-Plus Legacy Network under the adjustment mechanism provided for in Appendix 1 of Annex 2;
 - review and assess TEF DE's compliance with the MNO Remedy (Section C. 2.), and in particular:
 - review and assess the text of the communication by TEF DE in compliance with the MNO Remedy;
 - review and assess the progress of the negotiations and verify that dependent on the stage of the negotiation process interested third parties obtain sufficient and correct information relating to content of the MNO Remedy; and
 - review and assess TEF DE's compliance with its specific obligations under each of the elements of the MNO Remedy;
 - review and assess TEF DE's compliance with the Non-MNO Remedy (Section C. 3.), and in particular:
 - review and assess the text of the self-commitment letter and the communication in compliance with the Non-MNO Remedy;
 - review and assess the progress of the negotiations and verify that dependent on the stage of the negotiation process interested third parties obtain sufficient and correct information relating to the relevant agreements; review and assess TEF DE's compliance with the commitment to abolish customer transfer obligations (Section C. 3. c), and in particular: review and assess the text of the letter referred to in Section C. 3. c; and
 - review and assess TEF DE's compliance with its specific obligations under the Non-MNO Remedy;

- act as a contact point for any requests by third parties in relation to the Commitments;
- within one week after receipt of any signed MBA Agreement, submit to the Commission, sending TEF DE a non-confidential copy at the same time, a reasoned opinion as to the Suitability of the Upfront MBA MVNO and compliance of the signed MBA Agreement with the Upfront MBA MVNO Remedy (Section C. 1.);
- generally monitor compliance by TEF DE with the Commitments and assume the functions as specified in Section F of these Commitments;
- propose to TEF DE such measures as the Monitoring Trustee considers necessary to ensure TEF DE's compliance with the conditions and obligations attached to the Decision;
- promptly report in writing to the Commission, sending TEF DE a non-confidential copy at the same time, if it concludes on reasonable grounds that TEF DE is failing to comply with these Commitments;
- until the end of 2015, provide to the Commission, sending TEF DE a non-confidential copy at the same time, a written report on TEF DE's compliance with the Commitments within fifteen (15) calendar days after the end of every month;
- as from 1 January 2016 until the end of the Initial Term provide to the Commission, sending TEF DE a non-confidential copy at the same time, a written report on TEF DE's compliance with the Commitments within fifteen (15) calendar days after the end of every period of three months;
- as from the end of Initial Term until the expiration of the Commitments provide to the Commission, sending TEF DE a non-confidential copy at the same time, a written report on TEF DE's compliance with the Commitments within fifteen (15) calendar days after the end of every period of six months;
- provide to the Commission, sending TEF DE a non-confidential copy at the same time, a written report in relation to the periodical capacity measurements of the TEF DE Consolidated Network and the E-Plus Legacy Network within fifteen (15) calendar days after the end of every period of three months.
- monitor the fast-track Dispute resolution process in Section F and, in this context, provide to the Commission
 - a report (on a monthly basis) on the progress of any ongoing Dispute resolution process; and

- a final report detailing the outcome of any Dispute resolution procedure within seven calendar days of a determination by the Arbitral Tribunal;
- assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision.

All reports to the Commission must be provided in English. Communication with the Monitoring Trustee may be in German. 96

3. Duties and obligations of TEF DE

TEF DE shall provide and shall cause its advisors to provide the Monitoring Trustee with all such co-operation, assistance and information as the Monitoring Trustee may reasonably require performing its tasks. The Monitoring Trustee shall have full and complete access to any of TEF DE's books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments and TEF DE shall provide the Monitoring Trustee upon request with copies of any document. TEF DE shall make available to the Monitoring Trustee one or more offices on their premises and shall be available for meetings in order to provide the Monitoring Trustee with all information necessary for the performance of its tasks. 97

TEF DE shall provide and shall cause its advisors to provide the Monitoring Trustee, on request, with the information submitted to third parties that are interested in negotiating and concluding an Upfront MBA MVNO Agreement. TEF DE shall inform the Monitoring Trustee on third parties that are interested in concluding an Upfront MBA MVNO Agreement, submit a list of such interested third parties at each stage of the negotiation process, including the offers made by such interested third parties and keep the Monitoring Trustee involved on all developments in the negotiation process. The same shall apply mutatis mutandis in relation to the negotiation in relation to the (i) MNO Remedy and (ii) wholesale agreements under the Non-MNO Remedy. 98

TEF DE shall indemnify the Monitoring Trustee and its employees and agents (each an "**Indemnified Party**") and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to TEF DE for, any liabilities arising out of the performance of the Monitoring Trustee's duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Monitoring Trustee, its employees, agents or advisors. 99

At the expense of TEF DE, the Monitoring Trustee may appoint advisors (in particular for legal or technical advice), subject to TEF DE's approval (this approval not to be unreasonably withheld or delayed) if the Monitoring Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided that any fees and other expenses incurred 100

by the Monitoring Trustee are reasonable. Should TEF DE refuse to approve the advisors proposed by the Monitoring Trustee the Commission may approve the appointment of such advisors instead, after having heard TEF DE. Only the Monitoring Trustee shall be entitled to issue instructions to the advisors. The preceding paragraph of these Commitments shall apply mutatis mutandis.

TEF DE agrees that the Commission may share Confidential Information proprietary to TEF DE with the Monitoring Trustee. The Monitoring Trustee shall not disclose such information and the principles contained in Article 17 (1) and (2) of the Merger Regulation apply mutatis mutandis. 101

TEF DE agrees that the contact details of the Monitoring Trustee are published on the website of the Commission's Directorate-General for Competition and they shall inform interested third parties of the identity and the tasks of the Monitoring Trustee. 102

For a period of 10 years from the Effective Date the Commission may request all information from the Parties that is reasonably necessary to monitor the effective implementation of these Commitments. 103

4. Replacement, discharge and reappointment of the Monitoring Trustee

If the Monitoring Trustee ceases to perform or its functions under the Commitments or for any other good cause, including the exposure of the Monitoring Trustee to a Conflict of Interest: 104

- the Commission may, after hearing the Monitoring Trustee and TEF DE, require TEF DE to replace the Monitoring Trustee; or
- TEF DE may, with the prior approval of the Commission, replace the Monitoring Trustee.

If the Monitoring Trustee is removed according to these Commitments, the Monitoring Trustee may be required to continue in its function until a new Monitoring Trustee is in place to whom the Monitoring Trustee has effected a full hand over of all relevant information. The new Monitoring Trustee shall be appointed in accordance with the procedure referred to above. 105

Unless removed according to the provisions above, the Monitoring Trustee shall cease to act as Monitoring Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Monitoring Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented. 106

F. Fast-track Dispute resolution

1. Scope

The fast-track Dispute resolution procedure as described herein shall apply in the event that a Requesting Party claims that TEF DE or an Affiliated Undertaking is failing to comply with the requirements of Section C of the Commitments vis-à-vis that Requesting Party, in particular where: 107

- the Requesting Party and TEF DE have not agreed upon the terms of the respective agreement(s) under (i) the MNO Remedy and/or (ii) the Non-MNO Remedy; and/or;
- the Requesting Party and TEF DE have not solved a Dispute under agreements that have been signed under (i) the Upfront MBA MVNO Remedy; (ii) the MNO Remedy and/or (iii) the Non-MNO Remedy,

It is being understood that the fast-track Dispute resolution procedure as described only applies to claims related to TEF DE's compliance with these Commitments, not with other disputes between TEF DE and the Upfront MBA MVNOs, the New Entrant MNO and/or the non-MNOs. 108

2. Pre-Dispute Escalation

Any Requesting Party who wishes to avail itself of the fast track Dispute resolution procedure under either of the two situations set out in the preceding paragraph shall send a written request to that effect (the "**Request**") to TEF DE, with a copy to the Monitoring Trustee. In the Request, the Requesting Party shall set out in detail the reasons leading that party to believe that TEF DE is failing to comply with the Commitments. 109

Within a reasonable period of time not exceeding ten (10) working days after receipt of the Request by TEF DE, the Requesting Party and TEF DE will use their best efforts to resolve through co-operation and consultation all differences of opinion and to settle all Disputes underlying the Request. If the settlement of the Disputes fails within these ten (10) working days, the respective CEOs of TEF DE and the Requesting Party may seek to resolve the matters in Dispute within an additional ten (10) working days from expiry of the ten (10) working days period. 110

The Monitoring Trustee shall present to the Parties its own proposal (the "**Trustee Proposal**") for resolving the Dispute within five (5) working days after receipt of the Request by the Monitoring Trustee, specifying in writing the action(s), if any, to be taken by TEF DE or an Affiliated Undertaking in order to ensure compliance with the Commitments vis-à-vis the Requesting Party, and be prepared, if requested, to facilitate the settlement of the Dispute. To the extent TEF DE and the Requesting Party have settled a Dispute on the basis of the 111

Trustee Proposal and TEF DE complies with such settlement, TEF DE shall be deemed not to be in breach of the Commitments.

3. **Dispute**

If the Requesting Party and TEF DE (hereinafter referred to together as the "**Parties to the Arbitration**") fail to resolve their differences of opinion in the consultation phase described under point 2 "Pre-Dispute Escalation", the Requesting Party may, within twenty (20) calendar days of the expiry of the consultation time for the CEOs referred to in under point 2 "Pre-Dispute Escalation", serve a notice in the sense of a request for arbitration (the "**Notice**") to the German Institution of Arbitration (hereinafter referred to as the "**Arbitral Institution**") with a copy of such Notice to TEF DE. 112

The Notice shall set out in detail the Dispute, difference or claim (the "**Dispute**") and shall contain, inter alia, all issues of both fact and law, including any suggestions as to the procedure to be applied in the fast-track arbitration. All documents relied upon shall be attached, e.g. documents, agreements, communications with the Monitoring Trustee, expert reports, and witness statements. The Notice shall also contain a detailed description of the action(s) to be undertaken by TEF DE (including, if appropriate, a draft contract comprising all relevant terms and conditions) and the Trustee Proposal, including a comment as to its appropriateness. 113

4. **Answer**

TEF DE shall, within fifteen (15) working days from receipt of the Notice, submit its Answer to the Notice (the "**Answer**") to the Arbitral Institution, with a copy to the Requesting Party. The Answer shall provide detailed reasons for TEF DE's position and set out, inter alia, all issues of both fact and law, including any suggestions as to the procedure. All documents relied upon shall be attached, e.g. documents, agreements, communications with the Monitoring Trustee, expert reports, and witness statements. The Answer shall, if appropriate, contain a detailed description of the action(s) which TEF DE proposes to undertake vis-à-vis the Requesting Party (including, if appropriate, a draft contract comprising all relevant terms and conditions) and the Trustee Proposal (if not already submitted), including a comment as to its appropriateness. 114

5. **Appointment of the arbitrators**

The arbitral tribunal shall consist of three persons. The Requesting Party shall nominate one arbitrator in the Notice; TEF DE shall nominate one arbitrator in the Answer. The arbitrators nominated by the Requesting Party and by TEF DE shall, within five (5) working days of the nomination of the latter, nominate the third arbitrator who shall act as chairman of the arbitral tribunal, making such nomination known to the Parties to the Arbitration and the Arbitral Institution which shall forthwith confirm the appointment of all three arbitrators within five (5) working days 115

after the nomination of the third arbitrator. The right to challenge an arbitrator pursuant to Section 18 of the Arbitration Rules of the German Institution of Arbitration (DIS) shall apply.

Should the Requesting Party wish to have the Dispute decided by a sole arbitrator, it shall indicate this in the Notice. In this case, the Requesting Party and TEF DE shall agree on the nomination of a sole arbitrator within five (5) working days from the communication of the Answer and communicate the nominated sole arbitrator to the Arbitral Institution. 116

Should TEF DE fail to nominate an arbitrator, or if the two arbitrators nominated by the Parties to the Arbitration fail to agree on the chairman of the arbitral tribunal, or should the Parties to the Arbitration fail to agree on a sole arbitrator, the default appointment(s) shall be made by the Arbitral Institution within five (5) working days after the expiry of the time limit for the respective nomination. 117

The three-person arbitral tribunal or, as the case may be, the sole arbitrator, are herein referred to as the "**Arbitral Tribunal**". 118

6. Arbitration procedure

The Dispute shall be finally resolved by arbitration under the Arbitration Rules of the German Institution of Arbitration, with such modifications or adaptations as foreseen herein or necessary under the circumstances (the "**Rules**"). The place of arbitration is Munich, Germany. The language of the procedure is English or German. Unless the Parties to the Arbitration agree otherwise, hearings, if any, shall be held in Munich. 119

7. Expedited proceedings

The procedure shall be a fast-track procedure pursuant to DIS-Supplementary Rules for Expedited Proceedings 08 (SREP). For this purpose, the Arbitral Tribunal shall shorten all applicable procedural time-limits under the Rules as far as admissible and appropriate in the circumstances. The Parties to the Arbitration shall consent to the use of e-mail for the exchange of documents. 120

The Arbitral Tribunal shall, as soon as practical after the confirmation of the Arbitral Tribunal, hold an organisational conference to discuss any procedural issues with the Parties to the Arbitration. Terms of reference shall be drawn up and signed by the Parties to the Arbitration and the Arbitral Tribunal at the organisational meeting or thereafter and a procedural time-table shall be established by the Arbitral Tribunal. An oral hearing shall, as a rule, be established within two months of the confirmation of the Arbitral Tribunal by the Arbitral Institution. 121

8. Provision of information

In order to enable the Arbitral Tribunal to reach a decision, it shall be entitled to request any information from the Parties to the Arbitration which it deems relevant, 122

to appoint experts and to examine them at the hearing, and to establish the facts by all appropriate means. The Arbitral Tribunal is also entitled to ask for assistance by the Monitoring Trustee in all stages of the procedure if the Parties to the Arbitration agree.

9. Confidentiality

The Arbitral Tribunal shall not disclose Confidential Information and apply the standards attributable to confidential information under the Merger Regulation. The Arbitral Tribunal may take the measures necessary for protecting Confidential Information in particular by restricting access to Confidential Information to the Arbitral Tribunal, the Monitoring Trustee, and outside counsel and experts of the opposing party or to the Arbitral Tribunal and the Monitoring Trustee only ("*in camera inspection*"). 123

10. Burden of proof

Each of the Parties to the Arbitration shall bear the burden of proof for the facts on which it relies in order to substantiate its claim, counter-claim or defence. 124

11. Involvement of the Commission

The Commission is allowed and shall be enabled to participate in all stages of the procedure by: 125

- Receiving all written submissions (including documents and reports, etc.) made by the Parties to the Arbitration;
- Receiving all orders, interim and final awards and other documents exchanged by the Arbitral Tribunal with the Parties to the Arbitration (including terms of reference and procedural time-table);
- Filing any *amicus curiae* briefs; and
- Sending representatives to the hearing(s) who are allowed to ask questions to the Parties to the Arbitration, witnesses and experts.

The Arbitral Tribunal shall forward, or shall order the Parties to the Arbitration to forward, the documents mentioned to the Commission without delay. 126

In the event of disagreement between the Parties to the Arbitration regarding the interpretation of the Commitments, the Arbitral Tribunal may seek the Commission's interpretation of the Commitments before finding in favour of any Party to the Arbitration and shall be bound by the interpretation. 127

12. Decisions of the Arbitral Tribunal

The Arbitral Tribunal shall decide the Dispute on the basis of the Commitments and the decision. Issues not covered by the Commitments and the Decision shall 128

be decided (in the order as stated) in accordance with the Merger Regulation, EU law and German law. Any decision taken by the Arbitral Tribunal requires a majority vote by the members of the Arbitral Tribunal.

13. Preliminary rulings

Upon request of the Requesting Party, the Arbitral Tribunal may make a preliminary ruling on the Dispute. The preliminary ruling shall be rendered within one month after the confirmation of the Arbitral Tribunal by the Arbitral Institution, shall be applicable immediately and, as a rule, remain in force until a final Decision is rendered by the Arbitral Tribunal. 129

14. Final award

The Arbitral Tribunal shall, in a preliminary ruling as well as in a final award, specify the action(s), if any, to be taken by TEF DE or an Affiliated Undertaking in order to comply with the Commitments vis-à-vis the Requesting Party (e.g. specify a contract including all relevant terms and conditions). The final award shall be final and binding on the Parties to the Arbitration and shall resolve the Dispute and determine any and all claims, motions or requests submitted to the Arbitral Tribunal. The arbitral award shall also determine the reimbursement of the costs of the successful party and the allocation of the arbitration costs. In case of granting a preliminary ruling or if otherwise appropriate, the Arbitral Tribunal shall specify that terms and conditions determined in the final award apply retroactively. 130

15. Timeframe

The final award shall, as a rule, be rendered within six months after the confirmation of the Arbitral Tribunal by the Arbitral Institution. The time-frame shall, in any case, be extended by the time the Commission takes to submit an interpretation of the Commitment if asked by the Arbitral Tribunal. 131

16. Publication of award

The Parties to the Arbitration shall prepare a non-confidential version of the final award, without business secrets. The Commission may publish the non-confidential version of the award. The Parties to the Arbitration, the Arbitral Tribunal, all other persons participating in the proceedings and all further persons involved, i.e. in the administration of the arbitral proceedings shall maintain confidentiality towards all persons regarding the conduct of arbitral proceedings. All proceedings are being held in private and remain confidential. 132

17. No restriction of Commission

Nothing in the arbitration procedure shall affect the power to the Commission to take Decisions in relation to the Commitments in accordance with its powers under the Merger Regulation. 133

G. Review clause

The Commission may extend the time periods foreseen in the Commitments in response to a request from TEF DE or, in appropriate cases, on its own initiative. Where TEF DE requests an extension of a time period, it shall submit a reasoned request to the Commission no later than one month before the expiry of that period, showing good cause. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to TEF DE. Only in exceptional circumstances shall TEF DE be entitled to request an extension within the last month of any period. 134

The Commission may further, in response to a reasoned request from TEF DE showing good cause waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to TEF DE. The request shall not have the effect of suspending the application of the undertaking and, in particular, of suspending the expiry of any time period in which the undertaking has to be complied with. 135

A review of these Commitments will in particular be considered by the Commission if one of the following cases occurs: 136

- An Upfront MBA MVNO converts into an MNO. It will be deemed that an Upfront MBA MVNO converts into an MNO once the Upfront MBA MVNO has launched (or is about to launch) nationwide retail mobile services in Germany as an MNO. In any such case it will be reviewed to what extent TEF DE's obligations under the Upfront MBA MVNO Remedy can be reduced accordingly (i.e. to what extent the capacities formerly committed by the respective Upfront MBA MVNO can be deducted from the capacities which are to be made available under the Upfront MBA MVNO Remedy).
- TEF DE signs an MNO Agreement under the MNO Remedy with a New MNO Entrant not belonging to the group of Upfront MBA MVNOs and the new MNO Entrant has launched nationwide retail mobile services in Germany as an MNO.
- If a new fourth MNO (other than the New MNO Entrant) entered the German market. It will be deemed that a fourth MNO entered the market once this MNO has launched nationwide retail mobile services in Germany.

H. Entry into force

The Commitments shall take effect upon the date of adoption of the Decision.

137

(Signed)

duly authorised to act for and on behalf of TEF DE

Annex 1
[...]*

Annex 2

[...]*

Annex 3

[...]*