



Case No COMP/M.6992

HUTCHISON 3G UK / TELEFONICA IRELAND

Only the English language text is authentic.

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

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

Date: 28/05/2014

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EUROPEAN COMMISSION
DG Competition



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COMMISSION

Brussels, 28.05.2014
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PUBLIC VERSION

COMMISSION DECISION

of 28.5.2014

addressed to:

Hutchison 3G UK Holdings Limited

and

Hutchison 3G Ireland Holdings Limited

**declaring a concentration to be compatible with the internal market and the EEA
agreement (Case M.6992 - HUTCHISON 3G UK / TELEFONICA IRELAND)**

(Only the English text is authentic)

Table of Contents

1.	Introduction and procedure	6
2.	The Parties and the Concentration	8
3.	Union Dimension	9
4.	The Procedure and the Investigation	9
5.	The Irish Mobile Telecommunications Sector	10
5.1.	Overview of the Irish mobile telecommunications sector.....	10
5.1.1.	Description and key metrics.....	10
5.1.2.	National Broadband Scheme ("NBS")	13
5.1.3.	Bundles in Ireland	15
5.1.4.	Switching.....	15
5.2.	Description of the four MNOs operating in Ireland.....	16
5.2.1.	Vodafone	17
5.2.2.	O2.....	18
5.2.3.	Eircom	19
5.2.4.	Three	20
5.3.	The structure of a mobile network	20
5.4.	Spectrum allocation between MNOs in Ireland	23
5.4.1.	Spectrum bands and characteristics	23
5.4.2.	Spectrum auctions	27
5.5.	Network deployment by MNOs	30
5.6.	Network sharing agreements.....	30
5.6.1.	What is network sharing?.....	30
5.6.2.	Network sharing agreements between MNOs in Ireland	32
5.6.3.	National roaming arrangements of Eircom and Three with Vodafone	32
5.7.	MVNOs in Ireland.....	32
5.7.1.	Background on MVNOs	32
5.7.2.	Tesco Mobile.....	33
5.7.3.	Other Irish MVNOs.....	34
5.8.	Merger discussions for alternative consolidations	35
6.	Relevant Markets	35
6.1.	Product market definition.....	36
6.1.1.	The retail mobile telecommunications services market	36
6.1.2.	Wholesale market for access and call origination on public mobile telephone networks	40

6.1.3.	Wholesale market for international roaming.....	41
6.1.4.	Wholesale market for mobile call termination.....	41
6.2.	Geographic market definition	41
6.2.1.	Retail mobile telecommunications services market.....	42
6.2.2.	Wholesale market for access and call origination on public mobile telephone networks	42
6.2.3.	Wholesale market for international roaming.....	42
6.2.4.	Wholesale market for mobile call termination.....	42
6.3.	Affected markets	43
6.3.1.	Horizontally affected markets	43
6.3.2.	Vertically affected markets	43
7.	Competitive Assessment	44
7.1.	Introduction	44
7.2.	Legal test	46
7.2.1.	The Notifying Party's view	47
7.2.2.	The Commission's assessment	48
7.3.	Market shares and concentration.....	50
7.3.1.	Retail mobile telecommunications services market.....	51
7.3.2.	Wholesale market for access and call origination.....	65
7.4.	Limited likelihood of sufficient entry by MNOs and/or MVNOs	66
7.4.1.	Introduction	66
7.4.2.	MNO entry	66
7.4.3.	MVNO entry	67
7.5.	The merger will remove an important competitive force from the retail mobile telecommunications services market.....	68
7.5.1.	Introduction	68
7.5.2.	Three is currently an important competitive force on the retail mobile telecommunications services market.....	69
7.5.3.	Importance of Three in its segments of activity.....	101
7.5.4.	Conditions in the absence of the merger	117
7.5.5.	Merged entity's incentives to compete after the merger.....	129
7.5.6.	Likely reaction of competitors following the merger	135
7.5.7.	Quantitative assessment of horizontal non-coordinated effects.....	139
7.5.8.	Conclusion.....	160
7.6.	The merger is likely to reduce competition from Eircom in the retail and wholesale markets	161
7.6.1.	Eircom's contribution to competition in the absence of the merger.....	161

7.6.2.	The merger's impact on Eircom	162
7.6.3.	Conclusion: competition from Eircom is likely to be reduced	165
7.7.	Likely effects on the wholesale market for network access and call origination.....	166
7.7.1.	The Parties are important providers of wholesale access.....	166
7.7.2.	Reduction in the number of MNOs and decreased bargaining power of MVNOs ..	168
7.7.3.	Merger will likely change Three's and O2's incentives to host MVNOs	168
7.7.4.	Likely reaction of competing MNOs	170
7.7.5.	Conclusion on the likely effects in the wholesale market for network access and call origination	171
7.8.	Coordinated effects in the retail mobile telecommunications services market.....	171
7.9.	Absence of countervailing buyer power	173
7.10.	Efficiencies.....	174
7.10.1.	Scale efficiencies.....	176
7.10.2.	LTE deployment efficiencies	195
7.10.3.	Efficiencies related to the coverage of sparsely populated areas	205
7.10.4.	Conclusion on efficiencies	208
7.11.	Other markets	209
7.11.1.	Wholesale market for international roaming.....	209
7.11.2.	Wholesale market for mobile call termination.....	210
8.	Conclusion.....	210
9.	Commitments	210
9.1.	Analytical Framework.....	210
9.2.	Procedure.....	211
9.3.	Commitments of 3 March 2014	211
9.3.1.	Description of the proposed commitments	211
9.3.2.	Commission's analysis	213
9.4.	Commitments of 19 March 2014	216
9.4.1.	Description of the proposed commitments	216
9.4.2.	Commission's analysis	218
9.5.	The MVNO entry commitment of 8 April 2014	220
9.5.1.	Description of the proposed commitments	220
9.5.2.	Commission's analysis	221
9.6.	Final Commitments.....	223
9.6.1.	Description of the proposed commitments	223
9.6.2.	Commission's analysis of the Final Commitments	225
9.6.3.	Conclusion on the Final Commitments.....	232

9.7. Conclusion..... 233
10. CONDITIONS AND OBLIGATIONS..... 233
11. ANNEXES 235

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THE EUROPEAN COMMISSION,

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

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

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings,¹ and in particular Article 8(2) thereof,

Having regard to the Commission's decision of 6 November 2103 to initiate proceedings in this case,

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

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

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

Whereas:

1. INTRODUCTION AND PROCEDURE

- (1) On 1 October 2013, the Commission received a notification of a proposed concentration pursuant to Article 4 of Regulation (EC) No 139/2004 ("the Merger

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 264, 13.08.2014, p. 2-3.

³ OJ C 264, 13.08.2014, p. 4-5.

Regulation") by which the undertaking Hutchison 3G UK Holdings Limited (United Kingdom), controlled by Hutchison Whampoa Limited ("Hutchison", Hong Kong) (together the "Notifying Party"), will acquire within the meaning of Article 3(1)(b) of the Merger Regulation control of the whole of the undertaking Telefónica Ireland Limited ("O2", Ireland) by way of purchase of shares.⁴ The Notifying Party and O2 are designated hereinafter as the "Parties". Hutchison 3G Ireland Limited ("Three") is an indirect wholly-owned subsidiary of Hutchison Whampoa Limited.⁵

- (2) After a preliminary examination of the notification and based on the first phase ("Phase I") market investigation, the Commission concluded that the proposed concentration raised serious doubts as to its compatibility with the internal market as regards the retail mobile telecommunications services market and the wholesale market for access and call origination services and adopted a decision to initiate proceedings pursuant to Article 6(1)(c) of the Merger Regulation on 6 November 2013, (the "Article 6(1)(c) Decision").
- (3) Following the adoption of the Article 6(1)(c) Decision, the Notifying Party submitted written comments on 20 November 2013 accompanied by annexes (the "Response to the Article 6(1)(c) Decision"). The Response to the Article 6(1)(c) Decision was complemented by the "Response to the Article 6(1)(c) Decision on Efficiencies", on 29 November 2013, also accompanied by annexes. The annexes include a series of reports and studies prepared by the Notifying Party's external economists.
- (4) On 30 January 2014, the Commission addressed a Statement of Objections (the "SO") to the Notifying Party pursuant to Article 18 of the Merger Regulation in which the Commission raised competition concerns. The Notifying Party replied to the SO on 18 February 2014 (the "Response to the SO").
- (5) An oral hearing took place on 25 February 2014. The Commission, the Parties and interested third parties (namely Eircom, Vodafone, UPC / Liberty Global and British Telecommunications ("BT")) presented their views on the SO. Competition authorities of a number of Member States as well as the Irish telecommunications regulator, the Commission for Communications Regulation ("ComReg"), and the Irish Department for Communications, Energy and Natural Resources attended and had the opportunity to ask questions.
- (6) In order to address the competition concerns identified in the SO, the Notifying Party submitted a first set of commitments on 3 March 2014. On the same day, the time limit for taking a final decision in this case was extended by 15 working days pursuant to the first subparagraph of Article 10(3) of the Merger Regulation. The commitments of 3 March 2014 were not market tested.

⁴ OJ C 293, 9.10.2013, p. 8.

⁵ At the time of notification, Three was wholly-owned by Hutchison 3G UK Holdings Limited. Hutchison 3G UK Holdings Limited is the legal entity within the Hutchison group that notified the transaction to the Commission. Hutchison later reorganised the holding structure for its Irish business. A new holding company was established and Three is now wholly-owned by Hutchison 3G Ireland Holdings Limited, an indirect wholly-owned subsidiary of Hutchison. Hutchison 3G UK Holdings Limited has nominated Hutchison 3G Ireland Finance Limited to acquire the shares of O2. Hutchison 3G Ireland Finance Limited is an indirect wholly-owned subsidiary of Hutchison 3G Ireland Holdings Limited, and ultimately of Hutchison. This is a purely internal restructuring between companies which are all wholly-owned directly or indirectly by Hutchison and has no effect on the control of the relevant undertakings or the Commission's jurisdiction to examine the merger.

- (7) On 17 March 2014, the Notifying Party submitted a second set of commitments. On 19 March, the Notifying Party submitted revised commitments, with minor variations to the second set of commitments of 17 March. The Commission launched a market test of the commitments of 19 March 2014 on the same date they were received with competing mobile network operators (“MNOs”), actual and potential mobile virtual network operators (“MVNOs”), as well as national regulators.
- (8) On 8 April 2014, the Notifying Party submitted a revised part of the commitments relating to MVNO entry (“MVNO entry commitment”). On the same date, the Commission launched a second market test regarding the revised MVNO entry commitment with the respondents to the first market test.
- (9) On 19 March 2014, the Commission sent a letter of facts (the “Letter of Facts”) informing the Notifying Party about additional evidence identified after the adoption of the SO and that could be relied upon this Decision. The Letter of Facts contained (1) four additional internal documents supporting the Commission's view that Hutchison 3G Ireland Limited (“Three”) is an important competitive force, (2) a tariff comparison, and (3) a refined quantification of the likely price effects resulting from the elimination of horizontal competition between Three and O2.
- (10) The Notifying Party responded to the Commission's Letter of Facts on 30 March 2014 and 1 April 2014 (the “Response to the Letter of Facts”).
- (11) On 1 April 2014, the Commission adopted a decision pursuant to Article 11(3) of the Merger Regulation, following the Notifying Party's failure to respond to an information request from the Commission. That decision suspended the time limits for the adoption of this Decision. The Notifying Party responded to the information request on 7 May 2014 and the new time limit for a decision pursuant to Article 8 of the Merger Regulation became 20 June 2014.
- (12) On 6 May 2014, the Notifying Party submitted a final set of commitments.⁶
- (13) The Advisory Committee discussed the draft of this Decision on 21 May 2014 and issued a favourable opinion.

2. THE PARTIES AND THE CONCENTRATION

- (14) Hutchison is a conglomerate company headquartered in Hong Kong. This conglomerate is active on the Irish mobile telecommunications market through its subsidiary Three. Three is the most recent entrant in the Irish mobile telecommunications market and the fastest growing MNO in Ireland. It sells its services under the brand name “3”. Apart from Three, Hutchison also owns MNOs in five other Member States, namely Austria, Denmark, Italy, Sweden and the United Kingdom.
- (15) O2 is a wholly-owned indirect subsidiary of Telefónica S.A., the parent company of the Telefónica group. The Telefónica group is one of the world's largest mobile network providers. O2 is Ireland's second largest MNO and sells its services under the brand name “O2” and the sub-brand “48”. It also owns 50% of Tesco Mobile Ireland (“Tesco Mobile”), the other 50% being owned by Tesco Ireland.

⁶ These commitments were subsequently re-submitted by the Notifying Party on 22 May 2014 signed by an additional company within the Hutchison group (see footnote 722).

- (16) O2's parent companies and Hutchison 3G UK Holdings Limited entered into a sale and purchase agreement on 22 June 2013. Pursuant to that agreement, Hutchison, indirectly through Hutchison 3G UK Holdings Limited,⁷ will purchase all shares in O2 (the "merger"). If the merger is completed, the Notifying Party will acquire sole control over O2, resulting in a change of control on a lasting basis. The merger therefore constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

3. UNION DIMENSION

- (17) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million ⁸ (Hutchison: EUR 29 484 million, O2: EUR 629 million). Each of them has a Union-wide turnover in excess of EUR 250 million (Hutchison: [...]*, O2: [...]*. O2 achieves more than two-thirds of its aggregate Union-wide turnover within one and the same Member State (Ireland) but Hutchison does not. The merger therefore has a Union dimension within the meaning of Article 1(2) of the Merger Regulation.

4. THE PROCEDURE AND THE INVESTIGATION

- (18) During the second phase ("Phase II") investigation, the Commission took the following main investigative steps:
- (a) reviewing the submissions of the Parties, sending several requests for information to the Parties, reviewing responses, conducting meetings and telephone interviews;
 - (b) sending several requests for information to third parties (such as competitors, suppliers and customer associations), reviewing responses, conducting meetings and telephone interviews;
 - (c) reviewing submissions from and conducting meetings and telephone interviews with ComReg, telecommunications consultants Vilicom Engineering Limited and the Irish government;
 - (d) reviewing internal documents of the Parties;
 - (e) conducting a comparison of the Parties' tariffs; and
 - (f) conducting a quantitative analysis in order to evaluate the likely effects of the merger.

⁷ As mentioned in footnote 5, following the recent corporate restructuring, Hutchison 3G UK Holdings Limited has nominated Hutchison 3G Ireland Finance Limited to acquire the shares of O2.

⁸ Turnover calculated in accordance with Article 5 of the Merger Regulation.

5. THE IRISH MOBILE TELECOMMUNICATIONS SECTOR

5.1. Overview of the Irish mobile telecommunications sector

5.1.1. Description and key metrics

- (19) ComReg publishes Quarterly Key Data Reports on the Irish telecommunications markets, including mobile telecommunications. Those reports include metrics for that quarter, often compared to the previous year's corresponding quarter. The SO used the Quarterly Key Data Report of Q3 2013, which was published on 18 December 2013 and which, at the time of the SO, was the latest Quarterly report (the "ComReg Q3 Report").⁹ On 14 March 2014, ComReg published the Q4 2013 report (the "ComReg Q4 Report").¹⁰
- (20) In addition, ComReg has sent the Commission observations on the merger¹¹ (the "ComReg Observations"), which also set out metrics for the Irish mobile telecommunications markets. Those metrics are based on Q2 2013.¹²
- (21) Table 1 shows the evolution of annual revenues, number of subscribers and population in the Irish mobile telecommunications sector, calculated on an annual basis from 2008 onwards.

⁹ ComReg, Quarterly Key Data Report, Q3 2013, 18 December 2013, Document No. 13/120, page 60, http://www.comreg.ie/_fileupload/publications/ComReg13120.pdf, available on 23 January 2014, (the "ComReg Q3 Report") [ID 2376]. This report uses Q3 2013 data.

¹⁰ ComReg, Quarterly Key Data Report, Q4 2013, 14 March 2014, Document No. 14/19, http://www.comreg.ie/_fileupload/publications/ComReg1419.pdf, available on 7 April 2014, (the "ComReg Q4 Report") [ID 3967]. This report uses Q4 2013 data.

¹¹ ComReg, Proposed acquisition of Telefónica Ireland Limited by Hutchison 3G UK Holdings Limited, Preliminary detailed observations from the Commission for Communications Regulation to DG Competition – European Commission, 14 January 2014, (the "ComReg Observations") [ID 2090]. This report uses Q2 2013 data.

¹² The annual change in the ComReg quarterly report is reported on the basis of the last four quarters. Therefore for the ComReg Q3 report, the comparison is between the situation in Q3 2012 and Q3 2013. Similarly, for the ComReg Observations, the comparison is between the situation in Q2 2012 and Q2 2013.

Table 1: Evolution of metrics in the Irish mobile telecommunications sector

	Q4 2008 - Q3 2009	Q4 2009 - Q3 2010	Q4 2010 - Q3 2011	Q4 2011 - Q3 2012	Q4 2012 - Q3 2013
Population (in millions)	4.431	4.459	4.525	4.586	4.591
Mobile subscriptions (in millions)	5.109	5.170	5.384	5.511	5.492
Mobile retail revenues (in EUR million)	1 893	1 686	1 691	1 624	1 580
Mobile voice traffic (in millions of minutes)	10 530	10 556	11 041	11 008	10 909
Annual number of mobile broadband¹³ subscriptions (in millions)	0.354	0.497	0.585	0.578	0.533

Source: ComReg, on the basis of Quarterly Key Data Reports 2008-2013

- (22) There are approximately 5.5 million subscribers of mobile telecommunications services in Ireland. Of these, 84.5% are mobile voice only or voice and data subscriptions, 8.9% are mobile broadband subscriptions, and the remaining 6.6% are machine-to-machine ("M2M") subscriptions.¹⁴
- (23) Mobile penetration is internationally recognised as the standard metric to measure the number of subscribers who consume mobile services and is calculated on the number of active SIMs per 100 of the population.¹⁵ Mobile penetration at the end of December 2013, based on a population of 4 603 900, was 122.2% including mobile broadband and M2M subscriptions and 103.3% for voice / data packages.¹⁶
- (24) The ComReg Q4 Report illustrates the change in consumption in a year (Q4 2012 to Q4 2013).¹⁷ Total retail mobile voice traffic increased by 6.3%. On the other hand, the number of SMS messages decreased by 27.6% and MMS messages by 9.9%. Data volumes have increased the most, with a 43.7% growth, reaching a total data consumption of just over 12 273 terabytes.¹⁸ On the basis of the ComReg Q4 Report, the average monthly usage per subscription is 200.7 mobile voice call minutes, 152 SMS / MMS and 0.7 GB of data (uploads and downloads).¹⁹

¹³ Mobile broadband is the provision of data only tariff plans for use in laptops (through dongles) and tablets.

¹⁴ ComReg Q4 Report, page 46, [ID 3967].

¹⁵ Given that some mobile users may have used more than one active SIM card during the period, there is likely to be some over-estimation of actual individual mobile penetration using this metric.

¹⁶ ComReg Q4 Report, page 47, [ID 3967].

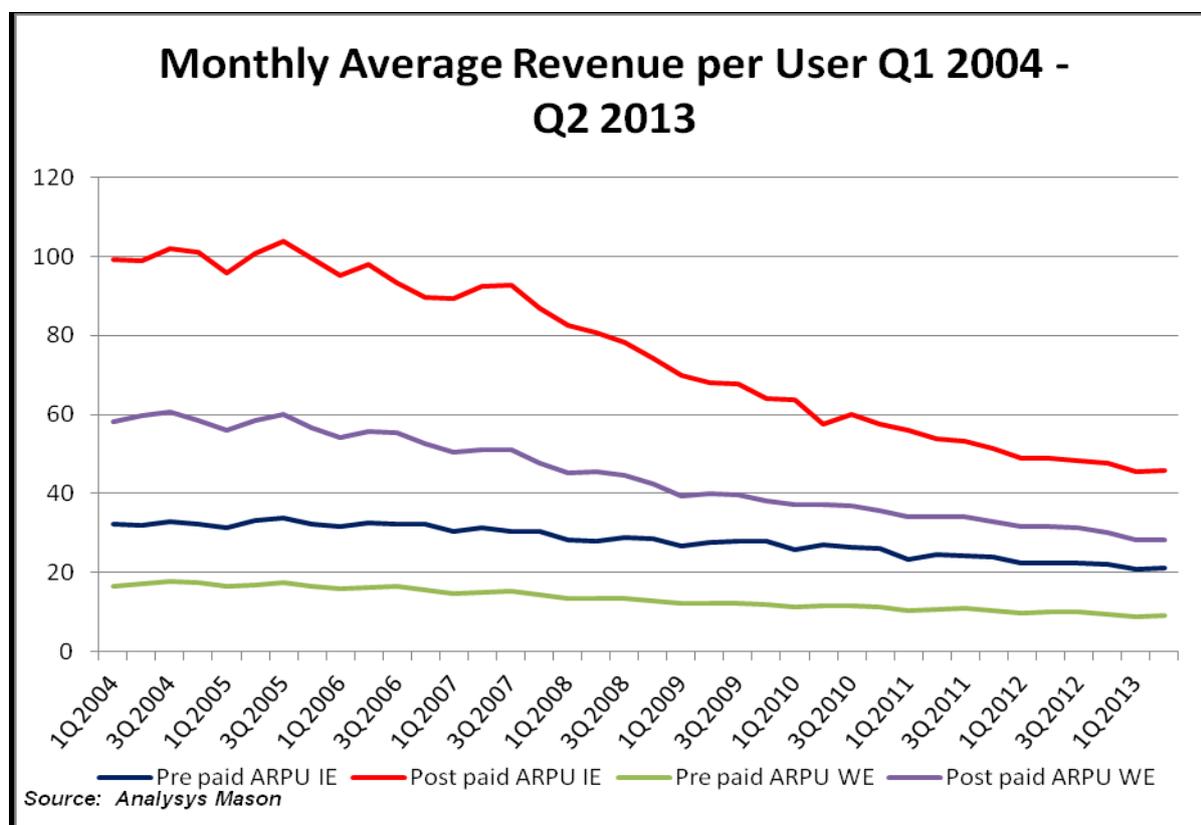
¹⁷ ComReg Q4 Report, page 53, [ID 3967].

¹⁸ A terabyte is a multiple of the unit byte for digital information. The prefix "tera" represents the fourth power of 1 000 and means 1 012. Thus a terabyte equals 1 000 000 000 000 bytes, or 1 000 gigabytes; ComReg Q4 Report, page 52, [ID 3967]

¹⁹ ComReg Q4 Report, pages 53 and 54, [ID 3967].

- (25) Communication prices have declined by 7.7 base points since December 2011, compared to an increase in the overall consumer price index ("CPI")²⁰ by 1.4 base points in the same period.²¹ Between Q4 2008 and Q3 2013 mobile retail revenues have decreased by 16.5%.

Figure 1: Monthly ARPU 2004 - 2013



Source: ComReg Observations on the basis of data from the Telecoms Market Matrix produced by Analysis Mason

- (26) Figure 1 shows the decline in pre-paid and post-paid average revenue per user ("ARPU") since 2004 compared to the Western European averages for the same services. This decline is in line with a general downward trend in ARPU across Western European countries. Based on data from Analysis Mason's Telecom Matrix, monthly mobile ARPU across the average of 14 Western European countries fell by 8.4% in Q2 2013 compared to Q2 2012.²²
- (27) Figure 1 also shows that the Irish ARPU for both pre-paid and post-paid services has historically been significantly higher than the Western European average. According to ComReg, this is partly a function of Irish consumers' higher voice usage.
- (28) According to ComReg, declining ARPU is likely to be a reflection of a number of factors such as worsened economic conditions in Ireland (such as reduced consumer

²⁰ Source:
http://www.cso.ie/en/media/csoie/releasespublications/documents/prices/2013/prices/consumerpriceindex/cpi_jan2013.pdf, available on 7 April 2014, [ID 3980].

²¹ ComReg Q4 Report, page 13, [ID 3967].

²² ComReg Observations, page 31 onwards, [ID 2090].

spending), lower priced mobile plans, increased sales of bundled products (combining mobile with fixed calls and sometimes broadband) and reductions in mobile roaming and termination rates among others.

- (29) Figure 2 and Figure 3 estimate the average revenue per minute and data usage by presenting estimated average revenue per minute and gigabyte respectively.

Figure 2: Average revenue per minute

[...]*

Figure 3: Average revenue per GB

[...]*

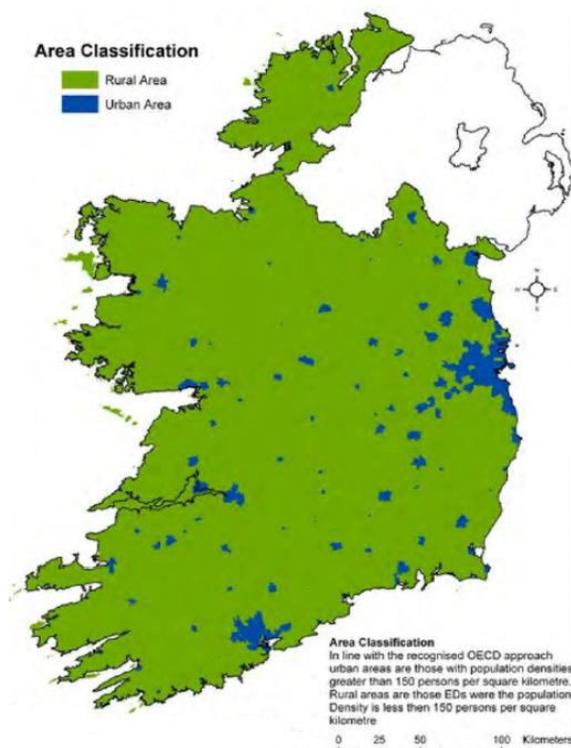
- (30) Figure 2 and Figure 3 indicate that over the last three years average revenue from voice services has declined for all MNOs in Ireland, while average revenue from data services has on average been flat or declining, but combined with higher usage levels has led to increased revenue from this source. Figure 2 and Figure 3 also show that Three and O2 have [...]*. Three's aggressive pricing strategy for data services is noticeable when compared to the pricing strategy of other MNOs.

5.1.2. National Broadband Scheme ("NBS")

- (31) A particular feature of the Irish telecommunications sector is that part of the population lives in sparsely populated rural areas in the western part of the country. Ireland has a large rural population, amounting to 37.5% of the total population. Ireland also has a low population density, with 67 persons per km².²³ This population distribution poses a challenge for fixed line operators and MNOs seeking to achieve nationwide population coverage.

²³ Census 2011, Central Statistics Office of Ireland.

Figure 4: Rural and urban areas of Ireland (2006)



*Sources: Statistical and Spatial Analysis: David Meredith (2008);
Population data: CSO, Census of Population, 3AP3 (1991);
Map: OSi*

- (32) In recognition of these difficulties, the Irish government established the NBS in 2007 / 2008 in order to address the lack of broadband connectivity in the rural areas of Ireland. Approximately 10% of the population in Ireland did not have access to broadband services. The Irish government considered that telecommunications network operators had insufficient incentives to invest in broadband networks in these rural areas with low population density and that there was no alternative but to grant public funding to support the building of the necessary infrastructure and the provision of broadband services.
- (33) The Irish government ran a competitive tender process open to both fixed and mobile operators for the contract to implement and operate the NBS to cover approximately 33% of the geographical area of the country. Three won the tender and entered into the NBS contract in December 2008. The Irish government committed to subsidising the NBS by up to EUR 79.8 million.
- (34) The NBS contract expires in August 2014. After expiry of the contract, Three is under an obligation to continue providing retail services to its existing customers until their individual contracts expire. At this stage, it is not known whether and when the Irish government will launch a tender for a new scheme to replace the NBS in the future. However, the new programme proposed by the Irish government will not be in place in September 2014. A gap is therefore to be expected between the end of the current NBS contract and the launch of the new NBS programme. The Irish government does not have precise information on the applicable time gap at this stage. However, the Irish government has indicated that it would not be feasible to extend the NBS contract with Three in its current form to fill the gap. A proposal for

a new NBS programme is expected to be published before the end of 2014, after which the implementation will take place.²⁴

5.1.3. *Bundles in Ireland*

- (35) A bundled subscription is one where a customer buys two or more telecommunications services (fixed telephony, internet access/broadband, TV, and/or mobile telephony) from the same supplier. In Q4 2013, there was a continued decline in the share of single play subscriptions (that is fixed services only) and a decline in double play subscriptions (that is a bundle of two services) as triple play subscriptions (a bundle of three services) continued to increase.²⁵ 48% of subscriptions were single play, compared to 52.7% in Q4 2012, 35.8% double play compared to 38.6% in Q4 2012 and 16.3% triple play, compared to 8.7% in Q4 2012.²⁶ Overall, the number of bundled subscriptions has been increasing steadily in the past four years from 38.4% of all fixed subscriptions in Q2 2011 to 49.2% in Q2 2013.²⁷
- (36) However, bundled subscriptions that include a mobile voice service represent a marginal part of the market and have been offered only since the second half of 2012.²⁸ ComReg estimates that only 1.3% of all mobile voice subscribers purchase mobile voice and fixed services (fixed voice and/or fixed broadband) from the same supplier.

5.1.4. *Switching*

- (37) In 2013, there were 524 115 total gross additions on average every quarter, that is the number of new mobile services subscribers that mobile operators attract per quarter.²⁹ The gross additions represent approximately 10% of the total subscribers in the market every quarter.³⁰ Of these, only 108 559 numbers were subscriptions with ported numbers³¹ on average every quarter, representing, on average, approximately 21% of the total gross additions.³²
- (38) In the past, and prior to reductions enforced by regulation, high termination rates and associated off-network call charges provided strong incentives for subscribers to join and remain on the same network as their friends and family and discouraged switching between networks. The extent of customer switching is also linked to

²⁴ Minutes from a conference call with the Irish government on the NBS, 16 January 2014, [ID 3602].

²⁵ Double play subscriptions can refer to either fixed telephony and internet or television or mobile telephony; television and the internet; mobile telephony and internet or television subscriptions. Triple play subscriptions can refer to fixed telephony and internet and television; fixed telephony and mobile telephony and internet; fixed telephony and mobile telephony and television; or, mobile telephony and internet and television subscriptions; ComReg Q4 Report, page 21, [ID 3967].

²⁶ ComReg Q4 Report, page 21, [ID 3967].

²⁷ ComReg Observations, page 34, [ID 2090].

²⁸ ComReg Observations, page 34, [ID 2090].

²⁹ As defined by ComReg gross additions include consumers who decide to avail of multiple SIMs and thus, slightly overstate the switching intensity in Ireland.

³⁰ This ratio is computed using the total stock of mobile subscribers in Q4 2013 and the total number of gross adds for the fourth quarter using figures reported in ComReg Q4 Report [ID 3967].

³¹ That is, subscriptions where users retained their mobile telephone numbers from their previous mobile network operator.

³² ComReg Q4 Report, page 61, [ID 3967].

contract duration for the post-paid customers. MNOs are increasingly trying to retain customers for longer periods by tying them into contracts longer than 12 months in the post-paid segment. 24 month contracts have become increasingly popular. Given the increasing share of post-paid customers, it can be expected that the overall level of switching will decrease in parallel.

5.2. Description of the four MNOs operating in Ireland

- (39) There are currently four MNOs active in Ireland.
- (40) Initially, Eircell was a public monopoly providing first generation mobile services. The market was opened to competition in 1997 with the entry of Esat Digifone. Vodafone, Eircom and Telefónica entered the Irish market by acquiring existing business: Vodafone entered the market by acquiring Eircell from Eircom in 2001. Eircom subsequently re-entered the market in 2005 through the acquisition of Meteor. Telefónica entered by acquiring Esat Digifone (then renamed O2) from BT in 2006. Three was the latest entrant in 2005. Three entered on the basis of a 3G licence.
- (41) Table 2 sets out key developments in the Irish mobile market, including MNO entry and entry by MVNOs:

Table 2: Entry and key developments in the Irish mobile market

	Vodafone	O2	Eircom / Meteor	Three
1984			Launch of Eircell, Ireland's first MNO	
1997		Esat Digifone enters Irish market as MNO		
1998			Meteor acquires a mobile licence in Ireland	
2000		Acquisition of Esat Digifone by British Telecom		
2001	Vodafone enters Irish market by acquiring Eircell from Eircom	Wireless division of Esat Digifone demerged and set up as "mmO2"	Eircom sells Eircell to Vodafone Meteor starts operating mobile services in Ireland as independent MNO	
2002		mmO2 rebranded as O2		Three obtains a mobile licence in Ireland
2005			Eircom acquires Meteor	Three starts operations as MNO
2006		O2 group acquired by Telefónica	Eircom acquired by Babcock	
2007		Tesco Mobile enters as MVNO on O2 network		
2008				Award of NBS contract to Three
2010	Postfone enters as MVNO on Vodafone network Just Mobile enters as MVNO on Vodafone network		Eircom starts eMobile brand	
2012		Lycamobile enters as MVNO on O2network	Eircom exits examinership	Blueface enters as MVNO on Three network

Source: Form CO, page 62

5.2.1. Vodafone

- (42) Vodafone entered the Irish market in 2001 by acquiring Eircell. Eircell itself was launched in 1984 as Ireland's first mobile phone service by the former state-owned incumbent fixed-line provider Telecom Eireann (now Eircom). Vodafone has second generation ("2G"), third generation ("3G") and fourth generation ("4G") licences.

Vodafone currently operates 2G and 3G networks and, in October 2013, it launched 4G network in the major cities and towns of Ireland.³³

- (43) Vodafone is Ireland's largest mobile telecommunications provider with a 44% share of the market by revenue and a 38% share of mobile subscribers (2.13 million subscribers) on the basis of 2013 market shares.³⁴ Vodafone also offers fixed line services to both private and business customers. Including its fixed line subscribers, Vodafone has approximately 2.35 million subscribers.
- (44) Vodafone has an established and recognised brand having utilised its *"first mover advantage"* as the longest standing operator in the Irish mobile network. It is perceived as providing a high quality network and competing more on quality than price. Vodafone is the second MNO in Ireland to offer long term evolution technology (that is "LTE" / 4G) to its customers.³⁵
- (45) Three and Vodafone entered into a network sharing agreement ("the Netshare agreement") in July 2012 (for more details on the Netshare agreement, see Section (113)).
- (46) Vodafone hosts one MVNO, namely Postfone.

5.2.2. O2

- (47) O2 is the second largest MNO in Ireland with a 26% market share by revenues and 27% by subscribers (1.51 million subscribers) on the basis of 2013 market shares.³⁶ O2 offers mobile telecommunications services such as voice, SMS, MMS, mobile internet and mobile broadband services. It also has limited fixed line activities, offering fixed line telephony and broadband services in Ireland, using Eircom's network. O2 has 2G, 3G and 4G licences and currently operates 2G and 3G networks. A [...] proportion of O2's subscribers are still on 2G devices (more than [...] of all O2 customers have 2G-only SIM cards). O2 has not yet launched 4G services in Ireland.
- (48) O2 entered the Irish market in 1997, at that time under the name Esat Digifone. It was subsequently acquired by British Telecom and rebranded "O2". In 2006, O2 was acquired by the Telefónica group.
- (49) O2 operates under two brands, the O2 brand and a sub-brand "48" which targets young mobile subscribers. O2 has strong brand recognition and loyalty in the market driven by high profile sponsorships that have an impact to the Irish consumer. Similarly to Vodafone, O2 is perceived as competing more on quality than on price. O2 is perceived as an efficient and competitive MNO.³⁷

³³ Vodafone, press release "Vodafone Ireland 4G Mobile Broadband Goes Live", 10 October 2013, <http://www.vodafone.ie/aboutus/media/press/show/BAU021319.shtml>, available on 7 April 2014, [ID 3993].

³⁴ Response to Questionnaire Q39, Question 6 [ID 3395].

³⁵ LTE deployment is an important consideration in assessing the extent to which one or more MNOs are likely to contribute to the achievement of the "30 Mbps for all" target in the Irish National Broadband Plan.

³⁶ Response to Questionnaire Q39, Question 6 [ID 3395]

³⁷ AIB, response to Questionnaire Q10 to Business customers of 1 October 2013, question 22 [ID 589]; Health Service Executive, response to Questionnaire Q10 to Business customers of 1 October 2013, question 22 [ID 666].

(50) O2 and Eircom (via Eircom's mobile subsidiary, Meteor) concluded the Mosaic network sharing agreement in April 2011 (the "Mosaic agreement") (see Section 5.6.2.1. for additional details on the Mosaic agreement).

(51) O2 currently hosts two MVNOs, namely Tesco Mobile, a 50-50 joint venture between O2 and Tesco Ireland, and Lycamobile.

5.2.3. *Eircom*

(52) Eircom is the previously state-owned incumbent of fixed line and mobile telephony services. Eircom is the principal provider of fixed line services in Ireland with approximately 2.6 million subscribers. In the retail mobile telecommunications services market, Eircom is the third largest player in Ireland with 18% market share by revenue and 19% of subscribers (1.08 million subscribers) on the basis of 2013 market shares.³⁸

(53) Eircom has 2G, 3G and 4G licences. Eircom operates 2G and 3G networks and was recently the first operator to launch 4G services in Ireland (in September 2013).

(54) Eircom originally owned and operated Ireland's first mobile phone service, Eircell. In 2001, Eircom exited the mobile market by selling its mobile subsidiary, Eircell, to Vodafone.

(55) Eircom re-entered the Irish mobile market in 2005 by acquiring Meteor from Western Wireless which had won the third mobile phone licence in Ireland. Meteor was incorporated in 2001. It launched 2G services in 2001. Meteor was the last operator to acquire a 3G licence in Ireland, in March 2007. In March 2009, Meteor launched mobile broadband services.

(56) In August 2006, the managed fund Babcock & Brown Capital acquired Eircom. In 2009, Eircom was purchased by the investment fund Singapore Technology Telemedia Limited.

(57) In 2010, Eircom launched a second mobile brand, eMobile, a full service brand with a particular focus on post-paid and business customers, cross-selling to its fixed-line customer base.

(58) Eircom, including Meteor and eMobile, underwent a restructuring in 2011-2012, which removed EUR 1.7 billion worth of debt from Eircom's balance sheet, a reduction of 40% of the group's debt. Also, new management was appointed. Eircom is now majority-owned by its former creditors and bondholders, the most important of which is Blackstone Group L.P., the global investment group which holds more than 18.6% of the shares in Eircom.

(59) Eircom seems to be keen on improving its network quality and brand perception. Eircom is the first MNO in Ireland to offer LTE to its customers.

(60) Eircom's roll-out plans prior to the merger are based on the Mosaic agreement with O2, in order to improve its network and provide nationwide coverage to its customers without reliance on national roaming.³⁹

(61) Eircom does not currently host any MVNOs.

³⁸ Response to Questionnaire Q39, Question 6 [ID 3395]

³⁹ Eircom's submission of 3 December 2013, page 6 [ID 2382]; Telefónica, Business Plan 2014-2016, 19 April 2013, slide 21, [Ref: TEL00075528], [ID 1062-1928].

5.2.4. Three

- (62) In Ireland, Hutchison operates through its wholly-owned subsidiary Three, which is an Irish MNO. Three offers mobile telecommunications services such as voice, SMS, MMS, mobile internet, mobile broadband and multimedia products such as mobile television, music and video calling (all 3G only), under the brand "3". Three is the smallest MNO in Ireland with 10% market share both by revenues and by subscribers (0.56 million subscribers) on the basis of 2013 market shares.⁴⁰
- (63) Three was awarded a 3G licence in Ireland in July 2002 and launched operations in 2005 with a 3G network. In 2008, the Irish government awarded Three the NBS contract to roll out broadband services to the 10% of the population that did not have broadband connectivity.
- (64) On 27 January 2014, Three launched its 4G network, aiming to improve its network quality. According to the press announcement, access to the 4G network will be free to existing customers until the end of July 2014. From 1 August 2014, post-paid customers will be able to continue to access the 4G network by purchasing an add-on service for EUR 4.99 per month. Three has not yet announced its pre-paid 4G offer from 1 August 2014.⁴¹
- (65) Three markets itself as a "*challenger brand*" that "*shook up a stale and uncompetitive market*"⁴² This is also the way that Three is perceived by both consumers and competitors.⁴³ Three's particular strength is price competition and customer growth, focusing in particular on the segments where data plays a more prominent role, such as the mobile broadband and post-paid segments of the market. More recently, Three has expanded into the pre-paid and the business segments and is aiming to improve its network quality.
- (66) Three currently hosts one MVNO, namely Blueface.

5.3. The structure of a mobile network

- (67) Two essential inputs are necessary in order to be active as an MNO: a mobile network and authorisation to use spectrum band(s) for mobile telecommunications.
- (68) Spectrum is part of Member States' public property. National Regulatory Authorities are entitled to allocate temporary spectrum licences to MNOs to use specific spectrum bands dedicated to mobile telecommunications. Such licences are nowadays frequently awarded by means of a spectrum auction.
- (69) A mobile network is composed of a number of mobile sites, essentially a mast with an antenna and a radio-frequency system, linked to a core network by backhaul connections. Each mobile site covers a limited area and has a maximum capacity.

⁴⁰ Response to Questionnaire Q39, Question 6 [ID 3395]

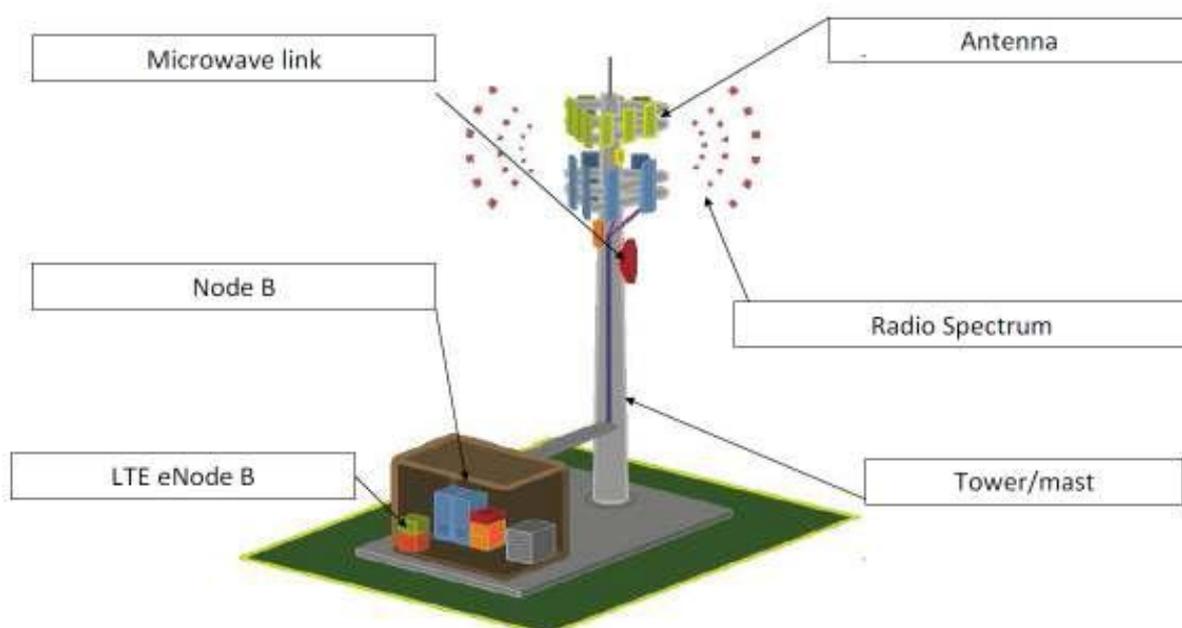
⁴¹ Source: <http://www.cellular-news.com/story/64018.php>, available on 7 April 2014, [ID 3983].

⁴² Source: <http://www.three.ie/explore/about-three/>, available on 29 January 2014, [ID 2343]. See also Three, fact sheet, "A bit about us", 10 October 2011, <http://press.three.ie/wp-content/uploads/kalins-pdf/singles/fact-sheet.pdf> available on 23 January 2014, [ID 3927].

⁴³ Blueface, response to Questionnaire Q9 to MVNOs of 1 October 2013, question 42, [ID 715]; Carphone Warehouse response to Questionnaire Q9 to MVNOs of 1 October 2013, question 42 [ID 700]; Imagine Communications Group response to Questionnaire Q9 to MVNOs of 1 October 2013, question 42 [ID 981].

Accordingly, the capacity of a mobile site depends on the number of antennas on the site and the range of frequencies that the MNO has the right to use.

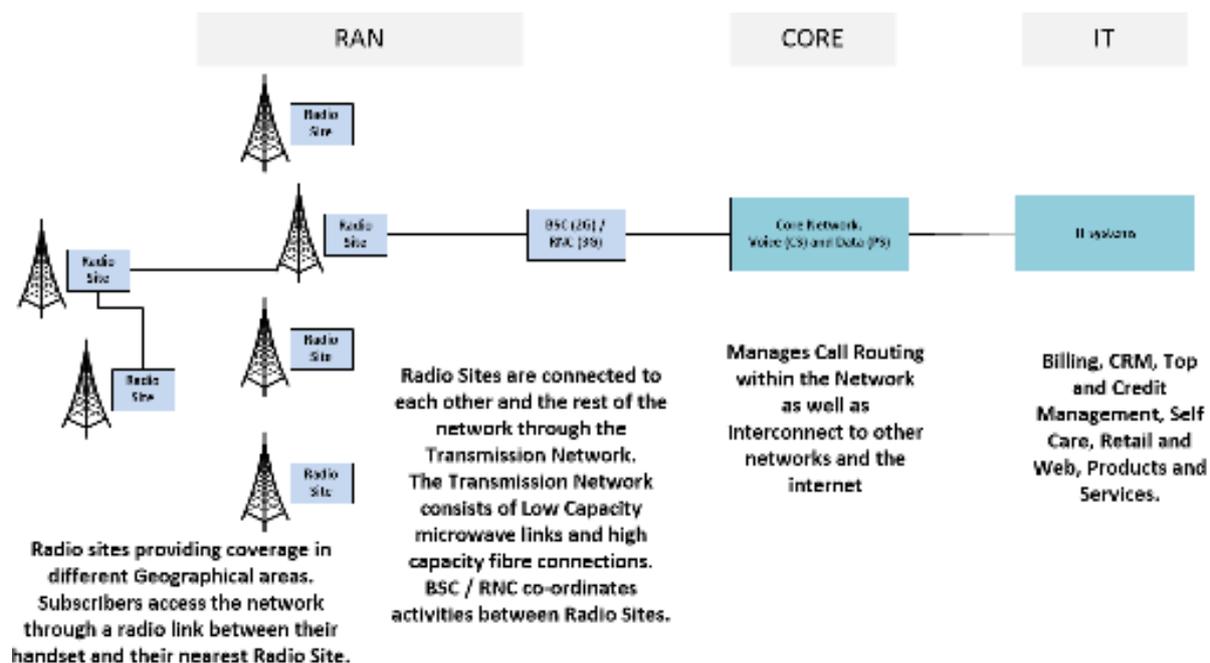
Figure 5: Structure of a radio site



Source: Figure 2 of the Form CO

- (70) In the case of Ireland and depending on the frequency bands used, between approximately 500 and 2000 mobile sites are required in order to virtually cover the entire population (see Section 5.4.1.).
- (71) Around a mobile mast, users of mobile phones exchange data with the mobile mast on a wireless basis. The signals transmitted to connect users of mobile phones to the masts are two-directional: upload to transfer data from the user to the rest of the network and download to transfer data from the rest of the network to the user. These signals only use the frequencies that the MNO has the right to use by virtue of its spectrum authorisations. Frequencies dedicated to mobile telecommunications are used in pairs by MNOs in order to ensure (i) the upload and (ii) the download connections.
- (72) Upstream of mobile masts, there is a connection between the mast and the core network through a backhaul. Backhaul are general wired connections based on fibre optic cables. They can also be based on wireless connections, such as microwave transmissions. Microwave transmissions are generally less costly but have less capacity to transfer high volumes of data. The core network of MNOs is then connected to the World Wide Web and exchanges information with numerous other networks.

Figure 6: Overview of mobile networks



Source: Figure 1 of the Form CO

- (73) As regards the connections between subscribers and mobile sites, different frequencies have different propagation characteristics. In particular, frequencies below one GHz offer coverage to a larger area than higher frequencies. Accordingly, operators tend to use the lowest frequencies first. Once mobile sites are saturated because there are too many users, MNOs add other cells, which operate at higher frequencies, on the saturated sites. This way, operators improve the capacity of their mobile sites with higher frequencies. Accordingly, higher frequencies are generally used for capacity and lower frequencies are used for coverage.
- (74) A larger spectrum portfolio provides more capacity to operators to serve a large number of users in parallel (with more cells per antenna). With fewer frequencies, operators have less capacity but they can compensate this disadvantage with a higher density of mobile sites although this is more costly.
- (75) Mobile networks are based on different generations of technologies. The most widespread generation is the second generation of mobile telephony ("2G") or GSM which was widely deployed in the late 1990s. 2G was essentially focused on voice and SMS communications. Later on, 2G communications could also support the exchange of data but at limited speed (equivalent to narrowband or very slow broadband speed). The 900 MHz and 1800 MHz bands have essentially been dedicated to 2G communications.
- (76) In the 2000s, the third generation of mobile telephony ("3G") or UMTS⁴⁴ was deployed by MNOs. In the Union, the 2100 MHz frequency band has been used to that effect. 3G communications are focused on data services and offer speeds comparable to slow/average broadband connections. 3G is rapidly increasing in importance.

⁴⁴ UMTS stands for Universal Mobile Telecommunications System.

- (77) In the late 2000s and 2010s, 4G or LTE has gradually been deployed. 4G is Internet Protocol ("IP") centric which allows it to be used for the transmission of voice, data, video, etc. It can deliver very high speed data exchanges equivalent to high quality broadband connections or even to very high speed fixed connections. In the Union, 4G has essentially used the 800 MHz band for coverage and the 1800 MHz and 2600 MHz bands for capacity.

Table 3: Overview of network technologies

	Voice	SMS	Data ⁴⁵
GSM	Yes (circuit switched)	Yes	GPRS – Maximum of 112 Kbps on a single 200 kHz channel
UMTS	Yes (circuit switched)	Yes	Maximum of 384 Kbps on a single 5 MHz channel
HSPA	Yes (circuit switched)	Yes	Maximum of 84 Mbps with 64QAM modulation and 2x2MIMO on a 10 MHz channel
LTE	Yes (packet switched voice over LTE)	Yes	Maximum of 75 Mbps using 2x2MIMO on a 10 MHz channel Maximum of 150 Mbps using 2x2MIMO on a 20 MHz channel
LTE advanced	Yes (packet switched voice over LTE)	Yes	Up to 1 Gpbs

Source: Table 2 of the Form CO

- (78) In the coming years and in application of the latest regulatory framework for electronic communications and the principle of technological neutrality, all spectrum holdings should be gradually opened to all generations of mobile telecommunications. The likely medium to long term consequence is the usage of 4G in virtually all frequency bands dedicated to mobile telecommunications.

5.4. Spectrum allocation between MNOs in Ireland

5.4.1. Spectrum bands and characteristics

- (79) There are currently four frequency bands in Ireland licensed for mobile telecommunications. They are set out in Table 4.

⁴⁵ The number of kilobits per second ("Kbps") constitutes a measure of speed of data exchanges. A speed of one Kbps means for instance that 1000 bits (a bit is an elementary data which can be equal to 1 or 0 – in the digital world every data can be encoded in bits) can be sent in one second. A megabit per second ("Mbps") is equal to 1000 Kbps.

Table 4: Licensed mobile frequency bands in Ireland

Cellular Band	Bandwidth	Uplink Frequencies	Downlink Frequencies
800 MHz	2 x 30 MHz	832 – 862 MHz	791 – 821 MHz
900 MHz	2 x 35 MHz	880 – 915 MHz	925 – 960 MHz
1800 MHz	2 x 75 MHz	1710 – 1785 MHz	1805 – 1880 MHz
2100 MHz Frequency Division Duplex (FDD)	2 x 60 MHz	1920 – 1980 MHz	2110 – 2170 MHz
2100 MHz Time Division Duplex (TDD)	1 x 20 MHz	1900-1920 MHz	

Source: ComReg data

- (80) In Ireland, the 900 MHz band and the 1800 MHz band are currently used for the provision of GSM or 2G mobile services, such as voice and SMS text messaging. These GSM services are mainly provided with 900 MHz spectrum while the 1800 MHz spectrum is used primarily to provide additional capacity in areas where demand is higher. UMTS, HSPA⁴⁶ and HSPA+ services are provided in the 2100 MHz band.

Table 5: Use of spectrum in Ireland

Frequency bands	Historical use in Ireland	Future use
800 MHz	Analogue TV broadcasting	LTE
900 MHz	GSM/2G mobile services (for example voice, SMS)	UMTS/3G; GSM/2G; LTE
1800 MHz		LTE; GSM/2G
2100 MHz	UMTS/3G	UMTS/3G
2600 MHz	Digital TV broadcasting	LTE (2016)

Source: Form CO

- (81) There are a number of other frequency bands which could in the future be used for mobile services in Ireland, most notably the 700 MHz and 2600 MHz bands. However, as of yet, there is no certainty on the availability and potential timing of the deployment of the 700 MHz band in Ireland. Spectrum in the 2600 MHz band is expected to become available for potential use by mobile network operators but not before April 2016.
- (82) A number of different factors can be considered when examining the merits and values of the different frequency bands. These include radio frequency ("RF") characteristics such as propagation and bandwidth, market characteristics such as the types and availability of devices and individual operator circumstances such as existing spectrum use, devices in the existing customer base and network strategies.
- (83) Table 6 highlights two characteristic differences between the different bands:

⁴⁶ High Speed Packet Access (HSPA) is an amalgamation of two mobile telephony protocols, High Speed Downlink Packet Access (HSDPA) and High Speed Uplink Packet Access (HSUPA), that extends and improves performance (source: Form CO).

- (a) there are two lower (sub one GHz) bands and then a significant gap to the higher bands. This results in coverage differences;
- (b) there are larger contiguous bandwidths available in the higher frequency bands.

Table 6: Bandwidth of bands in Ireland dedicated to mobile telecommunications

Band	Spectrum bandwidth
800 MHz	2 x 30 MHz
900 MHz	2 x 35 MHz
1800 MHz	2 x 75 MHz
2100 MHz	2 x 60 MHz

Source: ComReg data

- (84) The lower frequency bands (800 MHz and 900 MHz) have better propagation characteristics. The radio frequency signals travel further and diffract more successfully around obstacles such as terrain and buildings. In addition, lower frequencies typically penetrate better through buildings, again resulting in better coverage. As a result, an operator can cover a larger area per site with these lower frequency bands and so fewer sites are needed to cover a particular area.
- (85) Higher frequency bands have poorer propagation characteristics and typically higher building attenuation losses so the same site will generally cover a smaller area. This means more sites are required to cover the same area.
- (86) Table 7 shows the estimated cell range as calculated for each frequency band and environment type. The results for 900 MHz, 1800 MHz and 2100 MHz are derived from simulations and the results for 800 MHz and 2600 MHz are extrapolated from them. The study was based on a particular UMTS service, but equivalent relative coverage ranges would exist for GSM and LTE services. Table 7 clearly shows a far greater cell coverage range with the lower frequency band systems.

Table 7: Estimated cell range per frequency band and environment type (for sample UMTS service)

Frequency	Urban (km)	Suburban (km)	Rural (km)
800 MHz	1.06	1.76	16.66
900 MHz	1.03	1.70	16.20
1800 MHz	0.56	0.92	10.95
2100 MHz	0.47	0.77	9.75
2600 MHz	0.16	0.32	6.76

Source: Vilicom report,⁴⁷ page 14

- (87) Table 8 shows site count for a national coverage network. Again, the results for 900 MHz, 1800 MHz and 2100 MHz are derived from planning tool simulations (for UMTS) and the results for 800 MHz and 2600 MHz are extrapolated from them. As expected, this shows a far greater cell coverage range with the lower frequency band

⁴⁷ Vilicom, Report 1: Preliminary Analysis of the proposed merger of Hutchison Whampoa and Telefónica Ireland – Technology and Spectrum Considerations, Report for ComReg and the European Commission, 27 January 2014, [ID 2396].

systems. The sites ratio factor shows that the higher frequency bands (1800 MHz and above) require at least twice as many sites as the sub one GHz frequencies.

Table 8: Site count & site count ratio compared to 800 MHz for UMTS national coverage network

Frequency	Sites	Sites Ratio (compared to 800 MHz)
800 MHz	494	1.0
900 MHz	533	1.08
1800 MHz	1 013	2.05
2100 MHz	1 243	2.52
2600 MHz	1 742	3.53

Source: Vilicom report, page 15

- (88) However, there is generally less spectrum available in lower frequencies and more spectrum in higher frequencies. Therefore, mobile operators are likely to have access to larger contiguous (side by side) blocks in higher frequencies. Such frequencies provide capacity benefits in urban and suburban areas. However, because of the low propagation characteristics, in order for an operator to deliver such networks, a very dense network, with a large number of sites, is required.
- (89) Table 9 is an illustration of the different coverage capabilities for the different bands. As described in this Table, the site count of 2 100 sites for a 97% indoor population coverage for the 800 MHz band is based on Three's planning exercise with the site numbers for 1800 MHz, 2100 MHz and 2600 MHz based on Three's theoretical calculations.

Table 9: Comparison of sites and investment required for nationwide coverage using different spectrum bands

	800 MHz	1800 MHz	2100 MHz	2600 MHz
	Actual numbers based on radio plan	Minimum numbers based on theoretical calculation (actual numbers likely to be higher)		
No. of sites required	2 100	4 080	4 526	5 049
Indoor pop. Coverage	97%	97%	97%	97%
CAPEX ⁴⁸ in EUR	[...]*	[...]*	[...]*	[...]*
OPEX ⁴⁹ in EUR	[...]*	[...]*	[...]*	[...]*

Source: Table 35 of the Form CO

⁴⁸ Capital expenditure.

⁴⁹ Operational expenditure.

- (90) An MNO's strategy will be dependent on the spectrum available to it. Although adding more bands can add valuable capacity, it can also add significant complexity in terms of cell layer management (for example, traffic management between LTE 800 and LTE 2600 layers) and cell site development.
- (91) Typically, each additional band will require an additional antenna system, and so adding a new band such as 2.6 GHz for LTE will require antenna system changes including additional or replacement antennas which are costly, require a roll-out plan, and can have an impact on the existing service offered on the pre-existing bands. For example, the coverage of a site can be reduced due to additional radio frequency combining losses in the system or a compromised antenna solution in the case of a new multi-band antenna. Conversely, for an operator to add a UMTS 900 or an LTE 1800 service typically requires only changes at the level of the mobile site (assuming there is already a GSM 900 or GSM 1800 radio frequency and antenna system on the site which can then be shared with the co-band system).

5.4.2. Spectrum auctions

- (92) Radio spectrum in Ireland is managed by ComReg.
- (93) In November 2012, ComReg auctioned the rights of use of spectrum in the 800 MHz, 900 MHz and 1800 MHz frequency bands for the period 2013 to 2030 (the Multi-Band Spectrum Auction, "MBSA"). This auction was opened to all mobile technologies: 2G, 3G and 4G.
- (94) The 2100 MHz band was not part of the auction as it had been previously assigned to existing MNOs and would not be available before 2022. This means that all spectrum rights in key coverage (800 MHz and 900 MHz) and capacity bands (1800 MHz and 2100 MHz) have already been assigned to players on the market.
- (95) The spectrum allocation before the auction was as set out in Table 10.

Table 10: Pre-MBSA spectrum allocation

Band (MHz)	Vodafone	O2	Meteor	Three
900	2 × 7.2 MHz (GSM – exp 2013)	2 × 7.2 MHz (GSM – exp 2013)	2 × 7.2 MHz (GSM – exp 2015)	0 MHz
1800	2 × 14.4 MHz (GSM – exp 2014)	2 × 14.4 MHz (GSM – exp 2014)	2 × 14.4 MHz MHz (GSM – exp 2015)	0 MHz
2100	2 × 15 MHz (3G – exp 2022)	2 × 15 MHz + 1 × 5MHz (3G – exp 2022)	2 × 15 MHz (3G – exp 2027)	2 × 15 MHz (3G – exp 2022)

Source: ComReg

- (96) In the MBSA, licences for two time periods were awarded in order to coincide with license expiry dates. Time Slice 1 (TS1) concerns the period from 1 February 2013 to 12 July 2015 and Time Slice 2 (TS2) the period from 13 July 2015 to 12 July 2030. Those licences significantly increased the amount of spectrum which could be utilised for mobile telecommunications, enabling the launch of LTE.
- (97) ComReg had set spectrum caps for the auction in order to safeguard competition. Those caps prevented a single MNO from acquiring more than 2x10 MHz of 900

MHz (in Time Slice 1), 2x20 MHz of combined 800 MHz and 900 MHz (in either Time Slice 1 or 2), and 2x50 MHz of total spectrum in the three bands in total (in either Time Slice 1 or 2).⁵⁰

(98) Spectrum allocation following the MBSA is set out in Table 11.

Table 11: Post-MBSA Spectrum Allocation (in MHz)

Band (MHz)	Vodafone		O2		Meteor		Three	
	TS1	TS2	TS1	TS2	TS1	TS2	TS1	TS2
800	2 × 10 (MBSA)	2 × 10 (MBSA)	2 × 10 (MBSA)	2 × 10 (MBSA)	2 × 10 (MBSA)	2 × 10 (MBSA)	-	-
900	2 × 10 (MBSA)	2 × 10 (MBSA)	2 × 10 (MBSA)	2 × 10 (MBSA)	2 × 4.9 (GSM) 2 × 5 (MBSA)	2 × 10 (MBSA)	2 × 5 (MBSA)	2 × 5 (MBSA)
1800	2 × 15 (MBSA)	2 × 25 (MBSA)	2 × 14.4 (GSM exp 2014)	2 × 15 (MBSA)	2 × 9.9 (GSM) 2 × 10 (MBSA)	2 × 15 (MBSA)	2 × 10 (MBSA)	2 × 20 (MBSA)
2100	2 × 15 (3G – exp 2022)		2 × 15 + 1 × 5 (3G – exp 2022)		2 × 15 (3G – exp 2027)		2 × 15 (3G – exp 2022)	

Source: ComReg

(99) The MBSA made a significant amount of additional spectrum available for mobile telecommunications. Before the refarming⁵¹ of the 800 MHz spectrum, there was no 800 MHz spectrum available for mobile telecommunications. A total of 2x35 MHz in the 900 MHz band and 2x75 MHz in the 1800 MHz band and 2x60 FDD (1x5 MHz TDD) in the 2100 MHz band was available. Only a total of 2x21.6 MHz for 900 MHz, and 2x43.2 MHz for 1800 MHz was assigned for use. Following the auction, the amount of additional spectrum is much higher: 2x30 MHz for 800 MHz, 2x35 MHz for 900 MHz and 2x75 MHz for 1800 MHz (and 2x60 MHz in the 2100 MHz band which was not part of the auction). The availability of this additional spectrum has made it possible for MNOs to roll-out LTE networks and make higher speed data services available to their customers.

(100) MNOs currently require contiguous spectrum blocks within their frequency bands for two reasons:

- (a) If MNOs had to broadcast non-contiguous blocks of spectrum within a given spectrum band, they would require separate transmitters for each non-contiguous block.

⁵⁰ ComReg, Multi-band Spectrum Release – Release of the 800 MHz, 900 MHz and 1800 MHz Radio Spectrum Bands – Response to Consultation and Decision, Document No. 12/25, page 64, [Ref: 001197108], [ID 1300-17516].

⁵¹ Spectrum refarming is the process constituting a basic change in the conditions of a frequency usage in a given part of radio spectrum.

- (b) High speed broadband currently requires contiguous spectrum. However, the Commission notes that in the future, it may be possible to enable high speed broadband based on non-contiguous spectrum using carrier aggregation. This feature would have to be implemented on both the network and the handsets.
- (101) It is technically possible to aggregate non-contiguous spectrum within the same band (intra-band carrier aggregation). It is also technically possible to aggregate spectrum of different bands (inter-band carrier aggregation). Carrier aggregation is already practiced in some countries and is expected to be implemented more widely by MNOs in the next few years.
- (102) Figure 7 shows the pre- and post-merger spectrum holdings of the Irish MNOs in Time Slice 2. Each square represents a block of 2x5 MHz.

Figure 7: Irish MNOs' spectrum holdings as of July 2015 (Time Slice 2)

800 MHz

	Eircom		O2		Vodafone	
<i>Pre-merger</i>	A	B	C	D	E	F
<i>Post-merger</i>	A	B			E	F
	Eircom		Merged entity		Vodafone	

900 MHz

	Eircom		O2		Vodafone		Three
<i>Pre-merger</i>	A	B	C	D	E	F	G
<i>Post-merger</i>	A	B			E	F	
	Eircom		Merged entity		Vodafone		Merged entity

1800 MHz

	O2			Vodafone					Three				Eircom		
<i>Pre-merger</i>	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
<i>Post-merger</i>				D	E	F	G	H					M	N	O
	Merged entity			Vodafone					Merged entity				Eircom		

2100 MHz

	Vodafone			O2			Three			Eircom		
Pre-merger	A	B	C	D	E	F	G	H	I	J	K	L
Post-merger	A	B	C							J	K	L
	Vodafone			Merged entity			Merged entity			Eircom		

Source: Commission on the basis of ComReg data

- (103) As is clear from Figure 7, the merged entity would hold 45% of Ireland's total spectrum rights and would have substantially more spectrum than the remaining MNOs (a combined holding of 2x90 MHz, compared to 2x60 MHz for Vodafone and 2x50 MHz for Eircom). Its spectrum holdings would also exceed all the spectrum caps which ComReg set at the time of the auction to safeguard competition, which were binding only as part of the MBSA process.

5.5. Network deployment by MNOs

- (104) There are only two MNOs with nationwide networks in Ireland: Vodafone and O2. The other two MNOs, Eircom and Three, rely on those players in order to complete their coverage through network sharing agreements and roaming (see Section 5.6.).
- (105) Three MNOs have 2G networks: Vodafone, O2 and Eircom. However, Eircom's network lacks coverage in the western part of the country, which is more rural, less densely populated and hence more expensive to cover. Eircom relies on a [...] national roaming agreement with Vodafone to complete its coverage. Three does not have a 2G network. It is however not a necessity to the extent that a 3G network also can provide voice and SMS services. Nevertheless, Three also relies on a national 2G roaming agreement with Vodafone (now replaced by the Netshare agreement) in order to complete its coverage in the western part of the country. In application of that roaming agreement, Three's subscribers seamlessly switch to Vodafone's network in the areas where Three's antennas are not present (see Section 5.6 for an explanation of roaming agreements and the different forms of network sharing).
- (106) All four MNOs have 3G networks. In relation to 4G networks, Eircom released a commercial offer in September 2013. Vodafone followed in October 2013 with its 4G offer. On 22 January 2014, Three announced the deployment of its 4G network as of 27 January 2014. O2 has not yet deployed a 4G network.

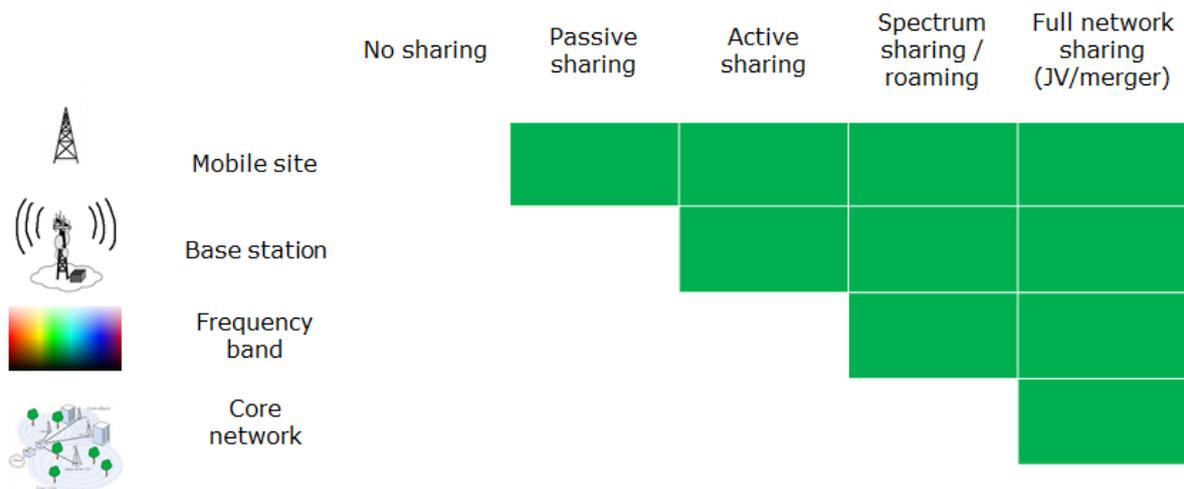
5.6. Network sharing agreements

5.6.1. What is network sharing?

- (107) Network sharing is an arrangement under which MNOs agree to share parts of the radio access network ("RAN") equipment and/or transmission network. In the mobile telecommunications industry, network sharing is a common practice between MNOs which allows them to increase coverage and save costs.
- (108) The extent of integration under network sharing arrangements varies since MNOs may agree to share different parts of their network equipment. Most commonly two types of network sharing are distinguished from one another: active and passive.

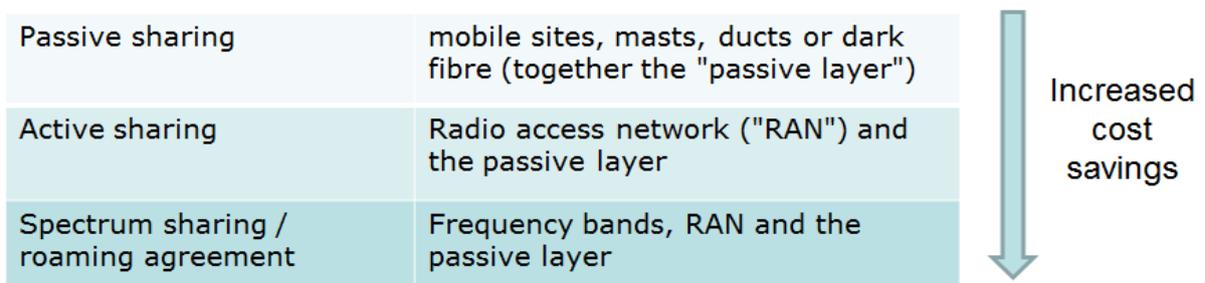
(109) Both active and passive network sharing involves site sharing and transmission network sharing. This means that towers, cabins, power supply rectifiers and the transmission network are all shared. In contrast to passive network sharing, active network sharing also involves the sharing of RAN equipment – that is the Node B processing equipment as well as the radio network controller ("RNC") and the mobile site controller (base station controller or "BSC"). This is the key equipment that sends data across frequencies and controls network cells. The sharing of RAN equipment requires that parties to a network sharing agreement use the same supplier of equipment as this equipment must be compatible on the shared sites.⁵²

Figure 8: Extent of sharing under different forms of network sharing



(110) The amount of savings stemming from a network sharing agreement increases with the extent of the sharing as indicated in Figure 9.

Figure 9: Different forms and network sharing and related savings



(111) Depending on their scope and the extent of integration, network sharing arrangements may have an effect on retail competition between the operators that have concluded them. The likelihood of such an effect materialising is greater in the context of active network sharing which involves a greater integration of the networks than passive network sharing.

⁵² Form CO, paragraphs 264 and 265.

5.6.2. *Network sharing agreements between MNOs in Ireland*

(112) All four existing MNOs in Ireland are party to network sharing agreements. Network sharing agreements are currently in place between O2 and Eircom and between Three and Vodafone.

5.6.2.1. The Mosaic agreement between O2 and Eircom

(113) O2 and Eircom (via Eircom's mobile subsidiary, Meteor) concluded the Mosaic network sharing agreement in April 2011. The Mosaic agreement is based on the [...]*. The key provisions of the Mosaic agreement are as follows:⁵³ [...]*⁵⁴ [...]*

5.6.2.2. The Netshare agreement between Three and Vodafone

(114) Three and Vodafone also entered into a network sharing agreement, the Netshare agreement, in July 2012. To implement that agreement, Vodafone and Three established a 50/50 joint venture company, which has its own employees and management. [...]*

(115) Under the Netshare agreement, [...]* (out of the total of [...]* sites of Three and Vodafone) will be shared or consolidated ([...]*) but will continue to be owned by the respective party. The process of consolidation of all [...]* sites is to take place within a [...]* transition period which commenced on 1 December 2012. At the time of the notification, [...]* sites had been consolidated and the agreement is in an early stage of development.

5.6.3. *National roaming arrangements of Eircom and Three with Vodafone*

(116) The networks of Eircom and Three do not have full national coverage. In order to be able to provide coverage throughout Ireland, Eircom and Three both rely on national roaming with Vodafone [...]*. Under the national roaming agreement, the respective parties do not share any network elements as such. Eircom and Three only use Vodafone's network to serve their own customers.

(117) Eircom concluded a national roaming agreement with Vodafone [...]*.⁵⁵ That agreement covers an area in the west of Ireland, where Eircom has insufficient coverage. The Eircom/Vodafone national roaming agreement [...]*. It expires in [...]*.⁵⁶

(118) Three entered into a national roaming agreement with Vodafone on 7 December 2004. That roaming agreement was subsequently terminated when Vodafone and Three entered into the Netshare agreement in 2012. The Netshare agreement provides for roaming by Three on the Vodafone network.⁵⁷ [...]*

5.7. **MVNOs in Ireland**

5.7.1. *Background on MVNOs*

(119) MVNOs are service providers that purchase access and call origination at wholesale level from MNOs in order to offer their own mobile services to subscribers at retail

⁵³ Form CO, paragraphs 270 to 274; Form CO (Mosaic agreement), Annex 32.

⁵⁴ In particular, the Mosaic agreement may be terminated in the following circumstances: [...]*

⁵⁵ Eircom, Briefing note to the European Commission, 1 October 2013, footnote 5, [ID 2283].

⁵⁶ Eircom, Briefing note to the European Commission, 1 October 2013, paragraph 12, [ID 2283].

⁵⁷ Form CO, paragraph 877.

level. Unlike MNOs, MVNOs do not have their own spectrum and may not necessarily have the full network infrastructure required to provide mobile telecommunications services.

- (120) Through their brand and customer segment-specific product strategy, some MVNOs target specific customer groups which MNOs cannot effectively address themselves (such as ethnic groups, where MVNOs offer cheap international call rates). Other MVNOs have a broader strategy, targeting the overall market, similar to MNOs. Moreover, MVNOs provide an opportunity for MNOs to enhance their network utilisation, and thus help to achieve benefits of scale.
- (121) Different types of MVNOs exist. 'Full' MVNOs maintain their own core infrastructure and use MNOs only for access to radio network. By contrast, "partial" or "light" MVNOs do not have their own infrastructure, but rely entirely on the infrastructure of an MNO. Partial MVNOs may also use the services of a Mobile Virtual Network Enabler ("MVNE"), an organisation that provides business infrastructure solutions to MVNOs, such as billing, administration, operations support, mobile site subsystem support and other related services.
- (122) Currently four MVNOs are present in Ireland, as set out in Table 12.

Table 12: Overview of MVNOs present in Ireland

MVNO	Type of MVNO	Market entry	Network provider
Tesco Mobile	Full	2007	O2
Postfone	Partial	2010	Vodafone
Lycamobile	Full	2012	O2
Blueface	Partial	2012	Three

Source: Form CO, paragraph 591

5.7.2. Tesco Mobile

- (123) Tesco Mobile is the most important MVNO in Ireland in terms of both revenues and market share. It entered the Irish market in 2007 and currently has around [...] subscribers, which corresponds to a subscriber share of 4% and revenue share of 2% on the basis of 2013 market shares.⁵⁸ Tesco Mobile has a specific business model. It is a 50/50 joint venture between O2 and Tesco Ireland, [...]*. It uses O2's network [...]*.
- (124) Tesco Mobile offers both pre-paid and post-paid services available both online and in retail stores. Tesco Mobile's strategy is to combine the network services and coverage of O2 with the customer franchise, brand and sales channels of Tesco Ireland. Tesco Mobile views itself as a "full-scope" consumer mobile service business competing across all the key consumer segments.⁵⁹
- (125) As concerns governance, [...]*.⁶⁰ In addition, [...]*.⁶¹

⁵⁸ Response to Questionnaire Q39, Question 6 [ID 3395]

⁵⁹ Tesco Mobile, response to Questionnaire Q33 of 3 January 2014, questions 1 and 2, [ID 2092].

⁶⁰ Form CO, paragraph 82.

(126) Tesco Mobile is currently jointly controlled by O2 and Tesco Ireland. The acquisition of O2 by the Notifying Party includes O2's shares in Tesco Mobile. Hence, after the merger, Tesco Mobile will come under the joint control of the merged entity and Tesco Ireland. It follows that, post-merger, Tesco Mobile cannot be regarded as an independent market operator. For the assessment of the merger, Tesco Mobile should be considered as under the joint control of O2 and Tesco Ireland before the merger and under the joint control of the merged entity and Tesco Ireland after the merger. In line with previous Commission decisions,⁶² its market share is aggregated with that of O2 when assessing market concentration.

(127) In any event, given that its market share is around 4% in terms of subscribers and around 2% in terms of revenue,⁶³ the market shares and concentration levels in Ireland would not significantly change if Tesco Mobile were to be treated as an independent market operator.

5.7.3. Other Irish MVNOs

(128) Apart from Tesco Mobile, three other MVNOs operate on the Irish market. However, their presence is negligible at the moment. Based on ComReg's data, Lycamobile has a market share of 2.1% in terms of subscribers, while the other MVNOs jointly have a subscriber market share of 0.3%.⁶⁴

(129) The profile of those MVNOs is as follows:

(a) Lycamobile launched its mobile brand worldwide in 2006 and entered the Irish market in June 2012. It relies on the network of O2. Lycamobile focuses on pre-paid customers and distributes its services through retail stores. Its international calling rates are geared in particular towards specific ethnic/foreign nationality groups in the Irish population.

(b) Postfone, which is owned by the Irish postal operator, An Post, entered the market in 2010. It offers pre-paid services to private customers. Postfone uses Vodafone's network.

(c) Blueface entered the market in March 2012. It focuses primarily on post-paid business customers. Blueface is hosted on Three's network. However, Blueface does not have a direct contractual relationship with Three. Blueface has a contractual arrangement with MVNE Plus+, which is Three's MVNE partner.

(130) In addition to the MVNOs listed in recital (129) according to the Notifying Party, since August 2013, PermaNET (a resale MVNO) has been offering mobile services via an MVNE on Three's network, similarly to Blueface. PermaNET operates a fixed wireless network in limited geographic areas of Ireland and offers retail mobile telephony services typically as part of its triple play proposition. Given its recent launch, it is unlikely that PermaNET has acquired any material subscriber base yet.

⁶¹ Form CO, paragraph 82.

⁶² Commission Decision of 14 November 2006 in Case No COMP/M.4180 *Gaz de France / Suez*, paragraphs 134, 135, 145, 157, etc.; Commission Decision of 27 September 2012 in Case No COMP/M.6611 *Arla Foods / Milk Link*, paragraph 143 ("*given that Milk Link exercises joint control (within the meaning of the Merger Regulation) over the joint venture, its permeate sales and market shares have been attributed to Milk Link*").

⁶³ Form CO, Annex 6.4.1.5(2), table I (total retail market).

⁶⁴ ComReg Q4 Report, page 58, [ID 3967].

- (131) Finally, an MVNO, Just Mobile, operated on Vodafone's network for a short period, entering the market in October 2010 and ceasing operations ten months later, in August 2011.

5.8. Merger discussions for alternative consolidations

- (132) Prior to agreeing on the current merger, the Irish MNOs considered various scenarios of consolidation of existing MNOs in the Irish market.

- (133) According to internal documents [...]*, O2 considered that [...]*.⁶⁵ [...]*.⁶⁶

- (134) However, as a result of financial difficulties, Eircom entered an examinership procedure⁶⁷ in 2011-2012. During that procedure, in spring 2012 Hutchison made a EUR 2 billion bid for Eircom.⁶⁸ The examiner rejected Hutchison's bid. The examiner's decision was subsequently upheld by the Irish Courts.⁶⁹ Eircom exited examinership in June 2012, with EUR 1.7 billion of debt removed from its balance sheet, a reduction of 40% of the group's debt, and new management appointed.

- (135) [...]*.⁷⁰

- (136) [...]*.⁷¹ [...]*. This led to Telefónica receiving separate non-binding indications of interest from each of the [...]* parties. Following those initial and informal discussions, a formal standard competitive sale process was finally launched at the end of May 2013. On 14 June 2013 Hutchison presented a pre-emptive binding offer for 100% of the shares of O2, which was followed by the negotiation of merger documents and the final signing of the sale and purchase agreements on 21 June 2013.⁷²

6. RELEVANT MARKETS

- (137) This section defines the relevant markets which are affected by the merger. In the context of the assessment of a merger, the main purpose of market definition is to identify in a systematic way the immediate competitive constraints facing the merged entity.⁷³

⁶⁵ Telefónica, Strategic Review, 28 June 2011, slide 10, [Ref: TEL00159119], [ID 1065-42909].

⁶⁶ [...]*, 23 May 2011, [Ref: TEL00157344], [ID 1065-42706].

⁶⁷ Examinership is a process which exists under Irish insolvency law whereby the protection of the court is invoked to assist with the survival of a company. It is comparable to Administration in the United Kingdom or Chapter 11 of the US Bankruptcy Code.

⁶⁸ Notably Telefónica, Email from [...]* to [...]*, 27 April 2012, [Ref: TEL00090871], [ID 1063-15066].

⁶⁹ For example, Bloomberg News "Hutchison Whampoa Fails in Challenge to Eircom Bid Block", 17 May 2012, <http://www.bloomberg.com/news/2012-05-17/hutchison-whampoa-fails-in-challenge-to-eircom-bid-block.html>, available on 7 April 2014, [ID 3978].

⁷⁰ Three, Email from [...]* to [...]*, 10 July 2012, [Ref: 001198807], [ID 1300-17830].

⁷¹ [...]*, 31 January 2013, [Ref: TEL00103049], [ID 1063-10119].

⁷² Telefónica, response to Questionnaire Q16, page 5, question 4, [ID 1251].

⁷³ 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) ("Horizontal Merger Guidelines"), paragraph 10.

6.1. Product market definition

- (138) A relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, their prices and their intended use.⁷⁴ In determining the relevant market, the Commission assesses demand substitution by determining the range of products which are viewed as substitutes by the consumers.⁷⁵ The Commission may also take into account supply-side substitution, namely when its effects are equivalent to those of demand substitution in terms of effectiveness and immediacy.⁷⁶ 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.⁷⁷
- (139) According to the Notifying Party, the following relevant product markets are affected by the merger:
- (a) the market for mobile telecommunications services to end customers (the "retail mobile telecommunications services market");
 - (b) the wholesale market for access and call origination on public mobile telephone networks (the "wholesale market for access and call origination");
 - (c) the wholesale market for international roaming; and
 - (d) the wholesale market for mobile call termination.
- (140) Those markets also correspond to the product markets defined in previous Commission decisions.⁷⁸ In the following recitals, the Commission assesses whether those product market definitions are also appropriate in this case.

6.1.1. *The retail mobile telecommunications services market*

- (141) In previous decisions,⁷⁹ the Commission found that there is one overall market for retail mobile telecommunications services. This is the market on which MNOs and MVNOs sell voice and data services to end customers via a mobile network. In previous decisions, the Commission did not further divide this market by type of

⁷⁴ 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).

⁷⁵ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 15.

⁷⁶ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 20.

⁷⁷ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 20.

⁷⁸ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, paragraphs 58, 63, 67 and 70; Commission Decision of 1 March 2010 in Case No COMP/M.5650 – *T-Mobile / Orange UK*, 1 March 2010, paragraphs 27-30, 32-34, 36-37.

⁷⁹ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, paragraph 58; Commission Decision of 1 March 2010 in Case No COMP/M.5650 – *T-Mobile / Orange UK*, paragraphs 21, 24; Commission Decision of 27 November 2007 in Case No COMP/M.4947 – *Vodafone / Tele2 Italy / Tele2 Spain*, paragraph 14; Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring*, paragraph 18 (but leaving open the question whether a separate market exists for specific 3G-only applications).

customer (business or private customers), by type of service (post-paid or pre-paid), or by type of network technology (2G/GSM or 3G/UMTS). The Commission has not previously found that there is a separate market for data-only services.⁸⁰ According to the Notifying Party, the Commission should also define one overall retail mobile telecommunications services market in this case.⁸¹ The Commission agrees and defines the relevant product market in this case as the retail mobile telecommunications services market. Sections 6.1.1.1 to 6.1.1.4 explain that this overall market consists of various segments but that these segments do not constitute separate product markets.

6.1.1.1. Post-paid and pre-paid

(142) Mobile operators and consumers distinguish between pre-paid and post-paid services.⁸² Post-paid services, also known as bill-pay services, typically involve long-term contracts with a monthly bill. They are often offered in combination with a subsidized handset, meaning a handset sold by operators at a discount or for free. By contrast, pre-paid services, also known as pay-as-you-go services, require consumers to purchase credit in advance without any contract and typically do not come with any handset subsidies.

(143) Although consumers distinguish between post-paid and pre-paid services because post-paid services entail a longer and more substantial financial commitment, the Commission nonetheless finds that they form part of the same market because of supply-side substitutability. Indeed, MNOs offering only post-paid services could easily offer pre-paid services and vice versa. As a matter of fact, all MNOs in Ireland offer both types of services. In line with previous decisions, the Commission therefore concludes that post-paid and pre-paid consumers do not constitute separate markets.

6.1.1.2. Voice (including voice/data), mobile broadband (data only) and machine to machine ("M2M") services

(144) End customers use mobile services on a variety of devices. These include traditional mobile phones, smartphones, tablets and laptops. Although some consumers use their mobile phone exclusively for calling, most also use it to receive and send data. These consumers purchase both voice and data services. By contrast, consumers with tablets and laptops typically purchase only data services, in order to access the internet. These data services are received on a SIM-card, which, in the case of laptops, is inserted in a USB-modem, also known as a dongle. In the case of tablets, the SIM-card is directly installed in the tablet. Irish MNOs often refer to these data-only services as mobile broadband⁸³ and this Decision also uses the term in this sense. In other words, mobile broadband is a subcategory of data services, namely those data services purchased by users of laptops and tablets.

⁸⁰ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *H3G Austria / Orange Austria*, paragraph 52.

⁸¹ Form CO, paragraph 117.

⁸² Consumer Association of Ireland, response to Questionnaire Q11 to consumer associations of 1 October 2013, questions 5 and 5.1 [ID 751]. For operators, the distinction is made in numerous internal documents.

⁸³ Form CO, page 4, defining mobile broadband as "*mobile data services accessed via mobile devices other than a mobile handset, i.e. via a dongle, tablet or mobile router*".

- (145) The other subcategory of data services are the data services purchased by users of mobile phones. Since these are purchased in a bundle with voice services, MNOs do not have separate turnover figures for this category of data services.⁸⁴ Instead, they are reported as part of the turnover from voice services.
- (146) Data services (both data used by mobile phone users and mobile broadband) are rapidly growing in importance. In two years' time, between 2011 and 2013, mobile data volumes in Ireland have doubled.⁸⁵ This evolution is likely to continue, as evidenced by O2 internal documents, predicting a [...] ⁸⁶ in the years ahead, giving O2 the opportunity to [...] ⁸⁷.
- (147) Although consumers may distinguish between mobile broadband, which they purchase for use on their laptop or tablet, and bundles of voice and data services, which they purchase for their mobile phone, the Commission finds that they form part of the same market based on supply-side substitutability. Mobile broadband is offered through the same infrastructure and technology as other mobile telecommunications services. Hence, MNOs could easily switch from offering mobile broadband to offering other mobile telecommunications services, and vice versa. As a matter of fact, all MNOs in Ireland offer both. In line with previous decisions, the Commission therefore concludes that there is one overall market for retail mobile telecommunications services, without distinction between mobile broadband, voice and data services.
- (148) Finally, M2M services are a type of services supplied to business customers. They are received through specific data-only SIM cards, most of which are 2G-only, used for communication between machines. Intelligent traffic lights, for instance, may rely on M2M services to communicate with each other to adjust their circuits. All M2M services are post-paid. These services do not constitute a separate market because of supply-side substitutability. MNOs could easily switch from offering regular voice and data services to offering M2M services, and vice versa.

6.1.1.3. Private and business customers

- (149) Mobile operators typically consider business customers as a distinct group. Business customers obtain *ad hoc* conditions which usually include a dedicated support team and better rates than private customers.⁸⁸ In Ireland, business customers constitute approximately [0–5]*% of the market.⁸⁹ Business customers consume voice and data services and mobile broadband. All business customers are on post-paid plans. There are no pre-paid business tariffs.⁹⁰

⁸⁴ Form CO, Annex 6.4.1.2(1).

⁸⁵ ComReg Q4 Report, page 52 (figure 4.3.1) [ID 3967].

⁸⁶ O2, Business Plan 2013-2015, June 2012, slide 10, [Ref: TEL00201954], [ID 1065-25627].

⁸⁷ Telefónica, TSSG Group meeting, 17 May 2012, [Ref: TEF00124006], [ID 1064-4958].

⁸⁸ See, for example, Response of Health Service Executive to Questionnaire Q10 to business customers of 1 October 2013, question 8 [ID 666]; Response of Henkel Ireland Operations and Research to Questionnaire Q10 to business customers of 1 October 2013, question 8 [ID 621]; Response of Total Produce to Questionnaire Q10 to business customers of 1 October 2013, question 8 [ID 548]; Response of AIB to Questionnaire Q10 to business customers of 1 October 2013, question 8 [ID 589].

⁸⁹ Form CO (tab 40), Annex 6.4.1.5 (2) ([...]* in revenues from private subscribers in comparison to [...]* in revenues from business subscribers in 2012).

⁹⁰ Form CO, paragraph 376.

(150) Although mobile operators treat business customers as a distinct group, in line with previous decision,⁹¹ the Commission nonetheless finds that services to business customers and services to private customers do not constitute separate markets because of supply-side substitutability. The services provided to business customers are essentially the same as those provided to private customers and MNOs serving one group of customers could easily switch to offering services to the other group.

6.1.1.4. Relative importance of different market segments

(151) Although, as set out in recital (141), one overall market for retail mobile telecommunications services exists, an analysis of competition in the different segments described in Sections 6.1.1.1 to 6.1.1.3 is important to assess competition in the overall market. This is because there is little demand-side switching between these segments and supply-side substitutability is not perfect. As a result, the competitive dynamics differ among segments. This is evidenced by the fact that MNOs themselves often analyse the market at segment-level and have different marketing strategies for each segment.⁹² This Decision therefore frequently analyses developments in specific segments. Such an analysis is relevant because a competitive concern in a specific segment can indicate the existence of a competitive concern on the overall market. This is especially the case if the segment is an important or growing part of the overall market or if the segments together amount to the overall market.

(152) Table 13 shows the relative importance of each segment as against the overall retail mobile telecommunications services market. The calculations show the importance both by subscribers and by revenues from 2010 to 2012.

Table 13: Percentage of segments against the overall market

	Subscribers (Millions)			Revenue (m EUR)		
	2010	2011	2012	2010	2011	2012
Pre-paid	64.37%	62.75%	59.61%	[...]*%	[...]*%	[...]*%
Post-paid	35.63%	37.25%	40.39%	[...]*%	[...]*%	[...]*%
Private	[...]*%	[...]*%	[...]*%	[...]*%	[...]*%	[...]*%
Business	[...]*%	[...]*%	[...]*%	[...]*%	[...]*%	[...]*%
Voice	86.87%	85.76%	85.27%	[...]*%	[...]*%	[...]*%
Mobile broadband	10.70%	10.79%	10.16%	[...]*%	[...]*%	[...]*%
M2M	2.43%	3.45%	4.58%	[...]*%	[...]*%	[...]*%

Source: Commission calculations on the basis of Form CO, Annex 6.4.1.5 (2) data

⁹¹ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, paragraph 21; Commission Decision of 1 March 2010 in Case No COMP/M.5650 – *T-Mobile / Orange UK*, paragraph 24; Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria/ Tele.ring*, paragraph 11.

⁹² See, for example, Form CO, Annex 5.4(16), "Ozone Commercial Review" (discussing prepay voice, bill pay voice, data-only services and mobile broadband separately).

- (153) Table 13 indicates the segments which are more lucrative for MNOs, based on figures from 2010 to 2012. For example, the pre-paid segment amounts to 60% of the market by subscribers and only to [...] % of the market by revenue. By contrast, the post-paid segment amounts to 40% of the market by subscribers and [...] % of the market by revenue. This difference is reflected in the average monthly revenue for each type of customer. Post-paid customers generate EUR 39 per month on average in Ireland. This is more than double the revenue generated by pre-paid users, which is EUR 17 on average. There is a consistent shift in the market from pre-paid to post-paid services. In September 2013, 42% of all subscribers in Ireland were on a post-paid plan, up from 39% the year before. This trend is likely to continue in the years to come. O2, for instance, predicts a "[...]".⁹³ An important factor driving the shift from pre-paid to post-paid is the popularity of smartphones, which are relatively expensive and for which consumers prefer post-paid plans because they come with a subsidised smartphone. Tariff plans offering unlimited data and bundled with attractive voice and SMS tariffs have also contributed to a shift towards smartphones and post-paid tariffs.
- (154) While the business segment amounts to [...] % of the market by subscribers, it is as high as [...] % of the market by revenue. Mobile broadband seems [...], with 10% by subscribers and [...] % by revenue. Voice on the other hand (including voice/data bundles) is more lucrative, with 85% of the market by subscribers and [...] % of the market by revenue. M2M services are low value services, amounting to 4.6% of the market by subscribers and only [...] % of the market by revenue.

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

- (155) On this market, MNOs sell access to their network and the ability to make calls ("call origination") to MVNOs. MNOs own the mobile network and constitute the supply side of the market, whereas MVNOs who seek access constitute the demand side of the market.
- (156) This market definition is in line with previous Commission decisions⁹⁴ and the Commission Recommendation on relevant markets.⁹⁵ It is also the relevant product market suggested by the Notifying Party. The Commission concludes that this market definition is also appropriate in this case.

⁹³ O2, Telefónica Ireland – QFC2 Submission, 13 May 2013, slide 8, [Ref: TEL00263810], [ID 1065-38576].

⁹⁴ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *H3G Austria / Orange Austria*, paragraph 63; Commission Decision of 27 November 2007 in Case No COMP/M.4947 – *Vodafone / Tele2 Italy / Tele2 Spain*, paragraph 15; Commission Decision of 20 August 2007 in Case No COMP/M.4748 – *T-Mobile / Orange Netherlands*, paragraph 17.

⁹⁵ 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 2001/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services, (OJ L 114, 8.5.2003, p. 45). That recommendation was replaced by the Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2001/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services (OJ L 344, 28.12.2007, p. 65). The latter recommendation did not include the wholesale market for access and call origination on public mobile telephone networks in its annex with relevant markets.

6.1.3. Wholesale market for international roaming

- (157) International roaming is a service which allows mobile subscribers to use their mobile handsets and SIM cards to call and use data services when abroad. To be able to offer this service to their customers, MNOs conclude wholesale agreements with MNOs in other countries to obtain access and capacity on mobile networks abroad.⁹⁶
- (158) In previous decisions,⁹⁷ the Commission has defined a wholesale market for international roaming. This market definition is also in line with the Commission Recommendation on relevant markets and it is the relevant product market suggested by the Notifying Party. The Commission concludes that this market definition is appropriate in this case.

6.1.4. Wholesale market for mobile call termination

- (159) 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 person being called.
- (160) Call termination is a wholesale service provided on the basis of interconnection agreements. Call termination services concern both fixed and mobile networks. The related charges are regulated by national telecommunications regulators.
- (161) In previous decisions, the Commission has found that there is no substitute for call termination on individual networks as the operator transmitting the outgoing call can reach the intended recipient only through the operator of the network to which the recipient is connected. Previous Commission decisions therefore concluded that individual networks, whether fixed or mobile, constitute separate markets for call termination.⁹⁸ The Notifying Party also suggests that the markets for call termination on each network are the relevant product markets. The Commission concludes that this market definition is appropriate in this case.

6.2. Geographic market definition

- (162) The relevant geographic market comprises the area in which the undertakings concerned are involved in the supply of and demand for 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.⁹⁹

⁹⁶ Commission Decision of 1 March 2010 in Case No COMP/M.5650 – *T-Mobile / Orange*, paragraph 32.

⁹⁷ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *H3G Austria / Orange Austria*, paragraph 67; Commission Decision of 1 March 2010 in Case No COMP/M.5650 – *T Mobile / Orange*, paragraphs 32-34.

⁹⁸ Commission Decision of 3 July 2013 in Case No COMP/M.6948 – *Telenor / Globul / Germanos*, paragraph 81; Commission Decisions of 1 March 2010 in Case No COMP/M.5650 – *T-Mobile / Orange*; Commission Decision of 2 October in Case No COMP/M.5148 – *Deutsche Telekom / OTE*; Commission Decision of 27 November 2007 in Case No COMP/M.4947 – *Vodafone /Tele2 Italy / Tele2 Spain* and Commission Decision of 20 August 2007 in Case No COMP/M.4748- *T-Mobile / Orange Netherlands*.

⁹⁹ Commission Notice on the definition of relevant market for the purposes of Community competition law, paragraph 7.

(163) According to the Notifying Party, all four relevant product markets are national in scope.¹⁰⁰ Previous Commission decisions have also found that the four product markets identified in Section 6.1. are national in scope.¹⁰¹

6.2.1. Retail mobile telecommunications services market

(164) The Irish telecommunications regulator, ComReg, grants licenses for the territory of Ireland. MNOs sell, market and price their services on a national level. Respondents to the market investigation also considered that the retail market was national in scope.¹⁰² The Commission therefore concludes that the relevant geographic market corresponds to the territory of Ireland.

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

(165) The mobile networks to which MNOs grant access to MVNOs have a national dimension because ComReg grants licenses for the territory of Ireland. The Commission therefore concludes that the relevant geographic market for the wholesale market for access and call origination on public mobile telephone networks corresponds to the territory of the Republic of Ireland.

6.2.3. Wholesale market for international roaming

(166) 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.¹⁰³

(167) In line with those previous decisions, the Commission concludes that the relevant geographic market for the wholesale market for international roaming is the territory of the Republic of Ireland.

6.2.4. Wholesale market for mobile call termination.

(168) Previous decisions from the Commission have defined the markets for call termination of mobile calls to be national in scope.¹⁰⁴ In this case, the Commission also concludes that the markets are national.

¹⁰⁰ Form CO, paragraph 139 (market for mobile telecommunications to end users), paragraph 144 (market for wholesale access and call origination on public mobile telephone networks), paragraph 148 (wholesale market for international roaming) and paragraph 160.

¹⁰¹ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *H3G Austria / Orange Austria*, paragraph 73; Commission Decision of 1 March 2010 in Case No COMP/M.5650 – *T Mobile / Orange UK*, paragraphs 25 and 26.

¹⁰² Responses to Questionnaire 8 to MNOs, question 19; Responses to Questionnaire 9 to MVNOs, question 19.

¹⁰³ Commission Decision of 12 December 2012 in Case COMP/M.6497 *Hutchison 3G Austria/ Orange Austria*, paragraph 78; Commission Decision of 1 March 2010 in Case COMP/M.5650 *T-Mobile / Orange*, paragraph 35; Commission Decision of 20 August 2007 in Case COMP/M.4748 *T-Mobile / Orange Netherlands*, paragraph 27; Commission Decision of 26 April 2006 in Case COMP/M.3916 *T-Mobile Austria / Tele.ring*, paragraph 28.

¹⁰⁴ See notably Commission Decision of 20 September 2013 in Case COMP/M.6990 - *Vodafone / Kabel Deutschland*, paragraph 242 and Commission Decision of 1 March 2010 in Case COMP/M.5650 *T-Mobile / Orange*, paragraph 38.

6.3. Affected markets

6.3.1. Horizontally affected markets

- (169) The retail mobile telecommunications services market in Ireland is horizontally affected because Three and O2 are both active in this market as MNOs and their market share exceeds 15%. The 15% threshold has been increased to 20% since 1 January 2014¹⁰⁵ but the merger was notified before that date and, in any event, Three and O2's joint market share also exceeds the 20% threshold.
- (170) Three and O2 also both provide wholesale access and call origination to MVNOs in Ireland and their combined market share on this market exceeds 15%.¹⁰⁶ Hence, the Irish wholesale market for access and call origination on public mobile telephone networks is also horizontally affected.
- (171) Moreover, both Three and O2 offer international roaming services to MNOs outside of Ireland. Hence, their activities overlap on the Irish wholesale market for international roaming. The Parties' combined market share on this market exceeds 15%.¹⁰⁷ The Irish wholesale market for international roaming is therefore horizontally affected. However, for the reasons discussed in Section 7.11.1, the Commission does not find any competition concerns with respect to the Irish wholesale market for international roaming.

6.3.2. Vertically affected markets

- (172) The Irish retail mobile telecommunications services market and the Irish wholesale market for access and call origination are vertically affected as Three and O2 are active on both markets and their combined market share exceeds 25% on both the retail and the wholesale level. The 25% threshold has been increased to 30% since 1 January 2014¹⁰⁸ but the merger was notified before that date and, in any event, Three and O2's joint market share also exceeds the 30% threshold.
- (173) The wholesale markets for international roaming services in several Member States are also vertically affected. Three is part of Hutchison and this group has subsidiaries that operate as MNOs in several Member States: Austria, Denmark, Italy, Sweden and the United Kingdom. MNOs in Ireland typically offer their customers roaming services when abroad. To do so, they purchase international roaming services from MNOs in other countries. This means the Irish retail mobile telecommunications services market is vertically linked to the wholesale market for international roaming in various other countries. Since the combined market share of Three and O2 on the Irish retail market exceeds 25%, and since Hutchison is active in Austria, Denmark,

¹⁰⁵ See Commission implementing Regulation (EU) No 1269/2013 of 5 December 2013 amending Regulation (EC) No 802/2004 implementing Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (OJ L 336, 14.12.2013, p. 1-36) (replacing Annex I to Regulation (EC) No 802/2004 and introducing higher thresholds in the definition of "affected markets" in Section 6.3 of Annex I).

¹⁰⁶ See recital (259).

¹⁰⁷ Form CO, paragraph 151.

¹⁰⁸ See Commission implementing Regulation (EU) No 1269/2013 of 5 December 2013 amending Regulation (EC) No 802/2004 implementing Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (replacing Annex I to Regulation 802/2004 and introducing higher thresholds in the definition of "affected markets" in Section 6.3 of Annex I).

Italy, Sweden and the United Kingdom, the wholesale markets for international roaming in these Member States are vertically affected.

- (174) Conversely, the merger also vertically affects the Irish wholesale market for international roaming. Hutchison's subsidiaries are active in the retail markets in Austria, Denmark, Italy, Sweden and the United Kingdom and these markets are vertically linked to the Irish wholesale market for international roaming, on which Three and O2 have a market share that exceeds 25%.¹⁰⁹
- (175) The wholesale market for mobile call termination on O2's network and the wholesale market for mobile call termination on Three's network are also vertically affected. O2 provides call termination to Three when subscribers of Three call subscribers of O2. Conversely, Three provides call termination to O2. Three has a 100% market share on the market for mobile call termination on its own network and O2 likewise has a 100% market share on mobile call termination on its network. Hence, both markets are vertically affected. In addition, Hutchison has MNOs in several Contracting Parties to the EEA Agreement and those MNOs provide call termination to O2 when O2 subscribers call Hutchison subscribers. Hence, the wholesale markets for mobile call termination on the networks of Hutchison's subsidiaries in Austria, Denmark, Italy, Sweden and the United Kingdom are vertically affected.
- (176) For the reasons discussed in Section 7.11, the Commission does not find any competition concerns with respect to the wholesale markets for international roaming and the wholesale markets for mobile call termination.

7. COMPETITIVE ASSESSMENT

7.1. Introduction

- (177) Three and O2 are two of the four MNOs present on the retail mobile telecommunications services market and the wholesale market for access and call origination in Ireland. These markets are oligopolistic markets characterised by a high degree of concentration and high barriers to entry.
- (178) The proposed merger would reduce the number of MNOs in Ireland from four to three. It would lead to a market structure with two MNOs with a similar strong position, Vodafone and the merged entity, both with a market share of roughly 40%, followed by a third more distant player, Eircom, with a market share close to 20%. While the proposed merger would not lead to the creation or strengthening of a (single) dominant position of the merged entity, the Commission concludes that it would result in a significant impediment to effective competition on the retail mobile telecommunications market and, potentially, on the wholesale market for network access and call origination in Ireland.¹¹⁰

¹⁰⁹ Form CO, paragraph 156.

¹¹⁰ In its competitive assessment, the Commission is also cognisant of the likely adoption in 2014 of the "Regulation of the European Parliament and of the Council laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, and amending Directives 2002/20/EC, 2002/21/EC, 2002/22/EC, and Regulations (EC) No 1211/2009 and (EU) No 531/2012". The current draft of that Regulation makes it illegal for telecom operators to restrict voice or instant messaging services provided by over the top providers and envisages to end roaming charges for voice, SMS and data by 15 December 2015.

- (179) First, as set out in more detail in Section 7.2, the Merger Regulation explicitly recognises that mergers in oligopolistic markets involving the elimination of important competitive constraints that the Parties previously exerted upon each other together 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 effective competition.¹¹¹
- (180) As described in Section 7.5.2 and recital (395), the Commission concludes that Three is an important competitive force in Ireland. Three's current incentives to compete are derived from its limited scale/subscriber base and its extensive available capacity for additional customers. The proposed merger would remove the important competitive constraint that Three and O2 currently exert on each other and reduce the competitive pressure on the remaining competitors.
- (181) In Section 7.5.4, the Commission concludes, that in the absence of the merger the Parties will have a continued ability and incentive to compete and will have rolled out LTE networks having an improved position thanks to their recently concluded network sharing agreements and the significant additional spectrum acquired in the MBSA auction.¹¹²
- (182) By contrast, if the merger takes place, Three will gain a significant customer base, having acquired the number two player. This is likely to significantly affect its current incentive to compete as set out in Section 7.5.5 Moreover, as set out in Section 7.5.6, the weakening of competition is unlikely to be offset by competitors who will, in all probability, increase their prices in turn.
- (183) Second, the merger is also likely to reduce competition from Eircom in the retail market because it would probably lead to the termination or frustration of the Mosaic agreement, thereby reducing Eircom's ability to compete (Section 7.6).
- (184) Third, as regards the wholesale market for network access and call origination in Ireland, as set out in Section 7.7, the merger would lead to a reduction in the number of MNO hosts for current and potential MVNOs in Ireland, and thereby potentially have a negative impact on MVNOs' ability to find a host MNO to enter the Irish market or to do so on reasonable terms and conditions for access. This could further lead to a reduced competitive pressure on the retail mobile telephony market in Ireland, to the extent that MVNOs bring some additional competitive pressure. However, the conclusion on the exact effects of the merger on the wholesale market is left open in the light of the commitments offered by the Notifying Party to address concerns on the retail market.
- (185) Section 7.8 assesses the risk of coordination on the Irish retail market after the merger and concludes that, given the commitments offered by the Notifying Party, the merger is unlikely to lead to coordinated effects on that market.
- (186) Finally, in relation to the efficiency claims submitted by the Notifying Party, the Commission concludes that the efficiencies brought about by the merger to the extent that they are verifiable, merger-specific and would benefit consumers, do not counteract the likely negative effects that the merger would have on the retail mobile

¹¹¹ The Merger Regulation, recital 25; Horizontal Merger Guidelines, paragraph 25.

¹¹² The Commission recognises that there can be important differences between different LTE deployments depending on the type of spectrum used, the cell sizes and the backhaul.

telephony market in Ireland. On this basis, the Commission's conclusion is that the proposed merger would lead to a significant impediment to effective competition on the retail mobile telephony market in Ireland.

7.2. Legal test

- (187) 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.
- (188) The Merger Regulation recognises that in oligopolistic markets, it is all the more necessary to maintain effective competition.¹¹³ 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.¹¹⁴
- (189) The Horizontal Merger Guidelines¹¹⁵ 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.¹¹⁶
- (190) 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. These factors apply equally when determining whether 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 this is not an exhaustive list.¹¹⁷
- (191) The Horizontal Merger Guidelines recognise that some firms, even those having a relatively small market share, may be an important competitive force. A merger involving such a firm may change competitive dynamics in a significant,

¹¹³ Recital 25 of the Merger Regulation.

¹¹⁴ Recital 25 of the Merger Regulation.

¹¹⁵ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, [2004] OJ C 31/5.

¹¹⁶ Horizontal Merger Guidelines, paragraph 24.

¹¹⁷ Horizontal Merger Guidelines, paragraph 26.

anticompetitive way, in particular where the market is already concentrated. This is of particular relevance to the assessment of the merger in this case.

- (192) As will be set out in Section 7.5.2, the Commission considers that Three is an important competitive force in Ireland. This finding is used as a factor to determine whether the elimination of this important competitive force would, first, remove an important constraint that Three and O2 exerted upon each other and, second, would reduce competitive pressure on the remaining competitors.

7.2.1. *The Notifying Party's view*

- (193) The Notifying Party considers that the theory of harm based on the removal of an important competitive force in this case is unusual, unprecedented and ultimately illegal under the Merger Regulation.¹¹⁸

- (194) In particular, the Notifying Party claims that while previously the Commission has "typically" relied on showing dominance and closeness of competition to establish non-coordinated effects, in this case it is not seeking to establish either. Instead, the Commission's analysis focuses (albeit together with factors such as market share and concentration levels, the likely incentives of competitors to increase prices and the low likelihood of entry) on the qualification of Three as an important competitive force. In the Notifying Party's view this is problematic, as the Commission typically relies on a finding that a firm is an important competitive force as "*an aggravating factor*" in situations where the merged entity would achieve a dominant position or where the Parties are particularly close competitors.¹¹⁹

- (195) The Notifying Party submits that, in the absence of dominance and/or a finding that Three and O2 are each other's closest competitors, the condition under recital 25 of the Merger Regulation and paragraph 25 of the Horizontal Merger Guidelines that they exert "important competitive constraints" on each other is unlikely to be met.¹²⁰ The Notifying Party suggests that if the Commission were to find non-coordinated effects in the absence of dominance or the parties being the closest competitors, for instance because Three would be an important competitive force, it would have to meet a different and higher standard of proof. This standard would be "*very demanding*" and would require "*particularly strong and unambiguous evidence*".¹²¹

- (196) As regards the question as to whether Three is indeed an "important competitive force", the Notifying Party submits that this concept is not clearly defined and inherently subjective. The Notifying Party explains that dominance and closeness of competition can be assessed against objective benchmarks, such as market shares, diversion ratios and bidding analyses. In its view, no such benchmark is available to determine whether a firm is "an important competitive force". The Notifying Party submits that, in its analysis of the appropriate test, Three could only be an "important competitive force" if Three is unique in that it stands out from all of its competitors in terms of the impact it has on competition and is, in that way, indispensable to maintain effective competition.

¹¹⁸ Response to the SO, paragraphs 79-95.

¹¹⁹ Response to the SO, paragraph 90.

¹²⁰ Response to the SO, paragraph 89.

¹²¹ Response to the SO, paragraphs 93-95.

7.2.2. *The Commission's assessment*

(197) The Commission considers that its approach in this case is fully in line with the Merger Regulation, which is the source for the legal test that it has to apply in merger cases. The Commission also considers that it is in line with the Horizontal Merger Guidelines, which provide further guidance on a number of factors that the Commission may take into account in applying that legal test.

7.2.2.1. Non-coordinated effects in the absence of dominance and closeness of competition

(198) Under the new substantive test introduced by the Merger Regulation (see Articles 2(2) and 2(3)), 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. Indeed, according to recital 25 of the Merger Regulation, the notion of "significant impediment to effective competition" in Articles 2(2) and (3) of the Merger Regulation should be interpreted, as extending, beyond the concept of dominance, to the anticompetitive effects of a concentration that result from the non-coordinated behaviour of undertakings which do not have a dominant position on the market concerned.¹²² It is, therefore, possible to find non-coordinated effects in the absence of dominance.

(199) This also follows from the Horizontal Merger Guidelines that give further guidance as to how the Commission applies the legal test set out in the Merger Regulation. The Horizontal Merger Guidelines state that non-coordinated effects from a merger "generally" arise from the creation or strengthening of a dominant position. The Horizontal Merger Guidelines go on to state that, in oligopolistic markets, mergers involving the elimination of important competitive constraints between the Parties together with a reduction of competitive pressure on the remaining competitors may result in a significant impediment to effective competition. The Horizontal Merger Guidelines make clear that all mergers giving rise to such non-coordinated effects must also be declared incompatible with the internal market.

(200) Furthermore, contrary to the Notifying Party's claims, the Commission is not required, for the purposes of finding non-coordinated effects in the absence of dominance, to show that Three and O2 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 suggested by the Notifying Party.¹²³ Moreover, closeness of competition is only one of the factors listed in the Horizontal Merger Guidelines as potentially influencing whether significant non-coordinated effects are likely to result from a merger. The

¹²² 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.

¹²³ Horizontal Merger Guidelines, paragraph 28 and following.

qualification of a firm as an important competitive force can be equally relevant. This has already been recognised in previous Commission decisions.¹²⁴

- (201) The standard of proof that the Commission needs to meet to find non-coordinated effects, including on the basis that a merger would remove an important competitive force, is the same as the standard that it must meet when assessing whether other relevant factors are present.
- (202) 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.¹²⁵ As any other decision regarding the compatibility of concentrations with the internal market, a decision finding a significant impediment to effective competition based on the removal of an important competitive force must be supported by a sufficiently cogent and consistent body of evidence.¹²⁶

7.2.2.2. The concept of important competitive force

- (203) The Commission disagrees that the concept of an important competitive force is unclear and impossible to apply in an objective manner.
- (204) Paragraph 37 of the Horizontal Merger Guidelines recognises that firms may have more of an influence on the competitive process than their market shares or similar measures would suggest.
- (205) An assessment of whether an undertaking has more of an influence on the competitive process than its market share suggests is carried out against an objective benchmark, namely the firm's own market share. The competitive influence that a firm exerts, as set against that benchmark, can be assessed on the basis of those competitive parameters that are relevant to the market under investigation. Similarly, the assessment of whether the removal of that firm would change competitive dynamics in an anticompetitive manner, can be carried out with reference to the likely incentives of the merged entity and the remaining competitors to compete on those 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.
- (206) For a number of reasons, the Commission disagrees with the position advocated by the Notifying Party, namely that Three can be considered as an important competitive force only if it "*stands out from all of its remaining competitors in terms of competitive influence*".
- (207) First, this position seems to flow from the Notifying Party's argument that in the absence of dominance and closeness of competition between the Parties, the burden of proof on the Commission for finding non-coordinated effects is different and more demanding. In its view, this would also raise the evidentiary burden for finding that a firm is an important competitive force. As explained in recitals (202)-(205), this approach is not in line with the legal test as set out in the Merger Regulation, and is not supported by the Horizontal Merger Guidelines.

¹²⁴ See, for instance, Commission Decision of 21 January 2010 in Case No COMP/M.5529, *Oracle / Sun Microsystems*, paragraph 164 and following.

¹²⁵ Case C-413/06 P, *Bertelsmann v. Impala*, [2008] ECR I-4951, paragraph 52.

¹²⁶ Case C-413/06 P, *Bertelsmann v. Impala*, paragraph 50.

(208) Second, the fact that in previous cases¹²⁷ the Commission has qualified certain firms that have been unique in their aggression in the market and that have been growing their market presence faster than any other competitor as an important competitive force, does not mean that Three cannot be an important competitive force in this case. The Horizontal Merger Guidelines do not support the Notifying Party's view that only unique firms that stand out from all their competitors can be considered an important competitive force.

7.2.2.3. The Commission's approach in this case

(209) Applying the legal test set out in the Merger Regulation to the proposed merger, the Commission has assessed whether or not the merger may significantly impede effective competition by eliminating an important constraint between Three and O2, and by reducing competitive pressure on the remaining competitors on the relevant markets.

(210) In particular, to verify whether Three can be considered an important competitive force on the retail mobile telecommunications services market, the Commission has first assessed whether Three has exerted more of an influence on the competitive process than its market share would suggest (Section 7.2.2.2).

(211) It has then assessed whether, in the light of this competitive influence, Three has exerted an important competitive constraint on O2, which would be lost as a result of the merger (Section 7.5.2.2). The Commission verified whether the removal of this constraint between the Parties would change competitive dynamics in an anticompetitive manner, by reducing their ability and incentives to compete on the retail mobile telecommunications services market (Section 7.5.5).

(212) The Commission has then assessed whether the removal of Three and its combination with O2 would reduce competitive pressure on the remaining main competitors on the market, namely Vodafone and Eircom. The Commission verified whether this would change competitive dynamics on the overall retail mobile telecommunications services market in a significant, anticompetitive manner (Section 7.5.2).

(213) The Commission has found that the mobile telecommunications market in Ireland is characterised by high barriers to entry (Section 7.4). Further MNO entry in Ireland is unlikely if the merger goes ahead unaltered (Section 7.4.2). This fact compounds any negative effects that the removal of Three and its combination with O2 may have on the Irish market, thus underlining the importance of the competitive dynamics that exist where Three is a stand-alone competitive force.

7.3. Market shares and concentration

(214) Market shares and concentration levels provide useful first indications of the market structure and of the competitive importance of the Parties and their competitors.¹²⁸ The larger the market share, the more likely a firm is to possess market power. And

¹²⁷ Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria/Tele.ring*.

¹²⁸ Horizontal Merger Guidelines, paragraphs 14 and 15; Case T-79/12, *Cisco Systems v. Commission*, not yet reported, paragraph 47.

the larger the addition of market share, the more likely it is that a merger will lead to significant increase in market power.¹²⁹

- (215) Normally, the Commission uses current market shares in its competitive analysis. Post-merger market shares are calculated on the assumption that the post-merger combined market share of the Parties is the sum of their pre-merger market shares.
- (216) A merger involving a firm whose market share will remain below 50% after the merger may raise competition concerns in view of other factors such as the strength and number of competitors, the presence of capacity constraints or the extent to which the products of the Parties are close substitutes.¹³⁰
- (217) The overall concentration level in a market may also provide useful information about the competitive situation. In order to measure concentration levels, the Commission often uses the Herfindahl-Hirschman Index (HHI). The HHI is calculated by summing the squares of the individual market shares of all the firms in the market. The HHI gives proportionately greater weight to the market shares of larger firms. Although it is best to include all firms in the calculation, lack of information about very small firms may not be important because such firms do not affect the HHI significantly. While the absolute level of HHI can give an initial indication of the competitive pressure in the market post-merger, the change in the HHI (also known as the delta) is a useful proxy for the change in concentration directly brought about by the merger.¹³¹

7.3.1. *Retail mobile telecommunications services market*

7.3.1.1. Overall market shares

- (218) Ireland has approximately 5.6 million mobile subscribers.¹³² For their mobile telecommunications needs, those subscribers rely on the services of one of Ireland's four MNOs: Vodafone, O2, Eircom and Three.
- (219) More than 96% of mobile subscribers purchase mobile services directly from these four MNOs. Less than 4% purchase services from an MVNO, which uses the network of one of the MNOs.
- (220) Table 14 shows the pre-merger market shares of the Irish mobile operators in 2013. Table 15 shows the market shares they would hold after the merger.

¹²⁹ Horizontal Merger Guidelines, paragraph 27.

¹³⁰ Horizontal Merger Guidelines, paragraph 17.

¹³¹ Horizontal Merger Guidelines, paragraph 16.

¹³² ComReg Q4 Report, page 8, [ID 3967].

Table 14: Irish mobile operators' market shares pre-merger (2013)

Operator ¹³³	Market share by subscribers ¹³⁴	Market share by revenues
Vodafone	38%	44%
O2 (including Tesco Mobile) ¹³⁵	31%	28%
Eircom	19%	18%
Three	10%	10%

Source: Response to Questionnaire Q39, Question 6 [ID 3395]

Table 15: Irish mobile operators' market shares after the merger (2013)

Operator ¹³⁶	Market share by subscribers ¹³⁷	Market share by revenues
Vodafone	38%	44%
Merged entity (including Tesco Mobile)	41%	38%
Eircom	19%	18%

Source: Response to Questionnaire Q39, Question 6 [ID 3395]

- (221) The merger would reduce the number of MNOs in Ireland from four to three and combine the second player with the fourth player. The result would be a market featuring two large MNOs of roughly similar size. Vodafone and the merged entity would have a market share of, respectively, 44% and 38% by revenues, and 38% and 41% by subscribers. Eircom would be a distant third player, with a market share of 18% by revenues and 19% by subscribers.
- (222) The merger would significantly increase the already high level of concentration in the market, with a post-merger HHI of 3 486, representing an increase of more than 620 points.¹³⁸

7.3.1.2. Evolution of market shares 2005-2012

- (223) Figure 10 shows the subscriber share development since 2005.

¹³³ Market shares of MVNOs other than Tesco Mobile are negligible and therefore not shown in this table.

¹³⁴ Operators other than the MNOs listed have a market share by subscribers of 2% and by revenues of 1%.

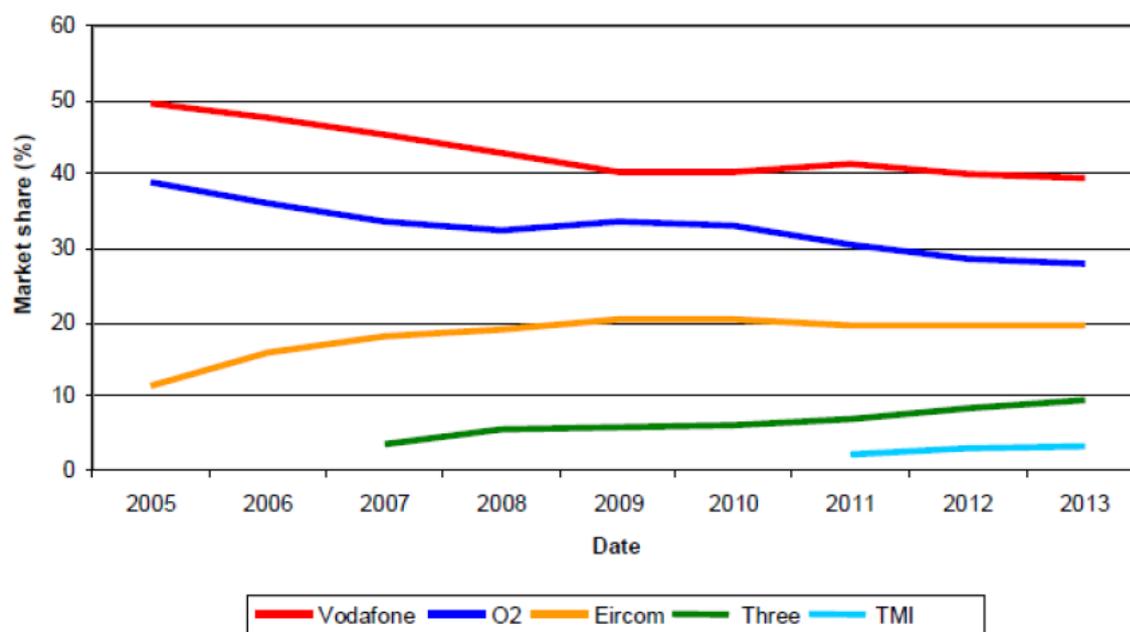
¹³⁵ On the reasons why Tesco Mobile's market share is aggregated with that of O2, see Section 7.2.

¹³⁶ MVNOs other than Tesco Mobile are very small and therefore not shown in this table.

¹³⁷ Operators other than the MNOs listed have a market share by subscribers of 2%.

¹³⁸ The post-merger HHI based on market share by subscribers in 2013 is calculated as follows: $19^2 + 41^2 + 38^2 = 3\,486$. The pre-merger HHI is 2 866, calculated as $10^2 + 19^2 + 31^2 + 38^2$. The post-merger HHI based on market share by revenues in 2013 is calculated as follows: $18^2 + 38^2 + 44^2 = 3\,704$. The pre-merger HHI is 3 144, calculated as $10^2 + 18^2 + 28^2 + 44^2$.

Figure 10: Overview of subscriber share development since 2005



Source: Form CO, on the basis of ComReg, Quarterly Key Data Reports 2005-2013

- (224) Figure 10 shows that between 2005 and 2008, Vodafone and O2 lost subscribers while Eircom and Three gained subscribers. Vodafone stabilised its subscriber share in 2009 (that is, it stopped losing subscribers) and Eircom also stabilised its subscriber share around that time too (that is, Eircom stopped gaining subscribers). Following a couple of years of stability between 2008 and 2010, O2 has started to lose subscribers again. Three has been consistently gaining subscribers since its market entry in 2005.

Table 16: Total retail market – Evolution of market shares by subscribers (2010-2012)

Operator	Subscribers					
	2010		2011		2012	
	Millions	Share (%)	Millions	Share (%)	Millions	Share (%)
Three	0.34	6%	0.42	8%	0.49	9%
O2	1.70	32%	1.62	30%	1.54	28%
Combined	2.04	38%	2.05	37%	2.03	37%
Tesco Mobile	0.07	1%	0.14	3%	0.19	3%
Combined incl. Tesco Mobile	2.11	39%	2.19	40%	2.22	41%
Vodafone	2.17	41%	2.23	40%	2.16	40%
Eircom	1.07	20%	1.08	20%	1.09	20%
Other	0.00	0%	0.00	0%	0.00	0%
Total	5.34	100%	5.50	100%	5.46	100%

Source: Form CO, Annex 6.4.1.5 (2)

Table 17: Total retail market – Evolution of market shares by revenues (2010-2012)

Operator	Revenues					
	2010		2011		2012	
	Millions	Share (%)	Millions	Share (%)	Millions	Share (%)
Three	[...]*	4%	[...]*	6%	[...]*	8%
O2	[...]*	35%	[...]*	32%	[...]*	28%
Combined	[...]*	39%	[...]*	38%	[...]*	37%
Tesco Mobile	[...]*	0%	[...]*	1%	[...]*	1%
Combined incl. Tesco Mobile	[...]*	39%	[...]*	39%	[...]*	38%
Vodafone	[...]*	43%	[...]*	44%	[...]*	44%
Eircom	[...]*	18%	[...]*	18%	[...]*	18%
Other	[...]*	0%	[...]*	0%	[...]*	0%
Total	[...]*	100%	[...]*	100%	[...]*	100%

Source: Form CO, Annex 6.4.1.5 (2)

(225) Table 17 shows the evolution of market shares by revenues and Table 16 by subscribers between 2010 and 2012. From 2010 to 2012, Three doubled its revenue share, from 4% to 8%, and increased its subscriber share from 6% to 9%. Vodafone's and Eircom's revenue and subscriber shares have largely remained constant. O2 has lost both subscriber and revenue share but remains a strong number two player. O2's joint venture with Tesco, Tesco Mobile, gained a market share of 3% by subscribers and 1% by revenues.

7.3.1.3. 2013 Market shares

(226) In response to the Commission's request for information, the Notifying Party submitted market shares for 2013 by revenues and by subscribers, on the basis of the ComReg quarterly reports (including the ComReg Q4 Report).¹³⁹

(227) The Notifying Party submits that in 2013, ComReg introduced a number of changes to the data it publishes on the mobile telecommunications sector. This new approach was reflected for the first time in the ComReg Quarterly Key Data report Q2 2013, which was published on 11 September 2013 (the "ComReg Q2 Report"). The Notifying Party submits that the underlying data relied upon for the 2010-2012 market shares in the Form CO and the 2013 data included in the Notifying Party's response are not directly comparable.

(228) The main changes introduced by ComReg to the data it publishes are as follows:

- (a) Voice / M2M: Prior to 2013 Q2, ComReg reported M2M subscriptions as part of mobile voice subscriptions. ComReg has now excluded M2M from the

¹³⁹ Three response to RFI Q 39, Question 6 – Market share data [ID 3395]

"voice" category¹⁴⁰ and reports it as a separate category.¹⁴¹ Accordingly, the 2013 market shares for voice and M2M are based on actual ComReg subscriber data and do not rely on the assumptions which were required for the market share estimates in the Form CO.

- (b) Revenues: In its ComReg Q2 Report, ComReg revised upwards the total mobile revenues for 2011 and 2012 and amended the market shares accordingly.¹⁴² [...] When producing the market share estimates submitted in the Form CO, the Notifying Party assumed that ComReg's reported revenue data (except for Three's) was net of handset costs.¹⁴³
 - (c) Data from MVNOs: As of 2013, ComReg has included mobile subscriptions from additional operators in its data. Lycamobile has been included since Q1 2013 and another (unidentified) operator has been included since Q4 2013.¹⁴⁴
- (229) On the basis of those differences and the Notifying Party's claims that the 2013 market shares are not comparable to the 2010 to 2012 market shares, the Commission considers the market evolution using the 2010 to 2012 market shares, on the overall market and in specific segments, when comparing growth. In addition, the Commission considers the 2013 market shares to give the most up to date market share figures currently available. The 2013 market share figures were taken into account in the Commission's final assessment in this Decision when assessing Three's current market position as against its competitors.
- (230) Table 18 sets out the overall market shares for 2013 by revenues and by subscribers.

¹⁴⁰ ComReg, Quarterly Key Data Report, Q2 2013, 11 September 2013, Document No. 13/87, page 50, in particular footnote 41, http://www.comreg.ie/_fileupload/publications/ComReg1387.pdf, available on 11 April 2014, (the "ComReg Q2 Report") [ID 1065-41281]. This report uses Q2 2013 data.

¹⁴¹ ComReg Q2 Report, section 4.6, [ID 1065-41281].

¹⁴² ComReg, Q2 Report, page 5, [ID 1065-41281].

¹⁴³ Form CO, Annex 6.4.1.2(1), page 2.

¹⁴⁴ ComReg Q4 Report, page 45, [ID 3967].

Table 18: Overall market– Overall market shares by subscribers and by revenues (2013)

Operator	Subscribers 2013 Q4		Revenue 2013 Q1-Q4	
	m EUR	Share (%)	m EUR	Share (%)
Three	[...]*	10%	[...]*	10%
O2	[...]*	27%	[...]*	26%
Combined	[...]*	37%	[...]*	36%
Tesco Mobile	[...]*	4%	[...]*	2%
Combined incl. Tesco Mobile	[...]*	41%	[...]*	38%
Vodafone	[...]*	38%	[...]*	44%
Eircom	[...]*	19%	[...]*	18%
Other	[...]*	2%	[...]*	1%
Total	[...]*	100%	[...]*	100%

Source: Response to Questionnaire Q39, Question 6 [ID 3395]

- (231) According to the figures in table 18, on the basis of 2013 figures, Three has a 10% market share in the overall retail mobile telecommunications market, both by revenues and by subscribers. O2 (including Tesco) has a market share of 28% by revenues and 31% by subscribers. Thus the merged entity will have a market share of 38% by revenues and 41% by subscribers. This is compared to Vodafone's market share which is 44% by revenues and 38% by subscribers and Eircom's market share which is 18% by revenues and 19% by subscribers.

Conclusion

- (232) In conclusion, the merger would result in a strong number two competitor with a market share of approximately 40% and would increase concentration in an already highly concentrated market.

7.3.1.4. Market shares in specific segments

- (233) This Section considers the market strength of Three in comparison to its competitors in the segments where Three is active and discusses Three's growth in each segment in the last three years.

- (234) While retail mobile telecommunications services belong in one market on the basis of supply side substitutability, from a demand perspective, mobile telecommunications services (for example voice services and mobile broadband) are differentiated products. Three is active in the overall retail mobile telecommunications services market, Three's business decisions and strategy are often based on its position on different segments. The Commission examines the competitive strength of Three in each segment, in order to understand the effect of Three's competitive strategy, which is different depending on the segment of activity. This position is consistent with previous decisions of the Commission, for example in Case M.6497 - H3G / Orange Austria.

Mobile broadband segment

- (235) Table 19 sets out the evolution of the market shares in the mobile broadband segment by revenues and Table 20 by subscribers.

Table 19: Mobile Broadband – Evolution of market shares by revenues (2010-2012)

Operator	Revenues					
	2010		2011		2012	
	m EUR	Share (%)	m EUR	Share (%)	m EUR	Share (%)
Three	[...]*	[30–40]**%	[...]*	[30–40]**%	[...]*	[30–40]**%
O2	[...]*	[30–40]**%	[...]*	[30–40]**%	[...]*	[20–30]**%
Combined	[...]*	[60–70]**%	[...]*	[60–70]**%	[...]*	[60–70]**%
Tesco Mobile	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
Combined incl. Tesco Mobile	[...]*	[60–70]**%	[...]*	[60–70]**%	[...]*	[60–70]**%
Vodafone	[...]*	[20–30]**%	[...]*	[20–30]**%	[...]*	[20–30]**%
Eircom	[...]*	[5–10]**%	[...]*	[10–20]**%	[...]*	[10–20]**%
Other	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
Total	[...]*	[90–100]**%	[...]*	[90–100]**%	[...]*	[90–100]**%

Source: Form CO, Annex 6.4.1.5 (2)

Table 20: Mobile Broadband – Evolution of market shares by subscribers (2010-2012)

Operator	Subscribers					
	2010		2011		2012	
	Millions	Share (%)	Millions	Share (%)	Millions	Share (%)
Three	0.20	35%	0.20	33%	0.18	33%
O2	0.16	29%	0.16	28%	0.15	28%
Combined	0.36	63%	0.36	61%	0.34	61%
Tesco Mobile	0.00	0%	0.00	0%	0.00	0%
Combined incl. Tesco Mobile	0.36	63%	0.36	61%	0.34	61%
Vodafone	0.15	27%	0.17	28%	0.16	28%
Eircom	0.05	10%	0.07	11%	0.06	11%
Other	0.00	0%	0.00	0%	0.00	0%
Total	0.57	100%	0.59	100%	0.55	100%

Source: Form CO, Annex 6.4.1.5 (2)

- (236) Three and O2 are currently the leading players in the mobile broadband segment. Three was first to launch stand-alone mobile broadband services targeting high-volume data users and it has now acquired leadership in mobile broadband.
- (237) In 2012, Three held market shares of roughly 33% in subscribers and 34% in revenues. O2 was the second largest player, holding a market share of roughly [20–30]**% both in subscribers and in revenues. They were followed by Vodafone and finally Eircom.

- (238) The Notifying Party argues that its market share in the mobile broadband segment includes Three's NBS subscriptions, which the Notifying Party claims amounts to approximately [20–30]*% of its total mobile broadband subscriptions.¹⁴⁵ The Commission considers that these subscriptions are rightly included in the assessment of the competitive position of Three, as they are active subscriptions that may continue after the NBS. However, even if all of those subscriptions ended on the termination of the NBS, as Three's current NBS subscribers would not subscribe to Three's services on a commercial basis, the merged entity's share would still remain above [50–60]*% in this segment.
- (239) Moreover, the Notifying Party claims that mobile broadband faces competition from fixed broadband. The Commission considers that mobile broadband has limited substitutability with fixed broadband because of the restriction in mobility. Only mobile data services offer customers the ability to access the internet from any location whilst on the move. Customers for whom mobility is important (including in locations where Wi-Fi is unavailable or less satisfactory) would not consider fixed line services as an alternative.
- (240) The mobile broadband segment can be further sub-divided into pre-paid and post-paid mobile broadband as well as into private and business mobile broadband. The merged entity would be the market leader in all mobile broadband sub-segments with the exception of business mobile broadband, where Three is not active. In pre-paid mobile broadband, the merged entity would still be the clear market leader with [50–60]*% by revenues (with Vodafone and Eircom having [20–30]*% and [20–30]*% respectively) and in post-paid mobile broadband [60–70]*% by revenues (with Vodafone and Eircom having [20–30]*% and [5–10]*% respectively). In private mobile broadband, the merged entity would have [60-70]*% by revenues (with Vodafone and Eircom having [20–30]*% and [10–20]*% respectively). In business mobile broadband, where Three currently is not active, the merged entity would be the number two player with [40–50]*% by revenues (Vodafone having the remaining [60–70]*% and Eircom not being active in this sub-segment).¹⁴⁶
- (241) Table 21 sets out the market shares in the mobile broadband segment for 2013 by revenues and by subscribers.

¹⁴⁵ Form CO, paragraph 236.

¹⁴⁶ Form CO, Annex 6.4.1.5 (2).

Table 21: Mobile broadband – Market shares by subscribers and by revenues 2013

Operator	Subscribers 2013 Q4		Revenue 2013 Q1-Q4	
	Millions	Share (%)	m EUR	Share (%)
Three	[...]*	33%	[...]*	[30–40]*%
O2	[...]*	27%	[...]*	[20–30]*%
Combined	[...]*	60%	[...]*	[60–70]*%
Tesco Mobile	[...]*	0%	[...]*	[0–5]*%
Combined incl. Tesco Mobile	[...]*	60%	[...]*	[60–70]*%
Vodafone	[...]*	29%	[...]*	[20–30]*%
Eircom	[...]*	11%	[...]*	[10–20]*%
Other	[...]*	0%	[...]*	[0–10]*%
Total	[...]*	100%	[...]*	[90–100]*%

Source: Response to Questionnaire Q39, Question 6 [ID 3395]

- (242) According to the figures in Table 21, on the basis of 2013 figures, Three has [30–40]*% revenue share in the mobile broadband segment and 33% subscriber share. O2 has a market share of [20–30]*% by revenues and 27% by subscribers. Thus the merged entity will have a market share of [60–70]*% by revenues and 60% by subscribers. This is compared to Vodafone's market share which is [20–30]*% by revenues and 29% by subscribers and Eircom's market share which is [10–20]*% by revenues and 11% by subscribers. Therefore, the merged entity would be the market leader in the mobile broadband segment with Vodafone a distant second player.

Post-paid segment

- (243) Table 22 sets out the evolution of the market shares in the post-paid segment by revenues and Table 23 by subscribers.

Table 22: Post-paid – Evolution of market shares by revenues (2010-2012)

Operator	Revenues					
	2010		2011		2012	
	m EUR	Share (%)	m EUR	Share (%)	m EUR	Share (%)
Three	[...]*	[6–10]*%	[...]*	[5–10]*%	[...]*	[10–20]*%
O2	[...]*	[40–50]*%	[...]*	[30–40]*%	[...]*	[30–40]*%
Combined	[...]*	[40–50]*%	[...]*	[40–50]*%	[...]*	[40–50]*%
Tesco Mobile	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
Combined incl. Tesco Mobile	[...]*	[40–50]*%	[...]*	[40–50]*%	[...]*	[40–50]*%
Vodafone	[...]*	[40–50]*%	[...]*	[40–50]*%	[...]*	[40–50]*%
Eircom	[...]*	[5–10]*%	[...]*	[10–20]*%	[...]*	[10–20]*%
Other	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
Total	[...]*	[90–100]*%	[...]*	[90–100]*%	[...]*	[90–100]*%

Source: Form CO, Annex 6.4.1.5 (2)

Table 23: Post-paid – Evolution of market shares by subscribers (2010-2012)

Operator	Subscribers					
	2010		2011		2012	
	Millions	Share (%)	Millions	Share (%)	Millions	Share (%)
Three	[...]*	[10–20]*%	[...]*	[10–20]*%	[...]*	[10–20]*%
O2	[...]*	[30–40]*%	[...]*	[30–40]*%	[...]*	[30–40]*%
Combined	[...]*	[50–60]*%	[...]*	[50–60]*%	[...]*	[50–60]*%
Tesco Mobile	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
Combined incl. Tesco Mobile	[...]*	[50–60]*%	[...]*	[50–60]*%	[...]*	[50–60]*%
Vodafone	[...]*	[40–50]*%	[...]*	[30–40]*%	[...]*	[30–40]*%
Eircom	[...]*	[5–10]*%	[...]*	[10–20]*%	[...]*	[10–20]*%
Other	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
Total	[...]*	[90–100]*%	[...]*	[90–100]*%	[...]*	[90–100]*%

Source: Form CO, Annex 6.4.1.5 (2)

- (244) On the basis of 2012 figures, Three held a [10–20]*% market share by subscribers and [10–20]*% market share by revenues on the overall post-paid segment. Vodafone was the number one competitor, with a market share of [40–50]*% by revenues and [30–40]*% by subscribers. Finally, Eircom was the smallest competitor with a market share of [10–20]*% by revenues and [10–20]*% by subscribers.
- (245) Three has [...]* its market share in the post-paid segment from [5–10]*% in 2010 to [10–20]*% in 2012 in terms of revenues. In terms of subscribers, Three has also [...]* its market share from [10–20]*% to [10–20]*% between 2010 and 2012.

Eircom also grew in that period, albeit more modestly. O2 and Vodafone both lost shares of the segment.

- (246) The post-paid segment can be further sub-divided into post-paid voice (including voice/data), post-paid mobile broadband and M2M, as well as into post-paid private and post-paid business. On the basis of 2012 figures in post-paid voice the merged entity would become the market leader with [40–50]*% by revenues (with Vodafone and Eircom having [40–50]*% and [10–20]*% respectively). In post-paid mobile broadband, the merged entity would be the market leader with [60–70]*% by revenues (with Vodafone and Eircom having [20–30]*% and [5–10]*% respectively). In M2M (which is always post-paid), the merged entity would also be the market leader with [60–70]*% by revenues (with Vodafone having the remainder [60–70]*% and Eircom not being active on this sub-segment). In post-paid private, the merged entity would be the market leader with [40–50]*% by revenues (with Vodafone and Eircom having [30–40]*% and [10–20]*% respectively). Finally, in post-paid business (which amounts for the entire business segment, as there is no pre-paid business), the merged entity would be the market leader with [50–60]*% by revenues (with Vodafone and Eircom having [40–50]*% and [0–5]*% respectively).¹⁴⁷
- (247) Table 24 sets out the market shares in the post-paid segment for 2013 by revenues and by subscribers.

Table 24: Post-paid – Market shares by subscribers and by revenues 2013

Operator	Subscribers 2013 Q4		Revenue 2013 Q1-Q4	
	Millions	Share (%)	m EUR	Share (%)
Three	[...]*	[10–20]*%	[...]*	[10–20]*%
O2	[...]*	[30–40]*%	[...]*	[30–40]*%
Combined	[...]*	[40–50]*%	[...]*	[40–50]*%
Tesco Mobile	[...]*	[0–5]*%	[...]*	[0–5]*%
Combined incl. Tesco Mobile	[...]*	[40–50]*%	[...]*	[40–50]*%
Vodafone	[...]*	[30–40]*%	[...]*	[30–40]*%
Eircom	[...]*	[10–20]*%	[...]*	[10–20]*%
Other	[...]*	[0–5]*%	[...]*	[0–5]*%
Total	[...]*	[90–100]*%	[...]*	[90–100]*%

Source: Response to Questionnaire Q39, Question 6 [ID 3395]

- (248) According to the figures in Table 24, on the basis of 2013 figures, Three has [10–20]*% market share in the post-paid segment both by revenues and by subscribers.

¹⁴⁷ Form CO, Annex 6.4.1.5 (2).

O2 (including Tesco) has a market share of [30–40]*% by revenues and [30–40]*% by subscribers. Thus the merged entity will have a market share of [40–50]*% by revenues and [40–50]*% by subscribers. This is compared to Vodafone's market share which is [30–40]*% by revenues and [30–40]*% by subscribers and Eircom's market share which is [10–20]*% both by revenues and by subscribers. Post-merger, Three would be the leader in this segment.

Pre-paid segment

- (249) Table 25 sets out the evolution of the market shares in the pre-paid segment by revenues and Table 26 by subscribers.

Table 25: Pre-paid – Evolution of market shares by revenues (2010-2012)

Operator	Revenues					
	2010		2011		2012	
	m EUR	Share (%)	m EUR	Share (%)	m EUR	Share (%)
Three	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
O2	[...]*	[20–30]*%	[...]*	[20–30]*%	[...]*	[20–30]*%
Combined	[...]*	[20–30]*%	[...]*	[20–30]*%	[...]*	[20–30]*%
Tesco Mobile	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
Combined incl. Tesco Mobile	[...]*	[30–40]*%	[...]*	[20–30]*%	[...]*	[20–30]*%
Vodafone	[...]*	[40–50]*%	[...]*	[40–50]*%	[...]*	[40–50]*%
Eircom	[...]*	[20–30]*%	[...]*	[20–30]*%	[...]*	[20–30]*%
Other	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
Total	[...]*	[90–100]*%	[...]*	[90–100]*%	[...]*	[90–100]*%

Source: Form CO, Annex 6.4.1.5 (2)

Table 26: Pre-paid – Evolution of market shares by subscribers (2010-2012)

Operator	Subscribers					
	2010		2011		2012	
	Millions	Share (%)	Millions	Share (%)	Millions	Share (%)
Three	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
O2	[...]*	[20–30]*%	[...]*	[20–30]*%	[...]*	[20–30]*%
Combined	[...]*	[30–40]*%	[...]*	[20–30]*%	[...]*	[20–30]*%
Tesco Mobile	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
Combined incl. Tesco Mobile	[...]*	[30–40]*%	[...]*	[30–40]*%	[...]*	[30–40]*%
Vodafone	[...]*	[40–50]*%	[...]*	[40–50]*%	[...]*	[40–50]*%
Eircom	[...]*	[20–30]*%	[...]*	[20–30]*%	[...]*	[20–30]*%
Other	[...]*	[0–5]*%	[...]*	[0–5]*%	[...]*	[0–5]*%
Total	[...]*	[90–100]*%	[...]*	[90–100]*%	[...]*	[90–100]*%

Source: Form CO, Annex 6.4.1.5 (2)

- (250) On the basis of 2012 data, the merged entity would be a clear number two player in the pre-paid segment behind Vodafone, with a revenue share of [20–30]*% and a subscriber share of [30–40]*%. Three has been expanding its subscriber base, increasing its market share from [0–5]*% in 2010 to [0–5]*% in 2012 by revenues and from [0–5]*% to [0–5]*% by subscribers.
- (251) The pre-paid segment can be further sub-divided into pre-paid voice (including voice/data) and pre-paid mobile broadband. As there is no pre-paid business segment, the entire pre-paid segment is pre-paid private. On the basis of 2012 data, in pre-paid voice the merged entity would become the second largest player with [20–30]*% by revenues (with Vodafone and Eircom having [50–60]*% and [20–30]*% respectively). In pre-paid mobile broadband, the merged entity would have [50–60]*% by revenues (with Vodafone and Eircom having [20–30]*% and [20–30]*% respectively). The market shares for pre-paid private equal the market shares of the overall pre-paid segment.¹⁴⁸
- (252) Table 27 sets out the market shares in the pre-paid segment for 2013 by revenues and by subscribers.

Table 27: Pre-paid – Market shares by subscribers and by revenues 2013

Operator	Subscribers 2013 Q4		Revenue 2013 Q1-Q4	
	Millions	Share (%)	m EUR	Share (%)
Three	[...]*	[5–10]*%	[...]*	[0–5]*%
O2	[...]*	[20–30]*%	[...]*	[10–20]*%
Combined	[...]*	[20–30]*%	[...]*	[20–30]*%
Tesco Mobile	[...]*	[5–10]*%	[...]*	[0–5]*%
Combined incl. Tesco Mobile	[...]*	[30–40]*%	[...]*	[20–30]*%
Vodafone	[...]*	[40–50]*%	[...]*	[50–60]*%
Eircom	[...]*	[20–30]*%	[...]*	[10–20]*%
Other	[...]*	[0–5]*%	[...]*	[0–5]*%
Total	[...]*	[90–100]*%	[...]*	[90–100]*%

Source: Response to Questionnaire Q39, Question 6 [ID 3395]

- (253) According to Table 27, on the basis of 2013 figures, Three has a [0–5]*% market share in the pre-paid segment by revenues and a [5–10]*% share by subscribers. O2 (including Tesco) has a market share of [20–30]*% by revenues and [20–30]*% by subscribers. Thus the merged entity will have a market share of [20–30]*% by revenues and [30–40]*% by subscribers. This is compared to Vodafone's market share which is [50–60]*% by revenues and [40–50]*% by subscribers and Eircom's market share which is [10–20]*% by revenues and [20–30]*% by subscribers.

Business segment

- (254) Table 28 sets out the evolution of the market in the business segment by revenues and Table 29 by subscribers.

¹⁴⁸ Form CO, Annex 6.4.1.5 (2).

Table 28: Business – Evolution of market shares by revenues

Operator	Revenues					
	2010		2011		2012	
	m EUR	Share (%)	m EUR	Share (%)	m EUR	Share (%)
Three	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
O2	[...]*	[40–50]**%	[...]*	[40–50]**%	[...]*	[40–50]**%
Combined	[...]*	[40–50]**%	[...]*	[40–50]**%	[...]*	[50–60]**%
Tesco Mobile	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
Combined incl. Tesco Mobile	[...]*	[40–50]**%	[...]*	[40–50]**%	[...]*	[50–60]**%
Vodafone	[...]*	[50–60]**%	[...]*	[40–50]**%	[...]*	[40–50]**%
Eircom	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
Other	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
Total	[...]*	[90–100]**%	[...]*	[90–100]**%	[...]*	[90–100]**%

Source: Form CO, Annex 6.4.1.5 (2)

Table 29: Business – Evolution of market shares by subscribers

Operator	Subscribers					
	2010		2011		2012	
	Millions	Share (%)	Millions	Share (%)	Millions	Share (%)
Three	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
O2	[...]*	[40–50]**%	[...]*	[50–60]**%	[...]*	[50–60]**%
Combined	[...]*	[40–50]**%	[...]*	[50–60]**%	[...]*	[50–60]**%
Tesco Mobile	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
Combined incl. Tesco Mobile	[...]*	[40–50]**%	[...]*	[50–60]**%	[...]*	[50–60]**%
Vodafone	[...]*	[50–60]**%	[...]*	[40–50]**%	[...]*	[40–50]**%
Eircom	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
Other	[...]*	[0–5]**%	[...]*	[0–5]**%	[...]*	[0–5]**%
Total	[...]*	[90–100]**%	[...]*	[90–100]**%	[...]*	[90–100]**%

Source: Form CO, Annex 6.4.1.5 (2)

- (255) On the basis of 2012 data, O2 had a leading position in the business segment with a market share of [40–50]**% by revenues (on par with Vodafone which also has a [40–50]**% market share) and [50–60]**% by subscribers (followed by Vodafone with [40–50]**%). Three has only recently expanded its activities into the business segment. It only had [0–5]**% by revenues and subscribers. However, Three is growing rapidly, having trebled its market share from [0–5]**% in 2010 to [0–5]**% in 2012.
- (256) The business segment can be sub-divided into business voice (including voice/data) and business mobile broadband. As there is no pre-paid business sub-segment, the entire business segment is post-paid business. On the basis of 2012 data, in business voice the merged entity would become the largest player with [50–60]**% by revenues (with Vodafone and Eircom having [40–50]**% and Eircom having [0–

5]*% respectively). In business mobile broadband (where Three is currently not active), the merged entity would be the number two with [40–50]*% by revenues (with Vodafone having the remaining [60–70]*% and Eircom not being active in that sub-segment). The market shares for post-paid business equal the market shares of the overall business segment.¹⁴⁹

- (257) Table 30 sets out the market shares in the business segment for 2013 by revenues and by subscribers.

Table 30: Business - Market shares by subscribers and by revenues 2013

Operator	Subscribers 2013 Q4		Revenue 2013 Q1-Q4	
	Millions	Share (%)	m EUR	Share (%)
Three	[...]*	[0–5]*%	[...]*	[0–5]*%
O2	[...]*	[50–60]*%	[...]*	[40–50]*%
Combined	[...]*	[50–60]*%	[...]*	[50–60]*%
Tesco Mobile	[...]*	[0–5]*%	[...]*	[0–5]*%
Combined incl. Tesco Mobile	[...]*	[50–60]*%	[...]*	[50–60]*%
Vodafone	[...]*	[40–50]*%	[...]*	[40–50]*%
Eircom	[...]*	[0–5]*%	[...]*	[0–5]*%
Other	[...]*	[0–5]*%	[...]*	[0–5]*%
Total	[...]*	[90–100]*%	[...]*	[90–100]*%

Source: Response to Questionnaire Q39, Question 6 [ID 3395]

- (258) According to the figures in Table 30, on the basis of 2013 figures, Three has [0–5]*% market share in the business segment by revenues and a [0–5]*% share by subscribers. O2 has a market share of [40–50]*% by revenues and [50–60]*% by subscribers. Tesco is not active on this segment. Thus the merged entity would have a market share of [50–60]*% by revenues and [50–60]*% by subscribers. This is compared to Vodafone's market share which is [40–50]*% by revenues and [40–50]*% by subscribers and Eircom's market share which is [0–5]*% both by revenues and by subscribers.

7.3.2. Wholesale market for access and call origination

- (259) Based on the Notifying Parties estimates, O2 (which hosts Tesco Mobile and Lycamobile) accounts for approximately [80–90]*% of wholesale revenues (such as network access fees) in Ireland, Vodafone (which hosts Postfone) accounts for approximately [20–30]*% and Three (which hosts Blueface) has a [...]* share of revenues.¹⁵⁰

¹⁴⁹ Form CO, Annex 6.4.1.5 (2).

¹⁵⁰ Form CO, paragraph 596.

7.4. **Limited likelihood of sufficient entry by MNOs and/or MVNOs**

7.4.1. *Introduction*

(260) A merger is unlikely to pose any significant anti-competitive risk if entering a market is sufficiently easy. For entry to be considered a sufficient competitive constraint on the Parties, it must be likely, timely and sufficient to deter or defeat any potential anti-competitive effects of the merger.¹⁵¹

(261) In this case, entry of viable MNOs could dispel the competition concerns arising from the significant impediment to effective competition in relation to both the affected retail market and wholesale market, while entry of MVNOs could have a countervailing effect on the retail market. The Commission assesses the likelihood of entry by a new MNO (Section 7.4.2) and the likelihood of entry by a new MVNO and whether such entry would be sufficient to deter or defeat the potential anti-competitive effects of the merger (Section 7.4.3).

7.4.2. *MNO entry*

(262) In relation to MNO entry, there appear to be substantial barriers to entry in Ireland. The following steps would be required for an MNO to commence operations:¹⁵²

- (a) obtaining spectrum rights in order to establish a national mobile network on a commercially viable basis;
- (b) complying with all regulatory requirements for setting up a mobile network;
- (c) building an initial greenfield network with national or near-to national coverage: national (or near-to national) coverage is essential for viability as customers will not subscribe to a network which cannot reach substantially all other mobile subscribers in Ireland (a greenfield network can be achieved through an own build or in combination with network sharing or national roaming);
- (d) establishing a backbone, core network and IT environment for the network;
- (e) establishing marketing, sales, customer service and support structures and the investment to acquire customers;
- (f) negotiating and entering into national interconnection agreements with all Irish operators, national SMS and MMS interworking agreements, agreements with at least one IP (Internet Protocol) upstream provider, GRX (GPRS (General packet radio service) Roaming Exchange) provider and voice provider for calls to foreign destinations;
- (g) implementing interfaces for mobile number portability ("MNP"), legal interception, data retention and information services; and
- (h) entering into international roaming agreements, international SMS interworking agreements and international MMS interworking agreements in order to be able to provide international services.

¹⁵¹ Horizontal Merger Guidelines, paragraph 68.

¹⁵² Form CO, paragraph 617.

- (263) Spectrum is unlikely to become available in time to ensure timely entry, which according to the Horizontal Merger Guidelines is normally two years.¹⁵³ Spectrum in the bands that are used for retail mobile telecommunications have been assigned until 2030 (800 MHz, 900 MHz and 1800 MHz) and 2022 (2100 MHz). In short, no spectrum will be auctioned for use in the near future. Spectrum in the 2600 MHz band is expected to become available for potential use by mobile network operators but not before April 2016. ComReg has proposed that spectrum in this band be made available by a technology neutral auction.
- (264) Even if the 2600 MHz spectrum were to become available in April 2016, the new entrant MNO would still not be able to roll-out its network immediately. Furthermore, the 2600 MHz spectrum band has poor propagation properties compared to lower frequency bands and an MNO, relying solely on this band for its deployment, would be significantly handicapped when aiming at deploying a nationwide network.
- (265) In addition, even if the new MNO were to rely on a national roaming agreement with an established MNO in order to achieve national coverage, it would still have an obligation to roll-out its network to achieve a percentage of population coverage on the basis of its spectrum licences.
- (266) Given the already high penetration rate, a new market entrant would have to grow a sufficiently large subscriber base almost exclusively based on customer churn from existing operators. This means that although it would need to incur significant upfront investment costs to build a new network, it could recuperate those investments only more slowly.
- (267) The costs of MNO market entry are significant. A MNO would need to build an entirely new national network, including a backbone, a core network and the IT environment. In addition, it would need to establish from scratch the necessary marketing, sales, customer service and support structures and invest heavily in customer acquisition.
- (268) Both the Notifying Party and the majority of respondents to the market investigation have indicated that it is unlikely that a new player will enter the market as an MNO in the next two to three years because of the underlying economic situation, the mobile penetration rate and market scale.
- (269) In conclusion, the Commission's view is that it is unlikely that a new player will enter the market as an MNO in the next two to three years.

7.4.3. *MVNO entry*

- (270) MVNO entry seems easier, as the new entrant does not need to build its own network but relies on other MNOs for access. In fact, UPC, a cable provider, is currently considered to be a likely entrant by the market players, including the Parties.
- (271) Nevertheless, as explained in Section 7.1, the Commission has concerns that post-merger MVNOs will find it more difficult to enter the market, given the reduction in the number of MVNO hosts and decreased incentives of the merged entity to grant wholesale access.

¹⁵³ Horizontal Merger Guidelines, paragraph 74.

- (272) According to the market investigation responses,¹⁵⁴ for many MVNOs, negotiating an agreement with an MNO may often be a key obstacle for launching operations.¹⁵⁵ Furthermore, if the MVNOs do not utilise a low cost MVNE, they may be dissuaded by the large capital / investment costs associated with extensive platform integration. The availability of an MVNE to lower the upfront capital cost may have an effect in encouraging potential MVNOs to launch in Ireland.
- (273) As already noted in Section 5.7, the MVNOs currently active on the Irish market have a fairly weak market position. The largest MVNO is Tesco Mobile, which has a market share of 2% by revenues and 4% by subscribers on the basis of 2013 data. However, Tesco Mobile is a joint venture with O2 and therefore cannot be considered as independent from O2. In any event, with a market share of 2% by revenues, the Commission's assessment would not change, even if Tesco Mobile were considered as a competitor independent from O2.
- (274) On this basis, previous entry by MVNOs has demonstrated that it is difficult for MVNOs to obtain a sufficiently high market share and affect the behaviour of other MNOs. Indeed, since its entry in 2007, Tesco Mobile has been able to gain only a limited market share. Another MVNO, Just Mobile, exited the market after less than a year of operations. [...]*
- (275) In conclusion, the Commission's view is that further MVNO entry, even if it were to occur, would not in itself be sufficient to negate the adverse effects of eliminating one of the four MNOs from the market.

7.5. The merger will remove an important competitive force from the retail mobile telecommunications services market

7.5.1. Introduction

- (276) In this section, the Commission assesses whether Three is currently an important competitive force on the Irish retail mobile telecommunications market. In particular, the Commission examines the competitive pressure exerted by Three on the market, including its market strength, growth strategy and the reaction from competitors in the overall retail mobile telecommunications services market (Section 7.5.2). The Commission also conducts a tariff comparison in Section 7.5.2.3 and assesses the Notifying Party's argument that the tariffs in Ireland do not support the conclusion that Three is an important competitive force. In Section 7.5.2.4, the Commission explores Three's brand strategy and assesses the arguments of the Notifying Party that [...] and that this makes it impossible for Three to be considered an important competitive force. The Commission concludes that Three is an important competitive force in the overall retail mobile telecommunications services market.
- (277) Following the analysis on the overall retail market, the Commission examines Three's importance in individual segments, in particular the mobile broadband segment (Section 7.5.3.2), the post-paid segment (Section 7.5.3.3) and the pre-paid

¹⁵⁴ Blueface, response to Questionnaire Q9 to MVNOs of 1 October 2013, question 38 [ID 715]; Digiweb, response to Questionnaire Q9 to MVNOs of 1 October 2013, question 38 [ID 718].

¹⁵⁵ As noted in Section 7.7.3 the Commission disagrees with Vodafone's argument that the wholesale access to MNO's networks would be provided at competitive terms as long as there is more than one possible host. The Commission hence also disagrees with Vodafone's argument that because of competitive wholesale access entry barriers for MVNOs at the retail level would be low.

segment (Section 7.5.3.4). The Commission concludes that Three is an important competitive force in each of these three segments. Finally, the Commission concludes its segment analysis by examining the business segment (Section 7.5.3.5) and concludes that Three is not yet an important competitive force in the business segment.

(278) The Commission then assesses Three's and O2's likely behaviour in the absence of the merger (Section 7.5.4). The Commission next examines the merged entity's incentives to compete post-merger (Section 7.5.5). In addition, the Commission assesses the reaction of competitors post-merger (Section 7.5.6). Finally, the Commission conducts a quantitative assessment of the effects of the merger (Section 7.5.7). Section 7.5.8 sets out the Commission's conclusion in relation to this theory of harm.

7.5.2. *Three is currently an important competitive force on the retail mobile telecommunications services market*

7.5.2.1. Introduction and overview of evidence

The Commission's analysis in the SO

(279) Since its entry on the market, Three has competed vigorously in order to grow its customer base. Three's competitive strategy appears to be mainly focused on a three-prong strategy, namely (i) unique data offers including All You Can Eat ("AYCE") data,¹⁵⁶ (ii) attractive or unlimited minutes and text bundle allowances, and (iii) market-leading / free device pricing and competitive tariff plans.¹⁵⁷

(280) Three's role as an important competitive force on the Irish retail mobile telecommunications services market is based on a number of indicators, including:

- (a) internal Three and O2 documents, as well as competitor documents and submissions;
- (b) independent surveys commissioned by the Parties; and
- (c) Three's attractive and competitive tariffs as shown by the Commission's own tariff comparisons, ComReg's data comparisons and Three's own internal documents.

Notifying Party's arguments in the Response to the SO

(281) In the Response to the SO, the Notifying Party claims that Three is not an important competitive force, arguing that:

- (a) Three does not "stand out" from its competitors in terms of its impact on competition, in that it plays a unique role on the market which is indispensable for the preservation of effective competition.¹⁵⁸ All competitors contribute to the strong price competition in Ireland;

¹⁵⁶ The Commission notes that AYCE offers are almost always subject to a "fair use limitation" and are therefore not truly unlimited.

¹⁵⁷ For example, Three, Bill Pay Review 2012-2014, with regard to post-paid, [Ref: 000833611], [ID: 1299-9545]; Three, Ireland Business Update, 11 July 2011, Slides 43, [Ref: 001188360], [ID 1300-16627] and Three, KPI's, 5 June 2012 with regard to pre-paid, [Ref: 000801804], [ID 1299-7229].

¹⁵⁸ Response to the SO, paragraph 82.

- (b) the SO bases its qualification of Three as an important competitive force solely on selective and misleading quotes from the Parties' internal documents.¹⁵⁹ No value can be attached to the qualification of Three as an aggressive or disruptive player in party or competitor documents if other MNOs at times are also perceived and qualified in a similar way as Three;
- (c) Three's own statements in its internal documents on the competitive nature of its offers have limited probative value and should be regarded as mere hyperbolic language or language containing market jargon with a view to selling Three's commercial performance to higher management or to Three's shareholders; and
- (d) the Commission's analysis is not based on "objective tariff comparisons":¹⁶⁰
 - (i) The Notifying Party argues that the Commission should have carried out an objective tariff comparison to verify whether Three typically offers the most attractive prices on the market.
 - (ii) In its Response to the SO, the Notifying Party has set out its own "objective price comparisons" for each segment of the market. According to the Notifying Party, these price comparisons show that for each segment, [...]*.¹⁶¹
 - (iii) The Notifying Party has also reviewed series of slides with tariff comparisons [...]*. In its analysis, Three counts how many times Three is mentioned as having a "market leading" offer as against its competitors.¹⁶²

The Commission's assessment

- (282) The Commission agrees with the Notifying Party that the Commission's assessment should be based on objective facts. However, the Commission disagrees with the Notifying Party's arguments that the Commission's assessment is flawed.
- (283) First, for the reasons set out in recitals (206)-(208), the Commission does not agree that it must show that Three is the most important competitive force in the market in order to be considered an important competitive force for the purposes of the Merger Regulation. The Commission does not contest that players other than Three may also be aggressive and potentially disruptive in relation to the retail mobile telecommunications services market in Ireland as a whole or in specific segments of it. In a concentrated market, such as the Irish retail mobile telecommunications services market, all MNOs contribute to competition to a certain degree and are therefore arguably important. However, the fact that other MNOs are also competing aggressively on the market does not invalidate Three's role as an important competitive force.
- (284) Second, the Commission considers that internal Three and O2 documents, as well as competitor documents, constitute a valid source of evidence with regard to Three's importance for competition. The Commission is not relying on internal documents

¹⁵⁹ Response to the SO, paragraph 96.

¹⁶⁰ Response to the SO, section 1.3.1.

¹⁶¹ Response to the SO, paragraph 131.

¹⁶² Response to the SO, paragraphs 132 to 136.

selectively. It is relying on the documents that show Three's importance, without claiming that Three is the only important competitive force in each segment.

- (285) Third, it is standard practice to rely upon internal documents of the Parties in merger case proceedings, in particular when other objective facts, such as pricing data, independent studies commissioned by the Parties and competitor documents, corroborate the veracity of such documents. On this basis, the Commission considers that Three's internal documents are a credible and valid source of evidence. Moreover, Three's internal documents frequently contain concrete comparisons between Three's own and its competitors' tariffs that confirm Three's own statements of having the "*best*", "*leading*", "*competitive*" etc. offers.¹⁶³
- (286) The Commission's review of internal documents has also taken into account the nature of those documents. The Commission relies on a variety of different documents: budget reports, board presentations, internal presentations, email exchanges etc. and has considered the purpose for which each document was drafted in its assessment.
- (287) The Commission notes that a number of internal documents are strategic documents, prepared for the board or for other strategic decision making groups within Three or Hutchison prior to notification of the merger to the Commission. These are the type of documents that in general are prepared for the purposes of business and strategic decisions of companies. The Commission considers that the nature of such documents, prepared for the purpose of decision making by a company, is such that they have probative value. They can therefore be considered by the Commission when examining that company's strategic position.
- (288) Three's statements are also corroborated by O2 and other contemporaneous documents and submissions from competitors, as well as independent studies and analyses commissioned by the Parties. The Commission therefore considers that it has taken into account the proper context in which the internal documents were drafted.
- (289) Fourth, in relation to the Notifying Party's claim that the Commission has not carried out an objective tariff comparison, it should be noted that a tariff comparison is not a prerequisite for finding that a particular firm is an important competitive force. In any event, in order to address the Notifying Party's criticism, the Commission has also carried out its own objective tariff comparison. This is set out in Section 7.5.2.3.

¹⁶³ For example: Three, Bill Pay, [Ref: 000713158], [ID 1304-4875]; Three email "The best things in life are free on Three" of 4 April 2012 on Three's offer of iPhone 4S – 16 GB, [Ref:001234088], [ID 1300-21710]; Three presentation on "ComReg update Q1 2012", reporting on 1 of every 2 post-paid handsets sold being purchased from Three in Q1 to Q2 2012, [Ref: 000796057], [ID 1299-6913]; See also Three presentation on "ComReg update Q1 2012", reporting that Three's current bill pay proposition leads the market with best in the market iPhone4 device price, [Ref: 000796057], [ID 1299-6913]; Three "Slide request 28th for 29th", date unknown, probably 2011, referring to "best device price in the market" for iPhone 4 and Samsung Galaxy S III, [Ref: 000800137], [ID 1299-7114]; Three Ireland "Market/Competitor Update", [...]*, 18 May 2012, according to which Three is the only operator offering iPhone4S and Samsung Galaxy SIII for free with AYCE data, [Ref: 000800338], [ID 1299-7135]; Three, KPI's, undated, on Three offering the lowest Samsung SIII and iPhone pricing on a 24 month contract, [Ref: 000801804], [ID 1299-7229]; Three, PROMS pack, April 2013, [Ref: 000788819], [ID 1299-6483]; Three, Pricing overview, 3 December 2012, [Ref: 001107642], [ID 1300-22999]; Three, presentation unnamed and undated, stating that Three's SIII proposition leads the market, [Ref: 000751244], [ID 1299-6319].

(290) Moreover, the Commission has reviewed in detail the "objective tariff comparison" conducted by the Notifying Party for each segment. This is set out in detail in the analysis of each market segment in Section 7.5.3.2 for mobile broadband, Section 7.5.3.3 for post-paid and Section 7.5.3.4 for pre-paid.

(291) Finally, the Commission has examined in detail the analysis relied upon by the Notifying Party based on Eircom data.

Conclusion

(292) The Commission considers that the factual findings it has reached, as set out in this Decision, are supported by a substantial body of consistent and reliable evidence.

7.5.2.2. Three exerts an important competitive constraint on O2 and the remaining players

The Commission's analysis in the SO

(293) In the SO, the Commission considered that the evidence on file shows the important competitive pressure exerted by Three on the retail mobile telecommunications services market. With regard to Three's own statements on the competitive nature of its offers and the important role that Three currently fulfils on the market, the Commission has relied on the documents and statements discussed in recitals (294) to (296).

(294) First, Three's own publicly stated views of itself underline Three's role as an important competitor and innovative player on the market. For example:

(a) Three's own website notes that since its launch in 2005: "*we shook up a stale and uncompetitive market with our great value plans ... and today, the Irish mobile market is a very different place to be thanks to Three. We have a track record of firsts for consumers ... we were first to launch mobile broadband, first to introduce innovative price plans like FlexiFix and of course, we brought you "All You Can Eat Data" ... Three's challenger brand credentials are what make us the fastest growing network in Ireland...*".¹⁶⁴

(b) The fact that Three is making a difference on the Irish market is also illustrated in a speech given by Three's CEO, Robert Finnegan in November 2012, in which he stated that: "*O2, Eircom, meteor, Vodafone, were all basking in glory, ripping off customers with high prices ... Along come three....we start to bring serious competition to the market, and the fat cat operations start to tumble The fat cats that had too much cream, failed to innovate, failed to understand customer needs and failed to recognise the threat from the new kids on the block and the changes in the industry that were happening....*".¹⁶⁵

¹⁶⁴ Source: <http://www.three.ie/explore/about-three/>, available on 29 January 2014, [ID 2343].

¹⁶⁵ Robert Finnegan, Three's CEO on the Waterfords Chamber of Commerce annual dinner, 16 November 2012, [Ref: 001226129], [ID 1300-20406]. See also Three internal email of 3 January 2013 by [...]*, on a Three press-release referring to Three's "best value" and many firsts in pre-paid and post-paid, [Ref: 000770407], [ID 1299-10481]; Three on "Three launches a new aggressive advertising campaign targeting O2 and Vodafone customers" in Irish Independent, 19 February 2013, referring to market leading offers in pre- and post-paid [Ref: 000780138], [ID 1299-5862]; See also Three "Briefing Note. CIMA Network News Magazine", 7 March 2012, referring to Three offering innovative price plans and value for money, leading the smartphone revolution with its ground-breaking AYCE data plans and Ireland's largest high-speed network [Ref: 001180019], [ID 1300-31704]; Three "Irish Time. Business

- (295) Second, strategic management documents show that Three has adopted a strategy of applying continued competitive pressure on the overall retail mobile telecommunications services market over the last three years. For example:
- (a) In its yearly 2011 Budget Plan,¹⁶⁶ Three states that: [...]*.
 - (b) Similarly, Three's 2012 Budget Plan¹⁶⁷ refers to [...]*.¹⁶⁸
 - (c) Three's 2013 Budget Plan¹⁶⁹ shows [...]*.
- (296) Third, Three's competitive behaviour and its impact on competitors and the market are discussed in a number of other Three internal documents.¹⁷⁰ For example:
- (a) a Three presentation of April 2013 refers to [...]*;¹⁷¹
 - (b) a Three presentation of May 2013 refers to Three being the only operator to offer unlimited (AYCE) data on almost all voice plans;¹⁷²
 - (c) a Three presentation of June 2013 shows [...]*;¹⁷³
 - (d) a Three presentation of 2012 shows how Three's [...]*;¹⁷⁴
 - (e) a Three presentation of January 2013 [...]*.¹⁷⁵
- (297) As is set out in greater detail in recitals (280) and (288), Three's own statements are backed up by O2 and other competitor documents and submissions, as well independent surveys and analyses commissioned by the Parties.

The Notifying Party's arguments in the Response to the SO

- (298) In the Response to the SO, the Notifying Party claims that Three is not an important competitive force. The Notifying Party makes the following arguments.

interview to feature 5 April", 26 March 2013, referring to Three continuing to drive market share by offering value and driving innovation [Ref: 001162824], [1300-30236].

¹⁶⁶ Three, Ireland 2011 Budget Presentation, 25 November 2010, slide 9, [ID 1055-135]. See also Three, Minutes of a meeting of the Directors of the company, 6 December 2010, referring to [...]*, [Ref: 000869103], [ID 1302-21070].

¹⁶⁷ Three, Ireland Budget 2012 update, 22 November 2011, [Ref: 000915974], [ID 1302-24680].

¹⁶⁸ Three, Minutes of a meeting of the Directors of the company, 27 January 2012, [ID 1055-107].

¹⁶⁹ Three, Budget presentation 2013, 27 November 2013, [ID 1055-137].

¹⁷⁰ For example also: Three, Pricing Overview, 15 October 2012, referring to [...]* [Ref: 000933763], [ID 1302-25967]; Three, Bill Pay Review 2012-2014, referring to [...]* [Ref: 000833611], [ID 1299-9545]; Three, Proposal for Galaxy S3 Advert, 28 May 2012, referring to [...]* [Ref: 000753506], [ID 1299-7997]; Three, Three Ireland Sales Update, April 2013, referring also to [...]* [Ref: 000804577], [ID 1299-7484].

¹⁷¹ Three, Ireland Business Update, 19 April 2013, referring also to [...]* [Ref: 001168897], [ID 1300-30742].

¹⁷² Three, Presentation to [...]*, May 2013, referring also to being the largest MBB provider in Ireland and being the first to offer smartphones at incredibly low prices, [Ref: 000374138], [ID 1053-8425].

¹⁷³ Three, [...]*, Weekly Sales & Commercial slides, 18 June 2013, referring also to [...]*, [Ref: 000014907], [ID 1049-2382].

¹⁷⁴ Three, presentation unnamed and undated, referring also to Three's SIII proposition leading the market, Three's non-high-end handset offers leading the market; Three's [...]*, increasing competition in top-up value in pre-paid, [Ref: 000751244], [ID 1299-6319].

¹⁷⁵ Three, Ireland Business update, 29 January 2013, slide 31 and 45, referring also to pre-paid growth continuing to build on 2012 momentum, [Ref: 000466411], [ID 1051-29782].

- (a) The vast majority of customers do not consider Three as particularly aggressive or innovative. [...]*
- (b) Competitors often do not react to Three's initiatives. [...]*
- (c) The Commission has failed to establish that Three's offers are significantly better than those of its competitors in the majority of cases. The Notifying Party claims that the Commission should have carried out an objective tariff comparison to verify that this is the case. [...]*. The Notifying Party also invokes its own "*objective price comparisons*" per segment to show that [...]*
- (d) Three's competitive force is curtailed by [...]*. This has had a negative impact on Three's ability to grow its customer base. If Three were an important competitive force, it would not have needed nine years to achieve an unsustainably small market share of 10%.
- (e) Three's persistent financial losses affect its ability to invest and consequently its competitiveness.

The Commission's assessment

- (299) The Commission disagrees with the Notifying Party's arguments.
- (300) First, it is not entirely clear how the results from these customer surveys have been calculated.¹⁷⁶ The Commission therefore considers that the surveys may not be entirely representative of the views prevailing on the market because of the lack of clarity about the exact methodology of the survey. In addition, the survey seems to be based on a limited number of respondents (600) in an overall market of 5.5 million subscribers. These facts, coupled with the fact that the results of the customer surveys are inconsistent with the results of the Commission's investigations, lead to the conclusion that the customer surveys may not reflect the views prevailing on the market. [...]*
- (301) In addition, even if the Commission were to take the surveys at face value, they do not invalidate the Commission's view that Three is an important competitive force. For example, even though ranked after Eircom, Vodafone and O2 in the categories "[...]*", "[...]*" and "[...]*", Three ranks closely behind its substantially bigger competitors. In other words, the surveys, to the extent that they can be considered reliable, do not appear to contradict that Three's influence reaches beyond what its 10% market share would suggest.
- (302) Second, the Commission does not consider that competitors would have to fully replicate Three's offers or respond more often to Three's competitive actions than to those of its competitors in order for Three to be considered an important competitive force. Internal Three and O2 documents, as well as competitor documents and submissions, show that other MNOs have felt the impact of Three's offers and have

¹⁷⁶ For example, there is a scale of 0 to 70 but it is not clear whether this scale represents the number of customers who ranked a certain service provider as the best within each category (if it does, the numbers of customer does not add up to the indicated total of roughly 600 participants) or if it relates to the percentage of customers having recommended a certain mobile operator (if it does, the percentage would exceed 100%).

responded to them, for example by introducing increased data allowances in response to Three's AYCE data offers.¹⁷⁷

- (303) Third, and as previously mentioned in recital (283), the Commission does not consider that it needs to show that Three's offers are significantly better than those of its competitors in order for Three to be considered an important competitive force. It is sufficient that Three, through its offers, exerts an important competitive constraint on the market. However, in order to show the competitiveness of Three's tariffs and to address the Notifying Party's claims, the Commission carries out an objective tariff comparison, set out in Section 7.5.2.3.
- (304) Moreover, although likely underestimating the competitive strength of Three and only focusing on "market leading" offers, the Commission considers that the Eircom "*Consumer Monthly Pricing Overview*" supports the conclusion that that Three is an important competitive force on the market. This analysis is set out in Section 7.5.2.3.
- (305) The Commission also considers that the "objective tariff comparison" conducted by the Notifying Party for each segment, as set out in Section 7.5.3.2 for mobile broadband, Section 7.5.3.3 for post-paid and Section 7.5.3.4 for pre-paid, further suggests that Three is an important competitive force.
- (306) Fourth, the Commission does not contest that Three's brand image may be different from O2's and Vodafone's and that price and network quality are two of many parameters on which MNOs can compete. However, the Commission considers that [...] has not prevented Three from contributing to competition to an important degree. This analysis is set out in Section 7.5.2.4.
- (307) Finally, the Commission considers that Three's financial situation has not prevented Three from exerting an important competitive constraint on the retail mobile telecommunications services market. Three's financial situation is dealt with in more detail in Section 7.5.4.2.
- (308) The Commission concludes that Three currently exerts an important competitive constraint on O2. This constraint will be lost post-merger. In this respect, the Commission relies on the elements set out in recitals (309) to (313), including diversion ratios, internal party documents and external studies and analysis commissioned by the Parties.
- (309) First, the quantitative implications derived from the applicable diversion ratios show that the level of competition between the Parties is significant. As set out in more detail in Section 7.5.7.4, the Commission, through its quantitative analysis, has shown that the merger will lead to significant price increase.

¹⁷⁷ See for example Three, Bill Pay Review 2012-2014, referring to all players playing in the EUR 40 monthly allowance space, having moved to a 24 month contract and having incorporated data into smartphone plans because of Three, [Ref: 000833611], [ID 1299-9545]; Three, Bill Pay, referring to other operators now having a free iPhone message like Three, [000751244], Eircom's response to Q8, 9 October 2013, stating that when Three launched AYCE data on all tariff plans, Eircom's next portfolio update included a direct response in the form of increased data allowances. [ID 1067]; [...]*; O2, "Christmas 2013. Unlimited Data, The next step for O2 prepay?", [Ref: TEL00083726], [ID 1062-2162] [...]*. See also Response to the SO, paragraph 269, which contains an overview of pre-paid offers as of 12 February 2014 and shows that O2 now offers "unlimited internet" in return for a EUR 20 top-up.

- (310) Second, an external Millward Brown customer study for the first quarter 2013, assessing how O2 performs on retention and acquisition compared to its competitors shows the risk that Three imposes on O2's overall customer base. [...]*.¹⁷⁸ [...]*
- (311) Third, internal Three documents and an external economic analysis by BNP Paribas further illustrate the competitive constraint that Three exerts on O2. For example:
- (a) a Three presentation quotes O2 as saying that Three is the cause of its decline;¹⁷⁹
 - (b) an email from Three's [...]* to Hutchison headquarters indicates that O2 is suffering from the competitive pressure exerted by Three: "[...]*";¹⁸⁰
 - (c) another email from [...]* illustrates Three's expectations of continued growth on a standalone basis, taking as much as [...]* of its customers from O2;¹⁸¹
 - (d) Three's own statements are confirmed by an external economic analysis by BNP Paribas, according to which Three's "[...]*", that is O2; the analysis refers to a "[...]*" driven by Three "[...]*".¹⁸²
- (312) Fourth, Three launched aggressive customer campaigns targeting O2 (and Vodafone) customers by doing direct value comparisons tag lines along the lines "*O2 eat kittens*" and "*Vodafone kick pigeons*". An O2 internal document shows that O2 considered that Three "[...]*".¹⁸³
- (313) Finally, a number of O2 internal documents refer to how O2 [...]*. For example:
- (a) in 2011, [...]*;¹⁸⁴
 - (b) another O2 report questions whether [...]*, concluding that this is difficult with "[...]*" like Three;¹⁸⁵
 - (c) an internal e-mail by O2's [...]* also refers to Three's "[...]*" commercial behaviour and states that [...]*;¹⁸⁶
 - (d) another O2 document refers to financial pressure driven by "[...]*". [...]* O2 plans to [...]* that March is also explicitly mentioned.¹⁸⁷

¹⁷⁸ Telefónica, Millward Brown presentation, O2 Brand & Advertising – Qtr1 '13, 23 May 2013, slide 23, [ID 447].

¹⁷⁹ Three, 2012-2016 Budget Review, notes of budget meeting on 22 November 2011, [Ref: 000903039], [ID 1302-23815].

¹⁸⁰ Three, Email by [...]*, 15 November 2011, [Ref: 001212618], [ID 1300-19105].

¹⁸¹ Three, Email from [...]* to [...]*, 2 December 2011, [Ref: 001153716], [ID 001153716].

¹⁸² BNP Paribas "Ozone highlights", 14 November 2011, [Ref: 001213331], [ID 1300-19260].

¹⁸³ O2, O2 Brand & Advertising – Qtr1' 13, 23 May 2013, Millward Brown, slide 9, [ID 447]. See also Three, Ireland Business update, 29 January 2013, slide 34, referring to aggressive switcher campaigns driving volume from other operators, such as O2, to Three [Ref: 000466411], [ID 1051-29782].

¹⁸⁴ Telefónica, O2 Strategy Day, Summary Actions and Materials, 31 May 2011, [Ref: TEL00158966], [ID 1065-42895].

¹⁸⁵ O2, Feedback from Q1 Business Updates. Regain Commercial Momentum, 21 February 2012, page 5, [Ref: TEL00017141], [ID 1061-16363].

¹⁸⁶ O2, Email from [...]* to [...]*, 19 November 2011, [Ref: TEL00170483], [ID 1065-45005].

¹⁸⁷ For example, Telefónica, 3 year plan update, March 2013, [Ref: TEL00052141], [ID 1061-23531].

- (314) The Commission also concludes that Three exerts an important competitive constraint on the remaining competitors on the market. This important competitive pressure would decrease post-merger. In this respect, the Commission relies on the elements set out in recitals (315) to (317), including internal party and competitor documents.
- (315) First, as set out in more detail in Section 7.5.6., internal documents on the "*market repair*" that would follow the removal of Three from the market as it currently stands show Three's important contribution to competition and the important competitive pressure that it exerts on all players on the market. The relevant O2 documents set out in great detail how the removal of Three from the Irish market would be [...] as it would lead to significant benefits such as [...].¹⁸⁸
- (316) Second, other internal O2 documents also show the important competitive pressure that Three exerts on the retail mobile telecommunications services market, for example referring to Three's offers being considered as "[...]", in particular "[...]" and "[...]" for iPhones.¹⁸⁹
- (317) Finally, internal documents show that Three exerts an important competitive constraint on the largest player on the market, namely Vodafone. For example a Vodafone document shows the company's concerns with [...].¹⁹⁰
- (318) The Notifying Party, in its Response to the Letter of Facts argues that nothing in the Vodafone "My Way Strategy" document suggests that Three exerts a particular competitive constraint on Vodafone or one which could be considered unique when compared to the offers of other providers. According to the Notifying Party, all operators are equally observed [...].
- (319) The Commission agrees that the Vodafone "My Way Strategy" document refers to other competitors and compares their tariffs. However, the Commission considers that this does not detract from the fact that Vodafone perceives that [...].
- (320) Three's internal documents also show Three's perception of the important impact it has on Vodafone. Three quotes Vodafone as saying that it perceives Three "[...]" and "[...]".¹⁹¹ In addition, [...] reported to Hutchison headquarters on a conversation that he had with Vodafone, stating that Vodafone "[...]".¹⁹²

¹⁸⁸ For example, Telefónica, Project Ozone: status and emerging conclusions, [Ref: TEL00086710], [ID 1063-8697].

¹⁸⁹ O2, Project Ozone, November 2011, slide 6, 7, 10 [Ref: TEL00170580], [ID 1065-45026]. See also O2, Business Plan 2013-2015, May 2012, slides 9, 12, 13 and 29, referring to Three as a [...], [Ref: TEL00025614], [ID 1061-18019]; O2, QFC2 1st submission to group, 11 May 2012, slide 7, referring to Three as [...], [Ref: TEL00123842], [ID 1064-4950]; Telefónica, Project ozone: Status and emerging conclusions, referring to [...], [Ref: TEL00086710], [ID 1063-8697]; O2, 2011 Budget Update, Management team, 7 December 2010, slide 7, referring to Three's "[...]", [Ref: TEL00151833], [ID 1065-38569]; Telefónica O2 Ireland, Market Forecast 2011-2013, April 2010, slide 30, referring to Three always playing a disruptive role and given its small voice base also [...], [Ref: TEL00156958], [ID 1065-42603]; O2, internal Email from [...] to [...], 16 November 2011, referring to [...], [Ref: TEL00169140], [ID 1065-44884]; O2 "2012 Budget review", 27 October 2011, slides 8-9, [Ref: TEL00164537], [ID 1065-44050].

¹⁹⁰ [...]

¹⁹¹ H3G, 2012-2016 Budget review, notes of budget meeting on 22 November 2011, [Ref: 000903038], [ID 1302-23815]; Three, Email by [...], 14 December 2011, [Ref: 001150736], [ID 1300-28766].

¹⁹² Three internal Email by [...], 13 December 2011, [Ref: 001153739], [ID 1300-29356].

Conclusion

- (321) The Commission considers that Three is currently an important competitive force, constraining O2 and the remaining players on the retail mobile telecommunications services market.

7.5.2.3. Comparison of tariffs and prices

- (322) In the SO, the Commission relied on a broad range of evidence to qualify Three as an important competitive force, including its attractive tariffs and handset prices.¹⁹³ These attractive tariffs and handset prices were evidenced by, among others, internal documents from the Parties and competitors relating to tariffs and handset prices, as well as comparisons of tariffs and handset prices provided by the Notifying Party. The Commission did not conduct a full-fledged tariff comparison because such a comparison has an inherent element of subjectivity to it as the price paid by a customer will normally depend on usage and, hence, the competitiveness of a tariff cannot be determined uniformly for all subscribers.
- (323) In its Response to the SO, the Notifying Party contends that the Commission should have carried out a tariff comparison to show that Three is an important competitive force.¹⁹⁴ The Commission does not consider that a full-fledged tariff comparison is a prerequisite to finding that a particular firm is an important competitive force. Nonetheless, in view of the Notifying Party's argument that the Commission should have conducted its own tariff comparison, the Commission compared the tariffs of Ireland's four mobile network operators (Vodafone, O2, Eircom and Three). This tariff comparison was communicated to the Notifying Party by a Letter of Facts dated 19 March 2014, to which the Notifying Party replied on 30 March 2014 and on 1 April 2014.

Pre-paid tariff comparison

The Commission's comparison

- (324) Pre-paid users buy credit, also known as top-ups, in shops or on the internet to "charge" their phone with voice minutes, SMS and data. Irish pre-paid users typically buy EUR 20 of top-up credit every four to six weeks.¹⁹⁵ These top-up credits are normally sold without handset, as customers do not purchase a new mobile phone every time they buy credit. The focus of the pre-paid tariff comparison is therefore on the top-ups, the product that pre-paid users purchase on a regular basis.
- (325) All mobile operators tend to offer top-ups at similar price points. All four MNOs in Ireland offer top-ups at EUR 20 and the Commission has compared what each of them offers for such a EUR 20 top-up. The comparison shows the competitiveness of Three's tariffs and supports the Commission's conclusion that Three exerts an important competitive constraint on O2 and the other operators.
- (326) The data for this comparison are taken from an overview of pre-paid tariffs in October 2013 made by O2 and submitted to the Commission in reply to a request for

¹⁹³ See, for instance, the SO, paragraph 203 (reference to great value plans), paragraph 204, paragraph 205 (reference to pre-pay plans, post-pay plans, iPhone device prices), paragraph 206, etc.

¹⁹⁴ See, among others, Response to the SO, paragraph 127, paragraphs 129 and 130.

¹⁹⁵ Response to the SO, paragraph 267.

information.¹⁹⁶ These October 2013 tariffs are described in more detail in the Notifying Party's Response to the Letter of Facts.¹⁹⁷

- (327) The O2 chart shows that, for a top-up of EUR 20, Three offers:
- (a) free calls to anyone on Three's network,
 - (b) free calls to anyone on any network in the weekend,
 - (c) free SMS to anyone on any network, and
 - (d) AYCE data.
- (328) The four above-mentioned components are automatically included when a customer purchases a EUR 20 top-up from Three. In addition to these four components, the customer buying a EUR 20 top-up will also get EUR 20 in credit. This credit can be used to make calls, for instance to people who are not on Three's network (so called off-net calls) during weekdays. There is no need to use the credit for calls in the weekend, or for SMS or data, since Three's EUR 20 top-up offers free calls to any network in the weekend, unlimited SMS and unlimited data. Three's offer is competitive because for many customers it will offer more value, meaning more voice minutes, SMS or data, than the EUR 20 pre-paid offers of other mobile network operators. In recitals (329) to (339), the Commission compares Three's EUR 20 pre-paid offer with the EUR 20 pre-paid offers of Vodafone, O2 and Eircom.
- (329) Vodafone offers the following for EUR 20:
- (a) free calls to anyone on Vodafone's network,
 - (b) free SMS to anyone on Vodafone's network, and
 - (c) 150 MB of data.
- (330) For most users, this offer of Vodafone will be less attractive than Three's. Indeed, Vodafone does not offer free any-network calls, unlike Three, which offers those calls for free in the weekend. Vodafone also does not offer free any-network SMS, whereas Three does. Finally, Vodafone only offers 150 MB of data, whereas Three offers AYCE data.
- (331) Three's pre-paid offer at EUR 20 is also competitive compared to O2's pre-paid offers at this price point. For EUR 20, O2 offers customers a choice of four different top-ups. These four different plans are called (1) talk, (2) text, (3) O2 to O2, and (4) internet. With "talk", customers who purchase a EUR 20 top-up receive free calls to anyone on any network. In return, EUR 10 of their EUR 20 is taken, leaving them with a remaining credit of EUR 10 to use for other services such as SMS or internet. With "text", customers receive unlimited texts and the EUR 20 credit remains intact. With "O2 to O2", customers receive free calls and SMS to anyone on O2's network and the EUR 20 credit remains intact. Finally, with "internet", customers receive 1 GB of data and 350 SMS, with a remaining credit of EUR 10. Three's offer is competitive with each of these offers.

¹⁹⁶ O2 response to Questionnaire Q23, page 4, figure 1 ("Example of Consumer Prepay Competitive Review Updated Monthly") [ID 1480].

¹⁹⁷ Response to the Letter of Facts, 30 March 2014, pages 12-17.

- (332) O2's "internet" plan at EUR 20 is less attractive than Three's offer, regardless of the customer's usage pattern. Whereas Three's customers obtain AYCE data for EUR 20, O2's customer only obtain 1 GB of data. In addition, O2's "internet" plan offers only 350 SMS whereas Three offers unlimited SMS. Moreover, O2's internet plan leaves customers with only EUR 10 of credit to spend on additional services, such as voice calls, SMS or additional data. By contrast, Three's customers have the full EUR 20 to use on additional services. Finally, Three's EUR 20 is more attractive than O2's internet plan because it offers customers free on-net calls and free off-net calls in the weekend, whereas O2's internet plan does not offer any free calls.
- (333) Likewise, O2's "text" plan is less attractive than Three's plan, regardless of the customer's usage pattern. This O2 plan offers free SMS, just as Three's EUR 20 top-up does. But Three's customers receive, in addition to free SMS, AYCE data and free voice calls, which O2 does not offer.
- (334) The "O2 to O2" plan of O2 will be less attractive than Three's EUR 20 plan for most customers. It offers free calls to anyone on the same network (Three also offers this) but only offers free SMS to people on the same network, whereas Three offers free SMS to any network. Three also offers free calls to people on other networks in the weekend, whereas O2's plan does not. Three's data allowance is also more generous, offering AYCE data, versus no data in O2's plan.
- (335) Finally, Three's EUR 20 offer is also competitive with O2's "talk" plan. That plan offers free calls to anyone on any network. On this point, the plan is more favourable than Three's offer, which only offers free calls to anyone on any network during the weekend and free calls to Three subscribers in the week. However, for many customers, this advantage will probably be outweighed by the fact that (1) Three offers free SMS to any network, whereas O2's plan does not offer any free SMS, (2) Three offers AYCE data whereas O2 does not offer any data, and (3) Three gives customers EUR 20 of credit, whereas O2 only gives customers a EUR 10 credit (the other EUR 10 being taken away in return for the free calls).
- (336) O2 also offers pre-paid plans through its 48 brand, which offers free calls and SMS to anyone on any network, 60 minutes to fixed lines and 5GB of data for EUR 20. This offer is also attractive – it offers less data than Three's plan but is more generous on its voice offering – but this does not detract from the fact that Three's offers are attractive. In addition, the 48 brand's tariffs are exclusively offered to people between 18 and 22 and only sold online.¹⁹⁸ A large proportion of Irish subscribers therefore cannot benefit from 48's attractive tariffs.
- (337) Three's pre-paid offer at EUR 20 is competitive compared to Eircom's pre-paid offer at EUR 20. For a EUR 20 top-up, Eircom's Meteor brand offers (1) free calls to anyone on Eircom's network, (2) free SMS to anyone on Eircom's network, and (3) 250 MB of data. This offer will be less attractive than Three's for most customers. Indeed, Eircom and Three both offer free calls to anyone on their own network but, on top of that, Three offers free SMS to anyone, regardless of network. Eircom, by

¹⁹⁸ See <http://www.48months.ie/boiler-plate/about-us> (which mentions that 48 is Ireland's first mobile network exclusively for 18 to 22 year olds and states that "If you are between your 18th and 22nd birthday, we're your kind of network. (...) If you're not, I'm afraid we're not for you but there are other offers out there for you.") [ID 3491]; <http://community.48months.ie/t5/Most-Popular-Questions/bd-p/faq> (under "I am not between the age 18 to 22, can I join 48?") [ID 3490]. See also Form CO, page 102, footnote 106.

contrast, only offers free SMS to people on Eircom's network. With 250 MB Eircom customers also receive much less data for their EUR 20 top-up than Three's customers, who receive unlimited data.

- (338) Alternatively, Eircom customers can obtain the following for a EUR 20 top-up: (1) 150 minutes of calls to anyone on any network, (2) unlimited SMS, and (3) 150 MB of data. The SMS component of this package is identical to Three's offer. The voice component of this package is difficult to compare with that of Three. Indeed, whether it is more advantageous than Three's will depend on whether subscriber often calls to other subscribers that are on a different network and whether they do much calling in the weekend. However, it is clear that Three's data component of the package is much more attractive than that of Eircom. Eircom offers only 150 MB of data, whereas Three offers AYCE data.
- (339) For EUR 20, Eircom's eMobile brand offers 250 minutes of voice to anyone on any network, 250 SMS to anyone on any network and 250 MB of data. The voice component of this package is again difficult to compare with that of Three, as the particular usage pattern of the customer will determine which one is more favourable. However, it is clear that the data and SMS component of this package are much less attractive than Three's. Three offers free SMS, which means a customer can send an unlimited amount of SMS, whereas eMobile only offers 250 SMS. In addition, eMobile only offers 250 MB of data, whereas Three offers AYCE data.

The Notifying Party's arguments in response to the Commission's comparison

- (340) The Notifying Party alleges that the Commission's pre-paid tariff comparison is flawed for a number of reasons.¹⁹⁹
- (341) According to the Notifying Party, the Commission's pre-paid tariff analysis is flawed because it excludes handset prices.²⁰⁰ The Commission considers that this argument disregards the nature of pre-paid tariffs and is therefore erroneous. Pre-paid users buy credit or "top-ups" whenever they need to recharge their phone with minutes or data. They do not buy a phone every time they buy a top-up. They either own a phone already or may buy a phone together with an initial top-up but thereafter, purchase only top-ups. The key variable for a comparison of pre-paid tariffs is therefore the price and value of top-up credits, not the price of the handset.
- (342) The Notifying Party also claims that the Commission has changed its position with respect to the importance of handset pricing in the pre-paid segment. According to the Notifying Party, the Commission qualified Three as an important competitive force in the pre-paid segment "*due to its hand-set prices*".²⁰¹ This is incorrect. The SO qualified Three as an important competitive force in the pre-paid segment based on Three's data strategy and competitive voice/text bundles and tariffs, as well as handset prices.²⁰² In other words, handset prices were only one of the elements why Three was qualified as an important competitive force in this segment. Moreover, the fact that the Commission has compared pre-paid tariffs does not mean that it considers handset pricing unimportant. This is simply another aspect of competition

¹⁹⁹ Response to the Letter of Facts, 30 March 2014, pages 6-22.

²⁰⁰ Response to the Letter of Facts, 30 March 2014, pages 7 and 8, paragraphs 31-36.

²⁰¹ Response to the Letter of Facts, 30 March 2014, page 7, paragraph 31.

²⁰² SO, paragraph 235.

and the pre-paid tariff comparison was, as its name implies, focused on a comparison of pre-paid tariffs, not handset pricing.

- (343) With respect to handset pricing, the Commission points out that the Notifying Party's comparison of handset prices in its Response to the Letter of Facts is consistent with the Commission's finding that Three is an important competitive force. The table in the Response to the Letter of Facts shows that Three offers ten different handsets.²⁰³ For four of these ten handsets, no other operator is cheaper than Three. For the Nokia C2-01, Nokia 300 and the Samsung Galaxy Chat, Three has the cheapest price of all operators and for the Nokia 302, Three is the cheapest together with other operators. By contrast, Vodafone also offers ten different handsets but is the cheapest for only one of them, namely the HTC Windows Phone 8S. O2 offers eleven handsets and is the cheapest for only two of them (the Samsung SIII Mini and the Nokia 302, for which it is the cheapest together with other operators). This shows that, with respect to handset pricing in the pre-paid segment, Three is a more important competitor than its market share would suggest.
- (344) The Notifying Party also takes issue with the fact that the Commission only conducted the pre-paid tariff comparison for one price point, namely EUR 20.²⁰⁴ This is a popular tariff²⁰⁵ and it is the only price point at which all four MNOs offer a top-up.²⁰⁶ The Commission therefore considered it to be the most appropriate price point for a comparison. Indeed, in its Response to the SO, the Notifying Party itself pointed out that the majority of customers top-up by approximately EUR 20 every 4-6 weeks and that, in line with this, the ARPU of Irish pre-paid customers is EUR 17 per month.²⁰⁷ It also compared pre-paid tariffs by comparing the value offered for a EUR 20 top-up.²⁰⁸
- (345) The Notifying Party criticises the fact that the Commission "simply" compared the value, that is to say the number of minutes, SMS and data, offered by operators at the same price.²⁰⁹ It considers this approach as too simplistic and contends that the Commission should have used usage profiles, as it has done for the comparison of post-paid tariffs. This argument is surprising, as the Notifying Party itself conducted a similar comparison of top-up values in its Response to the SO and qualified this analysis as "*an objective price comparison*".²¹⁰ In any event, the fact that the Commission's comparison is simple does not mean that it is not informative. Consumers have a choice between top-ups from different operators. Naturally, they will compare which operator gives them more "value for money", that is to say more

²⁰³ Response to the Letter of Facts, 30 March 2014, page 8, table 1.

²⁰⁴ Response to the Letter of Facts, 30 March 2014, page 9, paragraphs 42 and 43.

²⁰⁵ See, for instance, Three, Q4 Top-up Review, page 3 [Ref: 001183380] [ID 1300-16060] (internal presentation of Three indicating that "€20 accounts for [...] % of all SIM top-ups"); O2, Changes to top-up margins – Reactive Communications, page 1 [Ref: TEL00084393] [ID 1062-2300] (referring to "top-ups at the popular €20 value"). See also Response to the SO, paragraph 267 ("[...]").

²⁰⁶ O2 response to Questionnaire Q23, page 4, figure 1 ("Example of Consumer Prepay Competitive Review Updated Monthly") [ID 1480]. (which shows that O2 does not offer a EUR 5 or EUR 10 top-up and Three does not offer a EUR 30 top-up).

²⁰⁷ Response to the SO, paragraph 267.

²⁰⁸ Response to the SO, paragraph 270.

²⁰⁹ Response to the Letter of Facts, 30 March 2014, page 9, paragraphs 39, 40 and 41.

²¹⁰ Response to the SO, page 89.

voice minutes, SMS or data for their EUR 20. Hence, comparing the value offered by each operator for the same price is an appropriate method to compare the attractiveness of pre-paid tariffs. This is also confirmed by the fact that the mobile operators themselves compare tariffs this way. Indeed, the Commission's comparison is based on a comparative table made by O2, which regularly makes such tables to compare its pre-paid offer with that of competitors.²¹¹

- (346) The Notifying Party argues that the Commission should have included the MVNO Tesco Mobile in its comparison.²¹² The Commission compared the tariffs of all four Irish MNOs, in both the pre-paid and post-paid segment. It did not include MVNOs in the comparison because at present MVNOs play only a minor role in the Irish retail mobile telecommunications services market. In any event, the inclusion of Tesco Mobile in the comparison would not change the conclusion that Three's pre-paid tariffs are attractive and competitive. First, even if Tesco's offers are also attractive, this would not negate the fact that Three's offer is attractive. Second, based on the information regarding Tesco's pre-paid tariffs provided by the Notifying Party,²¹³ Tesco's EUR 20 pre-paid offer is not more attractive than Three's. It is true that the pre-paid offer described in the Response to the Letter of Facts as Tesco's "first" pre-paid offer provides for more voice minutes, but it does not offer any data allowance and offers fewer SMS. Whether Three's tariff or Tesco's tariff would be more advantageous will depend on the usage profile of the user in question.
- (347) The Notifying Party claims that a proper assessment of the tariffs shows that Three does not offer more value than other operators.²¹⁴ The Commission agrees that, for certain tariffs, the exact usage profile will determine whether Three's top-up for EUR 20 is more advantageous than other operators' top-up for the same price. But even for those tariffs, a direct comparison of the value offered by a EUR 20 top-up shows that Three offers more value. For instance, Eircom's EUR 20 top-up offers free on-net calls, free on-net texts and 250 MB of data. Three's EUR 20 top-up offers free on-net calls, free off-net calls in the weekend, free on-net texts, free off-net texts and AYCE data. It is true that, for some usage profiles (for instance people who make frequent voice calls to other people on the Eircom network during weekdays), Eircom's top-up offer may be more advantageous. However, for most usage profiles, Three's offer will be more attractive. Indeed, Three's offer will be more attractive not just for those who frequently call to other people on the Three network people but also for those who make frequent calls in the weekend, those who SMS frequently and those who use a significant amount of data. This is because, while the voice offering of Eircom (free on-net calls) may be comparable to that of Three (free on-net calls and free off-net calls in the weekend), the SMS and data offer of Eircom is objectively less advantageous, regardless of the usage profile.
- (348) In addition, the Commission's comparison of pre-paid tariffs in October 2013 shows that Three's EUR 20 top-up will always be more attractive than some EUR 20 top-ups of other MNOs, regardless of the usage profile. In other words, users of some EUR 20 top-ups will always be better off with Three's EUR 20 top-up, regardless of

²¹¹ O2 response to Questionnaire Q23, page 4 [ID 1480].

²¹² Response to the Letter of Facts, 30 March 2014, pages 8 and 9, paragraphs 37-38.

²¹³ Response to the Letter of Facts, 30 March 2014, pages 18 and 19, tables 11 and 12.

²¹⁴ Response to the Letter of Facts, 30 March 2014, pages 10-19, paragraphs 44-65.

consumption of voice minutes, SMS and data. More specifically, Three's EUR 20 top-up will always offer more value than the following EUR 20 top-ups:

- (a) O2's text plan for EUR 20: this plan can never offer more value than Three's EUR 20 plan, because Three's plan offers free SMS to any network (just as O2's text plan does) but, on top of that, offers free on-net voice calls, free off-net voice calls in the weekend and AYCE data; in other words, Three's plan is equal to O2's with respect to SMS but superior in all other respects;
 - (b) O2's internet plan for EUR 20: this plan can never offer more value than Three's EUR 20 plan because Three's plan offers more SMS, more data and more voice minutes; in other words, it is superior to O2's plan in all respects;
- (349) Although Three's EUR 20 top-up always offers more value than some EUR 20 top-ups of other operators, the inverse is not true. No other MNO offers a EUR 20 top-up that will always offer more value than Three's AYCE data offer at EUR 20 top-up, regardless of the usage profile.
- (350) In response to the Commission's pre-paid tariff comparison, the Notifying Party has conducted its own comparison of pre-paid tariffs, based on usage profiles.²¹⁵ For each usage profile, the Notifying Party assesses whether a EUR 20 top-up would be sufficient to accommodate that usage profile's consumption. As acknowledged by the Notifying Party²¹⁶, its analysis relies on several unrealistic assumptions that make Three's pre-paid offer seem less competitive than it is. However, even with these assumptions, the Notifying Party's comparison still reveals the competitiveness of Three's offers.
- (351) The Notifying Party's analysis uses the following unrealistic assumptions.
- (a) When Three's pre-paid customers use data, they do not lose any top-up credit because Three offers AYCE data for its EUR 20 top-up. Customers can therefore use as much data as they want, without having to use the EUR 20 credit. All other operators offer no or limited data with a EUR 20 top-up. When customers of those operators use data or use more data than their data limit, they have to pay for it using their EUR 20 top-up credit. This typically involves a daily fee that is subtracted from the credit and buys the customer a maximum volume of data downloads.²¹⁷ If a customer uses a small volume of data, this will immediately trigger, for instance, a EUR 1 charge, which then allows the user to use up to 50 MB in a day. In its analysis the Notifying Party has spread the data volume used by each usage profile in a way that minimizes the number of daily charges incurred. The assumption is that customers either use exactly 50 MB on a day or use no data at all. In reality, consumers do not use data in this way. The Notifying Party acknowledges that this assumption is unrealistic.²¹⁸ The result of this assumption is that operators other than Three seem cheaper than they actually are compared to Three.

²¹⁵ Response to the Letter of Facts, 30 March 2014, paragraphs 66-72, pages 19-22.

²¹⁶ Response to the Letter of Facts, 30 March 2014, page 21, paragraph 70.

²¹⁷ Response to the Letter of Facts, 30 March 2014, page 21, paragraph 70.

²¹⁸ Response to the Letter of Facts, 30 March 2014, page 20, paragraph 70.

- (b) Many pre-paid top-ups offer free on-net calls and free on-net SMS. This means calls and SMS to people on the same network are free. The Notifying Party has allocated the number of on-net and off-net minutes and SMS in each usage profile in proportion to the market share of each operator in the pre-paid segment.²¹⁹ This allocation is unrealistic and makes Three's tariffs seem less competitive. By taking the market shares in the pre-paid segment as a basis, the Notifying Party underestimates the number of minutes and SMS to subscribers on the Three network and overestimates the number of minutes and SMS to other networks. Pre-paid customers call and text to all customers, regardless of whether they are pre-paid or post-paid customers. Hence, there are no grounds to use pre-paid market shares to allocate the calls and SMS. Taking the market shares in the pre-paid segment as a basis artificially reduces the number of on-net calls and SMS for Three's subscribers and, conversely, inflates the on-net calls and SMS for other operators. This is because Three has a relatively low market share in the pre-paid segment and a relatively high market share in the post-paid segment. The Notifying Party's assumption also disregards the fact that customers often choose the same network as their spouse or close friends, resulting in a higher proportion of on-net calls.
- (352) Even with these unrealistic assumptions, the Notifying Party's analysis nonetheless shows that Three's pre-paid tariffs are attractive. As mentioned in recital (350), the Notifying Party assesses, for each usage profile, whether a EUR 20 top-up would be sufficient to accommodate that usage profile's consumption. In the case of Three, three out of the five usage profiles can be accommodated by Three's EUR 20 top-up. In other words, if consumers with these three types of usage profile purchase a EUR 20 top-up from Three, they will not need to buy any additional credit to cover the voice minutes, SMS and data they consume. By contrast, only one of the five usage profiles can be accommodated by Vodafone's EUR 20 top-up. This shows that Three's pre-paid tariff is more attractive than Vodafone's for most users.
- (353) For O2, a distinction must be made between its regular pre-paid plans (Talk, Text, O2 to O2 and Internet) and the pre-paid plan of its sub-brand 48. The table in the Notifying Party's Response to the Letter of Facts indicates that O2's regular pre-paid plans would accommodate three of the five usage profiles. Upon closer inspection, however, only one of the five usage profiles can realistically be accommodated by the four O2's. The other plans only accommodate the usage profiles under the unrealistic assumption that the users concentrate their data consumption on a small number of days and, on those days, uses exactly the maximum volume purchased by the daily additional charge.²²⁰ Even with this unrealistic assumption, O2's EUR 20 pre-paid offer only accommodates three usage profiles, the same number as Three. However, without the unrealistic assumption relating to data use (but keeping the unrealistic assumptions regarding on-net and off-net calls and weekend calls), it only accommodates one usage profile. This shows that, for most users, Three's pre-paid tariff is more attractive than the various tariff plans offered by O2.

²¹⁹ Response to the Letter of Facts, 30 March 2014, page 21, paragraph 70.

²²⁰ Response to the Letter of Facts, 30 March 2014, page 21, Table 15 (particularly footnotes 1 and 2) and paragraph 70 (which acknowledges that the assumption used is unrealistic).

- (354) According to the Notifying Party's calculations, O2's 48 brand seems to accommodate all five usage profiles.²²¹ However, the fact that O2's 48 brand also offers attractive pre-paid tariffs does not negate that Three's tariffs are also attractive. Moreover, the 48 brand is exclusively offered to people between 18 and 22 years old and can only be purchased online.²²² It is therefore not accessible to the majority of Irish consumers. In addition, consumers who top-up immediately lose their EUR 20 credit entirely.²²³ This means that, after one month, they are no longer able to use their phone and must purchase a new top-up. In this respect, the 48 tariff is less advantageous than that of Three and other operators that leave the EUR 20 credit intact, since the customers of those operators can use their EUR 20 credit for a period that exceeds one month.
- (355) According to the Notifying Party's calculations, Meteor's first pre-paid offer does not accommodate any of the five usage profiles. Its second pre-paid offer and the offer by E-mobile seem to accommodate all five usage profiles and, if one of the unrealistic assumptions is removed, four usage profiles. Tesco's offer seems to accommodate three usage profiles. However, the attractiveness of the tariffs of Meteor and Tesco (although under unrealistic assumptions) does not negate the attractiveness of Three's tariffs.
- (356) Moreover, the Notifying Party's calculations for Tesco seem unreliable. According to the Notifying Party, usage profile 2 can be accommodated by Tesco's first EUR 20 offer. However, a simple calculation shows that this cannot possibly be the case. Usage profile 2 uses 6.4 landline minutes, 19.3 minutes to mobile (of which 18 minutes off-net), 115.9 SMS (of which 111 off-net) and 37.5 MB of data.²²⁴ Using the price per minute and SMS provided by the Notifying Party, this consumption cannot be accommodated by a EUR 20 top-up: 6.4 landline minutes x 20 cent per minute = EUR 1.20; 111 off-net SMS x 13 cent per SMS = EUR 14.43; 37.5 MB of data for which a 1GB add-on has to be purchased at EUR 5.
- (357) Finally, the Notifying Party argues that [...] ²²⁵ [...]*, Three's market share in this segment would have grown at a faster rate. The Commission points out that Three's market share in the pre-paid segment has risen rapidly. In 2010, it had [...] ²²⁶ pre-paid customers. In 2012 its subscriber base was [...] ²²⁷ and in 2013, it rose to [...] ²²⁸. In other words, the number of Three's pre-paid customers has more than doubled in the past four years. In 2010, Three accounted for only [0–5]*% of pre-

²²¹ Response to the Letter of Facts, 30 March 2014, page 22, Table 15.

²²² See www.48months.ie/boiler-plate/about-us (which mentions that 48 is Ireland's first mobile network exclusively for 18 to 22 year olds and states that "If you are between your 18th and 22nd birthday, we're your kind of network. (...) If you're not, I'm afraid we're not for you but there are other offers out there for you.") [ID 3491]; <http://community.48months.ie/t5/Most-Popular-Questions/bd-p/faq> (under "I am not between the age 18 to 22, can I join 48?") [ID 3490]. See also Form CO, page 102, footnote 106.

²²³ Response to the SO, page 89 (text accompanying the footnote indicated by "***")

²²⁴ Response to the Letter of Facts, 30 March 2014, page 20, Table 13 (for the usage profile) and Table 14 (for the off-net minutes).

²²⁵ Response to the Letter of Facts, 30 March 2014, page 22, paragraphs 73, 74 and 75.

²²⁶ Table 26 of this Decision.

²²⁷ Table 26 of this Decision.

²²⁸ Table 27 of this Decision.

paid subscribers.²²⁹ In 2012, its market share had grown to [5–10]*%²³⁰ and in 2013 it was [7–10]*%.²³¹ The choices of consumers and the evolution of Three's market share therefore do not contradict but support the Commission's conclusion that [...]*

Conclusion regarding the pre-paid tariff comparison

- (358) The Commission compared pre-paid tariffs by comparing the value (the number of minutes, SMS and data) offered by each of the four MNOs for a top-up of EUR 20. The comparison showed that Three's offer is competitive because for many customers Three's pre-paid offer will provide more value, meaning more voice minutes, SMS or data, than the EUR 20 pre-paid offers of other mobile network operators. The comparison therefore supports the conclusion that Three exerts an important competitive constraint on O2 and the other operators.
- (359) The Notifying Party's tariff comparison, conducted in response to the Commission's tariff comparison, relied on several unrealistic assumptions that make Three's pre-paid offer seem less attractive than it is. It therefore does not fairly represent the competitiveness of the pre-paid offers of the four Irish operators. However, even with these unrealistic assumptions, the Notifying Party's comparison revealed the attractiveness of Three's pre-paid offer. Three's pre-paid offer accommodated more usage profiles than Vodafone and O2 (excluding O2's 48 brand which is only offered to customers between 18 and 22 years).

Post-paid tariffs

Commission's comparison in the Letter of Facts

- (360) To compare Three's post-paid tariffs with those of other operators, the Commission compared what subscribers would pay per month with each of the four Irish mobile network operators. The Commission considered operator A's offer more attractive than operator B's offer if the monthly bill of a subscriber with operator A would be lower than the monthly bill paid by that same subscriber with operator B.
- (361) This post-paid tariff comparison was based on a tariff level dataset. The Commission requested monthly tariff level data from the main operators in the Irish retail mobile telecommunications market for the period from 2010 to 2013. The data contains 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, add-ons, dates of activation and deactivation) and the monthly evolution of subscriber numbers and usage (voice, text and data) for each tariff. Allowances, if applicable, are broken down to on-net allowances, off-net allowances and fixed parts. Also, out-of-bundle prices are specified by on-net 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 the total data traffic (both uploads and downloads) in gigabytes. For each operator, the data cover all tariff plans available to new subscribers at any point in time between 1 January 2010 and 31 July

²²⁹ Table 26 of this Decision.

²³⁰ Table 26 of this Decision.

²³¹ Table 27 of this Decision. The figure for 2013 was calculated based on a total number of subscribers that included the subscribers of certain MVNOs that had previously not been included in the total number of subscribers. It is therefore not directly comparable with the numbers for 2010 and 2012.

2013, which together account for at least 95% of the total number of new subscribers. For certain operators, handset subsidies were not available on tariff level but only on the more aggregated, segment level (such as post-paid private).

- (362) As each subscriber has its own consumption profile of voice minutes, SMS and data, a comparison of the optimal tariff under all possible consumption profiles is not possible. Therefore, the Commission conducted a comparison for several user types, also known as usage profiles. Each usage profile corresponds to a specific usage pattern, consisting of a number of mobile minutes, fixed minutes, text messages and data traffic. The Commission used two sets of usage profiles: (1) a set of five usage profiles based on the usage patterns of subscribers to the five most popular post-paid tariffs in the Irish retail market, and (2) a set of four usage profiles based on the usage pattern of subscribers to the most popular post-paid tariffs of Vodafone, O2, Eircom and Three. This means that, in total, the Commission has compared tariffs for nine different usage profiles. Since these usage profiles are based on the usage pattern of subscribers to very popular tariffs, they are representative of the usage pattern of a relatively large number of subscribers.
- (363) In the Letter of Facts, the Commission concluded that, for each of these nine profiles, the tariffs of Three were competitive. In fact, for each of these nine profiles, the tariffs offered by Three were the cheapest.

The Notifying Party's arguments in response to the Commission's comparison

- (364) In its Response to the Letter of Facts, the Notifying Party argues that the Commission's analysis contains certain flaws.²³² First, the Notifying Party argues that Three's calculated tariff prices are underestimated.²³³ Second, the Notifying Party also argues that one other operator's tariff prices were overestimated because its handset subsidies were underestimated.²³⁴ Third, the Notifying Party argues that for some tariffs of two other operators handset subsidies were allocated when the tariff was in fact a tariff that was not eligible for handset subsidies.²³⁵ Fourth, the Notifying Party argues that the Commission should not compare the cheapest of the most popular tariffs, but the overall cheapest tariffs. If the comparison is not restricted to the top five tariffs, one operator's tariff price is oscillating between negative and positive numbers.²³⁶ Fifth, the Notifying Party provided an alternative tariff price variable, corrected for those problems and based on the same data the Commission used.²³⁷ Sixth, the Notifying Party conducted a post-paid tariff comparison based on its own market information and argues based on this that Three does not stand out as a particularly aggressive competitor.²³⁸

The Commission's assessment

- (365) The Commission agrees that some flaws were present in the computation of the tariffs of Three and one other operator. However, even if these flaws are corrected,

²³² Response to the Letter of Facts, 1 April 2014, Annex II.

²³³ Response to the Letter of Facts, 1 April 2014, Annex II, pages 13-17.

²³⁴ Response to the Letter of Facts, 1 April 2014, Annex II, page 18.

²³⁵ Response to the Letter of Facts, 1 April 2014, Annex II, page 18.

²³⁶ Response to the Letter of Facts, 1 April 2014, Annex II, pages 9 and 10.

²³⁷ Response to the Letter of Facts, 1 April 2014, Annex II, pages 19 and 20.

²³⁸ Response to the Letter of Facts, 1 April 2014, Annex II, pages 19 and 20.

the comparison still shows that Three's tariffs are competitive. In recitals (366) to (372), the Commission conducts the post-paid tariff comparison, using the alternative tariff price variable created by the Notifying Party in the Response to the Letter of Facts.

- (366) The five anonymised graphs below (Figure 11 to Figure 15) relate to the first set of usage profiles. These five usage profiles were created based on the usage pattern of subscribers to the five most popular post-paid tariffs in Ireland, meaning the tariffs with the largest number of subscribers. For each of these five tariffs the Commission calculated the average consumption of voice minutes, text messages and data over time. The Commission thus obtained the "typical" usage patterns of Ireland's five most popular post-paid tariffs. The selection of the five usage profiles followed the methodology proposed by the Notifying Party.²³⁹
- (367) After having established these five usage profiles, the Commission calculated what these five typical users would pay with each operator. First, the Commission calculated the implied monthly bill for each user type per tariff. In this step, the Commission followed the methodology proposed by the Notifying Party.²⁴⁰ Second, for each user type, the Commission calculated the bill that this user type would pay if it subscribed to each operator's five most popular tariffs. This gave five potential bills per operator. Third, the Commission kept the cheapest bill of these five. In other words, each usage profile was matched with the tariff that yielded the cheapest bill for that usage profile.
- (368) Handset subsidies were taken into account in calculating these bills. This was done by converting the total handset subsidy into a monthly subsidy. This amount was then subtracted from the monthly bill. These calculations took into account the Notifying Party's proposed correction of the handset subsidies.²⁴¹ The calculations also 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 the bill that would have been generated without add-on.
- (369) In this comparison, for each operator, the cheapest of the five most popular tariffs is selected to avoid tariffs with very low subscriber numbers. Otherwise, the results might be driven by non-typical movements related to insignificant tariffs. This is the reason why the Notifying Party found that one operator's overall cheapest tariff shows some wide oscillations.²⁴² The tariff with the oscillations has only a fraction (typically about one percent) of that operator's most popular tariff's subscriber number. The subscriber number of this small tariff in some months is as low as six while the most popular tariff has typically 38 000 subscribers and never less than 28 000. As a consequence, the small tariff's handset subsidy figures in particular are widely oscillating. The Commission does not consider that the price and subsidy movements of this insignificant tariff are relevant for a comparison of the typical best tariffs.

²³⁹ Response to the Letter of Facts, 1 April 2014, Annex II, pages 19 and 20.

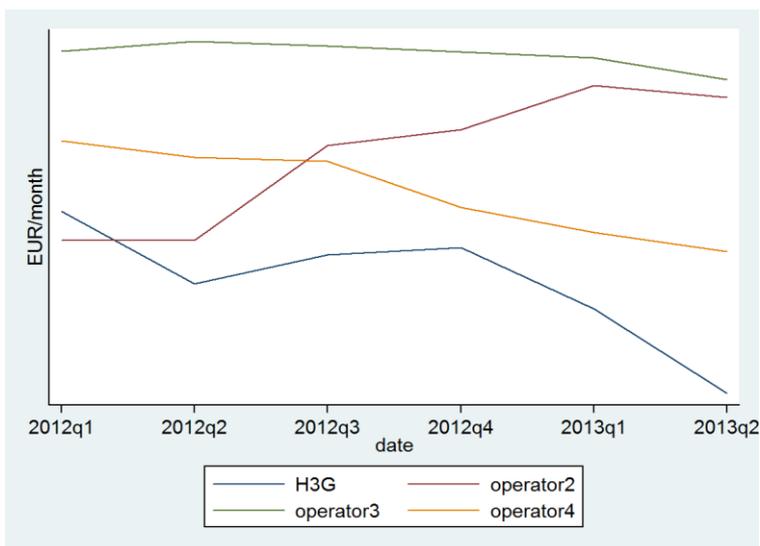
²⁴⁰ Response to the Letter of Facts, 1 April 2014, Annex II, pages 23, 24 and 25.

²⁴¹ Response to the Letter of Facts, 1 April 2014, Annex II, pages 13-18.

²⁴² Response to the Letter of Facts, 1 April 2014, Annex II, pages 9 and 10.

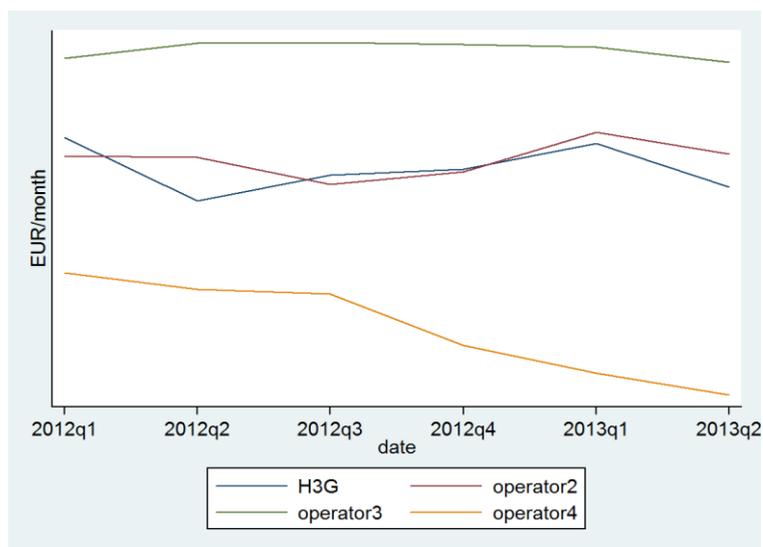
(370) The graphs in Figure 11 to Figure 15 show that more often than not Three offers the lowest or the second lowest bill. Each of the five graphs shows six quarters, giving a total of 30 cases that can be compared. Three is the cheapest in 11 cases (37%), and second cheapest in 15 cases (50%). In other words, in 87% of the cases analysed Three's implied monthly bill is the lowest or the second lowest. This shows that Three's tariffs are a competitive option for five usage patterns that are similar to the usage pattern of a comparatively large number of Irish post-paid mobile subscribers.

Figure 11: Cheapest tariff for usage profile 1



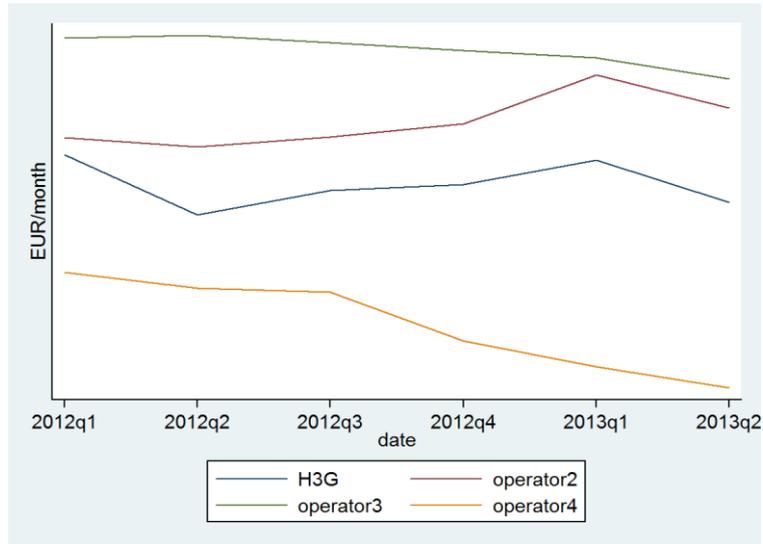
Source: Three and the other Irish mobile network operators. Commission calculations

Figure 12: Cheapest tariff for usage profile 2



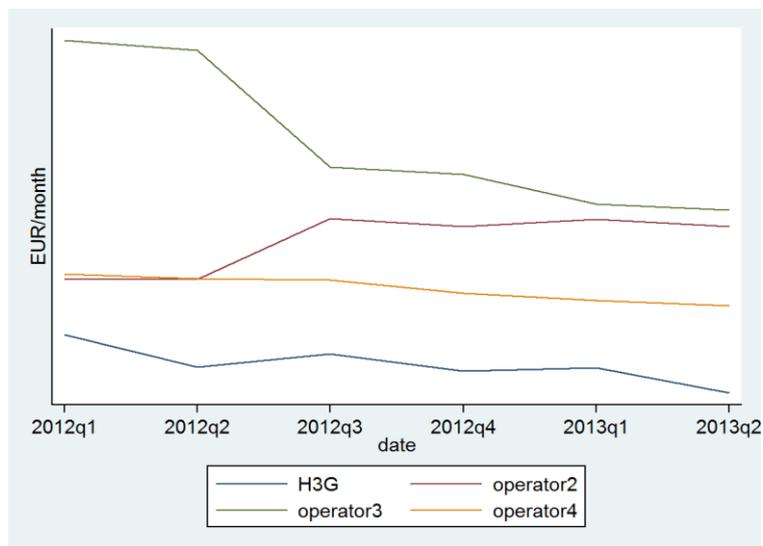
Source: Three and the other Irish mobile network operators. Commission calculations

Figure 13: Cheapest tariff for usage profile 3



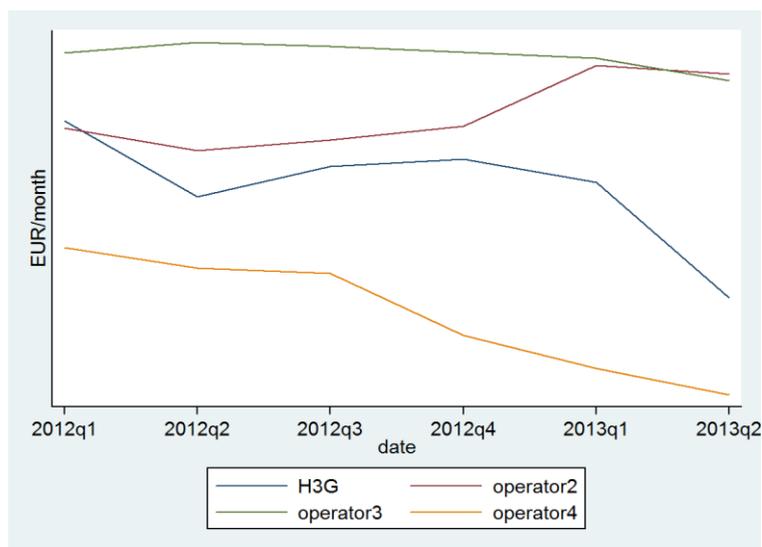
Source: Three and the other Irish mobile network operators. Commission calculations

Figure 14: Cheapest tariff for usage profile 4



Source: Three and the other Irish mobile network operators. Commission calculations

Figure 15: Cheapest tariff for usage profile 5

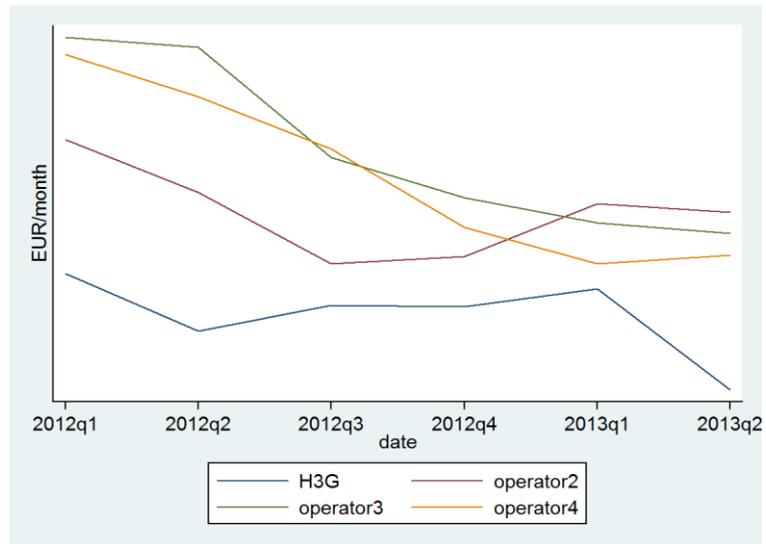


Source: Three and the other Irish mobile network operators. Commission calculations

- (371) The Commission has also done a similar comparison for a second set of usage profiles. The result of this comparison is represented in the anonymized graphs below (Figure 16 to Figure 19). The four usage profiles for these graphs were calculated on the basis of the usage pattern of subscribers to each operator's most popular post-paid tariff. In other words, the Commission selected Vodafone's most popular post-paid tariff and calculated the average usage pattern of subscribers to that tariff. The Commission did the same for each other operator, obtaining four profiles, namely those of a Three user, an O2 user, an Eircom user and a Vodafone user. The Commission then calculated whether these users would pay more or less with other operators. In the case of the Vodafone user, for instance, the Commission calculated what the Vodafone user would pay if they were a subscriber of O2, Eircom or Three. To determine what the Vodafone user would pay with O2, for instance, the Commission first calculated the bill of the Vodafone user under each O2 tariff. Of these tariffs, the Commission then kept the five tariffs that yielded the cheapest bills. These five bills were then averaged.
- (372) The graphs show that Three's tariffs are also competitive for these usage profiles. Indeed, Three's tariffs yield the lowest bills in 58% of the cases and the second lowest bill in a further 21%.²⁴³ Moreover, Three's implied tariff prices are consistently the cheapest not just for the typical Three user, but also for the typical user of operator 3, which is one of the four Irish mobile network operators (Figure 16 and Figure 18, respectively).

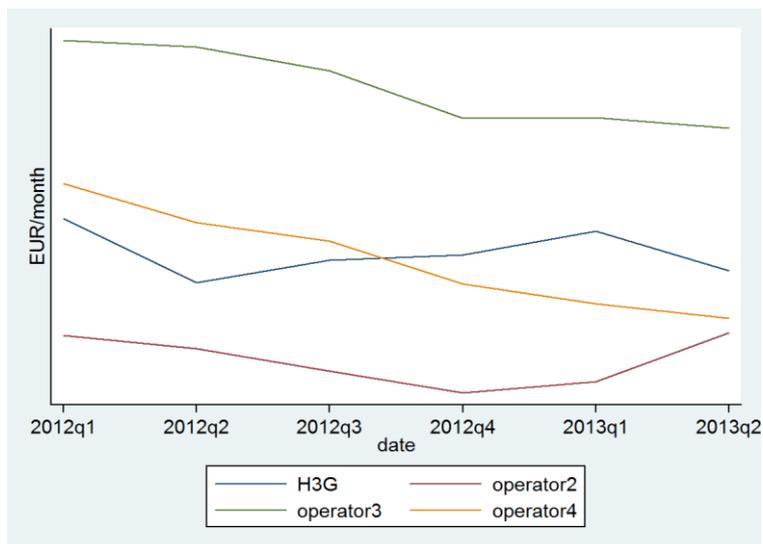
²⁴³ Six quarters and four usage profiles give 24 cases. Three is the cheapest in 14 cases (58%) and second cheapest in five (21%) cases.

Figure 16: Cheapest tariffs for Three usage's usage profile



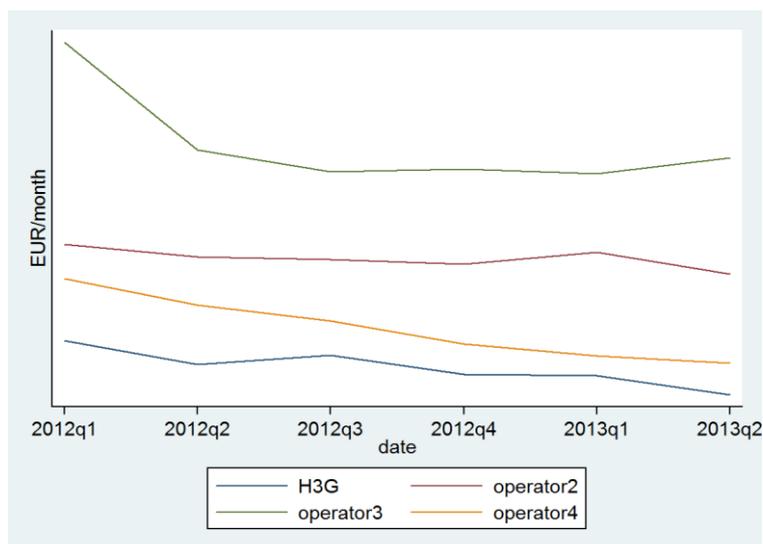
Source: Three and the other Irish mobile network operators. Commission calculations

Figure 17: Cheapest tariffs for operator 2's usage profile



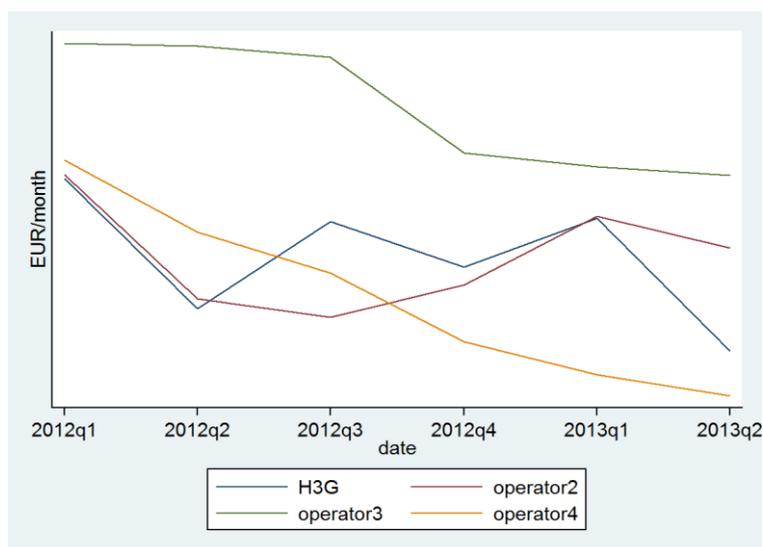
Source: Three and the other Irish mobile network operators. Commission calculations

Figure 18: Cheapest tariffs for operator 3's usage profile



Source: Three and the other Irish mobile network operators. Commission calculations

Figure 19: Cheapest tariffs for operator 4's profile



Source: Three and the other Irish mobile network operators. Commission calculations

(373) The Notifying Party's post-paid tariff comparison based on its own market information²⁴⁴ is less representative than the Commission's tariff comparison discussed in recitals (365) to (372). This is because it compares the tariffs only in one period with offered prices and subsidies, while the Commission's analysis uses a time series comparison of actual prices and subsidies. This is important as the offered handset subsidies might change quickly as the operators adjust to the market

²⁴⁴ Response to the Letter of Facts, 1 April 2014, Annex II, pages 19 and 20.

conditions and their own stocks of handsets. For example, according to the Notifying Party's data, Eircom offers the Samsung S4 and the iPhone 5s for the Smart Explorer tariff for EUR 229 and EUR 379, respectively. The more recent information on Eircom's webpage, however, shows a price of EUR 249 and EUR 419 for these two handset models, respectively.²⁴⁵ That is, Eircom is actually less competitive than what the Notifying Party claims. In contrast, the Commission's data uses the actual handset subsidies paid by each operator, and compares the resulting tariffs in a more robust, time series comparison framework. This latter framework better captures the competitive interactions between the different operators in the post-paid segment over time. Hence, it is more informative of Three's typical competitive position than a static comparison. Nevertheless, even the Commission's analysis implies that, in some instances, Three's offer is not necessarily the cheapest, and to some extent this is consistent with the Notifying Party's findings. Even in the Commission's graphs in Figure 16 to Figure 19, Three's ranking might change over time. This underlines that the Commission's time series comparison is more representative than that of the Notifying Party. The more robust time series comparison shows that Three more often than not is among the more aggressive players.

Conclusion regarding the post-paid tariff comparison

- (374) The Commission compared the evolution of the different Irish mobile operators' post-paid offers. The results show that Three more often than not is among the more aggressive players in the market offering competitive prices. This is consistent with Three being an important competitive force exercising an important competitive constraint in the post-paid private segment.

Other price elements that show Three's attractive and competitive prices

- (375) The tariff comparison set out in Section 7.5.2.3 was conducted in response to the Notifying Party's argument, formulated in its reply to the SO, that the Commission should have conducted a tariff comparison. The SO also identified several other price-related elements in support of the finding that Three is an important competitive force. These included data regarding pricing of recent handsets and monthly allowances.
- (376) First, Table 31 and Table 32 contain a price comparison per MNO with regard to handset pricing, which is an important value driver in the post-paid segment. Table 31 demonstrates that, as of July 2013, Three alone offered the cheapest device price in two out of seven prices analysed. Three also offered the cheapest device price together with one or more of its competitors in three of seven prices analysed. In other words, in five of seven prices analysed it was present at the cheapest price points. Table 32 demonstrates that, as of November 2013, Three alone offered the cheapest device price in two out of six prices analysed (it did not offer Nokia Lumia 925). Three also offered the cheapest device price together with one or more of its competitors in two of six prices analysed. In other words, in four of six prices analysed it was present at the cheapest price points.
- (377) Second, Three's competitiveness is also clear when taking into account the price of the monthly tariff plans that give access to these cheap handsets. Table 31 demonstrates that, as of July 2013, Three alone offered the second cheapest device

²⁴⁵ https://store.meteor.ie/phones/bill-pay-phones?plan_id=69, Downloaded on 25 April 2014. [ID 4136]

price and monthly tariff combination in two out of seven prices analysed. Three also had the second cheapest offer together with one of its competitors in three of seven prices analysed. In other words, in five of seven prices analysed Three had the second cheapest price offer. In two out of seven prices analysed Three had the third cheapest offer. Table 32 demonstrates that, as of November 2013, Three alone offered the cheapest device price and monthly tariff combination in three out of six prices analysed (it did not offer Nokia Lumia 925). Three also offered the cheapest device price together with one or more of its competitors in one of six prices analysed. In other words, in four of six prices analysed Three was present at the cheapest price points. In one out of six prices analysed Three had the second cheapest offer.

Table 31: Handset prices per operator (as of 8 July 2013)

Price Plan	Open Basic € 55	Ultimate FlexMax € 55	Smart Unlimited € 49	Red € 55
Device	O2	Three	Meteor	Vodafone
IPhone 5	€ 179.00	€ 99.00	€ 129.00	€ 99
IPhone 4S	€ 79.00	€ 29.00	€ 49.00	FREE
Galaxy S IV	€ 199.00	€ 59.00	€ 99.99	€ 99.99
Galaxy S III	€ 149.00	FREE	FREE	FREE
HTC One	€ 139.00	FREE	€ 29.99	€ 49.99
Xperia Z	FREE	€ 29.00	FREE	€ 49.99
Note 2	€ 249.00	FREE	€ 99.99	FREE

Source: Form CO, page 150, Figure 22

Table 32: Device pricing comparison (November 2013)

Price Plan	Open Basic € 55	€ 50 Discount € 55 Tariff	Ultimate FlexMax € 55	Smart Unlimited € 59	Red € 55
Device	O2	O2	Three	Meteor	Vodafone
IPhone 5S	€ 179.99	N/A	€ 129.00	€ 79.00	€ 99.00
IPhone 5C	€ 79.99	N/A	FREE	€ 29.00	€ 49.00
IPhone 4S	FREE	N/A	FREE	FREE	FREE
Galaxy S IV	€ 99.00	€ 49.00	€ 29.00	€ 49.00	€ 49.99
HTC One	€ 99.00	€ 49.00	FREE	FREE	€ 49.99
Xperia Z1	€ 149.00	€ 99.00	€ 99.00	€ 49.00	€ 49.99
Nokia Lumia 925	€ 119.00	€ 69.00	N/A	FREE	FREE

Source: O2 response to Questionnaire Q23, page 3

- (378) Finally, the attractiveness of Three's tariffs is also shown by the statistics drawn by the Notifying Party from Eircom's "Consumer Monthly Pricing Overview" and

mentioned in the Response to the SO.²⁴⁶ According to the Notifying Party Three is an important competitive force when examining the number of "market leading" offers made.²⁴⁷ According to the Notifying Party, Eircom's tariff comparisons provide the "unbiased view of a third party" and show that Three does not stand out in terms of the number of "market leading" offers made. However, the Commission notes that Eircom considers that Three's offers are "market leading" in roughly 16% of the cases over the estimated period. The Commission also notes that Eircom's comparison likely underestimates the competitive strength of Three's offers as it does not fully factor in Three's unlimited or otherwise competitive data offers. The comparison also includes price points where Three is not at all present.

7.5.2.4. Brand positioning

The Commission's analysis in the SO

- (379) As set out in the SO,²⁴⁸ the Commission accepts that price is not the only relevant parameter of competition. Moreover, the Commission does not contest that Three's brand image may be different from that of O2 and Vodafone. However, the Commission notes that Three's brand reputation has not prevented Three from increasing its customer base in an overall declining market through its aggressive business strategy nor from exerting an important competitive pressure on the market as set out in Section 7.5.2.2.
- (380) In this respect, Three's internal documents, as well as external studies, show that Three's presence on the market has led to "[...]" for other MNOs, forcing the larger MNOs to either respond to Three's aggressive pricing or lose their customers. Customer churn and ARPU decline are associated with Three's presence on the market.²⁴⁹
- (381) Three's internal documents also indicate that Three's various aggressive and innovative campaigns have led to significant customer switching, referring for example to a "[...]", a "[...]" and a "[...]".²⁵⁰ In addition, the fact that Three has continued its aggressive offers, for example with regard to unlimited AYCE data

²⁴⁶ Response to the SO, paragraph 134 (Table 1).

²⁴⁷ Consumer Monthly Pricing Overview for the months of April and May 2012 and June to October 2013, [ID 2226-2232].

²⁴⁸ SO, Section 7.4.2.3.

²⁴⁹ For example, Three, Email from [...] to [...], 15 November 2011, [Ref: 001212618], [ID 1300-19105]; BNP Paribas "Ozone highlights", 14 November 2011, [Ref: 001213331], [ID 1300-19260].

²⁵⁰ Three Ireland 2011 Budget, 25 November 2010, for example slide 8 and 11 referring to strong growth and major turnaround of business due to new competitive positioning [ID 1055-135]; Three, Ireland Budget 2012 Update, 22 November 2011, slide 33, referring to [...], [Ref: 000915974], [ID 1302-24680]; Three, Ireland Business Update, 11 July 2011, slide 36, referring to a phenomenal uptake of the iPhone offer, [Ref: 001188360], [ID 1300-16627]; Three, Ireland Budget 2012 Summary for Chairman, 22 November 2011, referring to [...], [Ref: 001216455], [ID 1300-19467]; Three, Bill Pay, referring to [...], [Ref: 000713158], [ID 1304-4875]; Three, Ireland Business Update, 11 July 2011, slide 4, which refers to free iPhone offers having been a great success, [Ref: 001188360], [ID 1300-16627]; Three, Minutes of a meeting of the Directors of the company, 6 December 2010, referring to [...], [Ref: 000869103], [ID 1302-21070]; Three, Minutes of a meeting of the Directors of the company, 4 May 2011, referring to [...], [ID 1055-112]; Three, PROMS pack, April 2013, referring to [...], [Ref: 000788819], [ID 1299-6483]; Three, AYCE & Tethering, [Ref: 001187220], [ID 1300-16483], referring to [...].

offers, further indicates that it has been successful in attracting a significant amount of customers.

- (382) Finally, competitors, such as O2, acknowledge Three's competitiveness and the impact it has had on the market in terms of subscriber growth.²⁵¹
- (383) In addition, the Commission notes that:
- (a) Three's internal documents show that Three's brand awareness is increasing and that Three has succeeded in building loyalty among customers. [...]*.²⁵² [...]*.²⁵³ Moreover, Three has an advantageous position in terms of being a globally recognised brand, something which Three itself is keen to underline as one of the reasons why it is not a lesser brand than O2 and why post-merger it would retain the Three brand and phase out the O2 brand.²⁵⁴
 - (b) Three markets itself as Ireland's largest and best 3G network that "*excels in delivering fast mobile data*".²⁵⁵ The Commission notes that this statement is in line with Three's data-based acquisition strategy and that Three's internal documents also indicate that Three has successfully managed to accommodate significantly increasing data traffic, resulting for example from its attractive AYCE data offers, without having issues with performance.²⁵⁶
 - (c) Three's internal documents also show that [...]*.²⁵⁷
 - (d) [...]* Three's brand appeal has increased, particularly among post-paid customers. [...]*.²⁵⁸
 - (e) Finally, the largest independent retailer of mobile phones in Ireland, Carphone Warehouse, also considers that Three has a strong brand in Ireland, stating that Three is "*a fast growing and entrepreneurial company who have successfully grown market share through innovative tariff plans and pricing supported by technology and investment in subsidy to make high end smartphones more accessible*." Three is therefore considered "*the dynamic challenger brand in the market*".²⁵⁹ Similarly, Imagine Communications stated that Three has "*a good brand recognition and a strong business offering in the market place*".²⁶⁰

²⁵¹ O2, Telefónica Ireland March 2012 MRM, 16 April 2012, slide 36, referring to Three's subscriber growth across the pre- and post-paid segments being driven by [...]*, [Ref: TEL00090694], [ID 1063-15026].

²⁵² Three, Ireland Budget 2012 Update, 22 November 2011, slide 31, 38, [Ref: 000939048], [ID 1302-26221].

²⁵³ Three Ad & brand Tracking Biannual Report of January – June 2012 [Ref: 000824512], [ID 1299-8905];

²⁵⁴ Three, Project Ozone – PR Plan, [Ref: 001165262], [ID 1300-30375].

²⁵⁵ For example, Three Wholesale, presentation to [...]*, 15 November 2012, [Ref: 000391238], [ID 1053-9747]; Three, Presentation to [...]*, May 2013, [Ref: 000374138], [ID 1053-8425].

²⁵⁶ H3G, 2012-2016 Budget review, notes of budget meeting on 22 November 2011, slide 83, [Ref: 000903038], [ID 1302-23815].

²⁵⁷ Three, Presentation to [...]*, May 2013, [Ref: 000374138], [ID 1053-8425].

²⁵⁸ O2, internal Email from [...]* to [...]* and [...]* of 21 August 2013 on July Flash report, referring to [...]*, [Ref: TEL00136241], [ID 1064-4389]; O2, Email by [...]*, 28 August 2013, "Consideration and brand KPI's", [Ref: TEL00136166], referring to [...]*.

²⁵⁹ Carphone Warehouse, response to Questionnaire Q9 to MVNOs of 1 October 2013, question 42 [ID 700].

²⁶⁰ Imagine Communications Group, response to Questionnaire Q9 to MVNOs of 1 October 2013, question 42, [ID 981].

The Notifying Party's arguments in the Response to the SO

- (384) In the Response to the SO, the Notifying Party claims that [...]*, affects Three's competitiveness to the extent that Three cannot be considered an important competitive force, arguing that:
- (a) [...]*. In any case, the Notifying Party considers that Three's market share growth has been too low to qualify it as an important competitive force.²⁶¹
 - (b) Three's internal documents have limited probative value. Instead, the Commission should base its assessment on objective facts, such as representative customer surveys.
 - (c) The O2 internal documents relied upon by the Commission are taken out of their context and do not show that O2 would have considered Three as an important competitive force which stands out from other MNOs in terms of market impact.
 - (d) Responses by isolated market participants, in particular when they are not customers, cannot have a stronger probative value than the results of representative customer surveys invoked by the Notifying Party also with regard to point (b).
 - (e) Finally, the quotes from O2's surveys only show [...]*. This does not change the fact [...]*. In this respect, the Notifying Party relies on Red C's fourth quarter 2013 market research report and the Millward Brown first quarter 2013 report.

The Commission's assessment

- (385) The Commission disagrees with the Notifying Party's arguments.
- (386) First, the Commission considers that Three's customer base would not have grown the way it did if any [...]* were truly affecting Three's competitiveness. Three's growth has been strong and continuous. This growth is shown by Three's Budget Plans.²⁶² Despite being lower than the budgeted growth and the 2011 actual revenue growth, Three's strong customer base growth delivered an actual 2012 revenue growth of [...]*.²⁶³ Three has also continuously increased its market share over the last years. In the three years from 2010 to 2012, its market share grew from 4% to 8% by revenues and from 6% to 9% by subscribers on the overall retail mobile telecommunications services market. In 2013, Three's market share is reported as 10% for both subscribers and customers. These figures are to be viewed in the context of an overall declining market where other MNOs either stagnate or decline on the overall market.
- (387) Three's growth is all the more remarkable given that it only had 2.1 GHz spectrum until the spectrum auction in 2012, which means that it operated a 3G-only network.

²⁶¹ SO, paragraphs 240 and following.

²⁶² Three Ireland 2011 Budget, 25 November 2010, [ID 1055-135]; Three, Ireland Budget 2012 Update, 22 November 2011, [Ref: 000915974], [ID 1302-24680]; and Three, Ireland Budget Presentation 2013, 27 November 2012, [ID 1055-137]. See for example also Three, 2013-2017 Budget Review Meeting – Discussion Notes, which for example refers to an increase in registered customers of [...] end 2012, [Ref: 000900875], [ID 1302-23617].

²⁶³ Three, Ireland Budget Presentation 2013, 27 November 2012, slide 27, [ID 1055-137].

This means that Three only competed for customers with 3G-handsets. However, 2G mobile phone customers traditionally constituted a large part of the market. Indeed, according to Three's own figures, GSM-only handsets still account for a significant proportion ([...]*%) of all pre-paid handsets,²⁶⁴ and this proportion was even higher in the past.

- (388) Contrary to the Notifying Party's claims, the Commission concludes that Three qualifies as an important competitive force despite the fact that Three's market share growth is somewhat lower than that of Tele.ring in Case M.6497 – *H3G / Orange Austria*. Tele.ring doubled its market share in revenue in three years, similarly to Three, which doubled its market share in revenue from 4% in 2010 to 8% in 2012. Tele.ring's growth in market share in terms of subscribers was, however, higher than Three's. This comparison is, however, of very limited relevance, as market share growth must be assessed on the basis of the particular facts of the case. For example, in the case of Tele.ring, the provision of data services did not play any role. However, as noted in recital (65), Three has a particular stronghold in data, the importance of which is rapidly growing.
- (389) Second, as set out in more detail in recitals (287) - (288), the Commission concludes that Three's internal documents have probative value and can be relied upon in this case. In this context, and contrary to the Notifying Party's claims, it should also be noted that the statements made in Three's documents are not "unsubstantiated" in that they often quantify the impact of Three's campaigns by providing concrete examples of sales increases and customer acquisition numbers.²⁶⁵ In addition, Three's statements are backed up by O2 and other competitor documents and submissions showing the competitive pressure exerted by Three on the market.²⁶⁶
- (390) The Commission considers that the Red C customer surveys do not invalidate the Commission's view that Three is an important competitive force. In fact, the surveys suggest that Three ranks relatively closely behind its substantially bigger competitors in the various categories including "[...]*", "[...]*" and "[...]*".²⁶⁷ The Commission also notes that these surveys show that Three's [...]*.²⁶⁸
- (391) With regard to the Millward Brown study invoked by the Notifying Party,²⁶⁹ the Commission does not contest that [...]*. In this respect, the Commission notes that:

²⁶⁴ Response to the SO, paragraph 276.

²⁶⁵ For example, Three, Ireland Budget 2012 Summary for Chairman, 22 November 2011, referring to Three re-launching pre-paid proposition in August with customer acquisition numbers increasing [...]*, [Ref: 001216455]; Three, Minutes of a meeting of the Directors of the company, 4 May 2011, referring to an [...]*, [ID 1055-112]; Three, PROMS pack, April 2013, referring to Three taking [...]*% of all new post-paid connections in the last quarter of 2012, [Ref: 000788819], [ID 1299-6483].

²⁶⁶ For example, O2, Telefónica Ireland March 2012 MRM, 16 April 2012, slide 36, [Ref: TEL00090694], [ID 1063-15026]; O2, QFC2 1st submission to group, 11 May 2012, [Ref: TEL00123842], [ID 1064-4950]; Telefónica, 3 year plan update, March 2013, [Ref: TEL00052141]; O2, Project Ozone, November 2011, slide 6, 7, 10 [Ref: TEL00170580], [ID 1065-45026]. See also O2, Business Plan 2013-2015, May 2012, slides 9, 12, 13 and 29, [...]*, [Ref: TEL00025614], [ID 1061-18019]; Eircom's response to Questionnaire Q8, 9 October 2013, [ID 1067]; [...]*.

²⁶⁷ Response to the SO, page 59, Figures 2 and 3.

²⁶⁸ Response to the SO, page 60, Figure 4.

²⁶⁹ Response to the SO, page 60.

- (a) With regard to the Notifying Party's claim that the [...] (a measure of whether customers have seen, read or heard anything about Three), the Commission nevertheless notes that the awareness of the Three brand is reported to amount to [...]%, which is relatively closely behind Eircom's [...] (and O2's and Vodafone's [...]).²⁷⁰ The Commission also notes that Three's level of brand communication awareness may not necessarily be very informative with regard to the nature of Three's brand reputation.
- (b) [...] In addition, the Commission notes that the fact that some customers may not consider Three as the only mobile network provider they would like to use, they may nevertheless choose to become or remain a Three customer.
- (c) [...]
- (d) [...]
- (392) Third, with regard to the O2 internal documents referred to in the SO,²⁷⁴ the Commission disagrees that these documents are taken out of context. Those documents show that Three's offers exert an important competitive constraint on the market. Contrary to the Notifying Party's claims, the Commission does not have to show that Three stands out from the other MNOs in terms of its impact on the market in order for Three to be considered an important competitive force.
- (393) Fourth, the Commission considers that responses by individual market participants, in particular by the largest independent retailer of mobile phones in Ireland (Carphone Warehouse), have a probative value. As the Commission disagrees with the Notifying Party's claims that the customer surveys show that the Three brand is perceived to be [...], the Commission does not find it necessary to engage in an assessment of whether the probative value of one exceeds the other.
- (394) Finally, contrary to the Notifying Party's claims, the Commission considers that the quotes from recent O2 surveys show a [...].²⁷⁵

Conclusion

- (395) The Commission therefore concludes that Three's brand reputation does not negatively impact Three's competitiveness to such a degree that it cannot be considered an important competitive force on the retail mobile telecommunications services market.

7.5.3. Importance of Three in its segments of activity

7.5.3.1. Introduction

²⁷⁰ O2 Brand & Advertising – Qtr1' 13, 23 May 2013, Millward Brown, slide 20, [ID: 447].

²⁷¹ O2 Brand & Advertising – Qtr1' 13, 23 May 2013, Millward Brown, slide 25, [ID: 447].

²⁷² O2 Brand & Advertising – Qtr1' 13, 23 May 2013, Millward Brown, slide 45, [ID: 447].

²⁷³ O2 Brand & Advertising – Qtr1' 13, 23 May 2013, Millward Brown, slide 46-18, [ID: 447].

²⁷⁴ For example, Telefónica Ireland March 2012 MRM, 16 April 2012, slide 36, [Ref: TEL00090694], [ID 1063-15026].

²⁷⁵ O2, internal Email from [...] to [...] and [...] of 21 August 2013 on July Flash report, referring to [...], [Ref: TEL00136241], [ID 1064-4389]; O2, Email by [...], 28 August 2013, "Consideration and brand KPI's", [Ref: TEL00136166], referring to [...].

The Commission's analysis in the SO

- (396) Since its entry in the Irish market in 2005 on the basis of a 3G licence, Three has focused on data growth. Three initially concentrated on the mobile broadband segment, being the first MNO to offer stand-alone mobile broadband services and achieving a leading position in terms of market share, both by revenues and by subscribers. It has also historically focused on the post-paid segment, gaining traction by being the first MNO to offer free iPhones on the market, achieving a [10–20]*% market share. In 2011, Three also expanded more aggressively into the pre-paid segment, launching the first AYCE price tariff in this segment which was perceived as a significant innovation at the time. Three has managed to build [...] of its subscriber share in pre-paid in (less than) two years which illustrates how quickly Three has grown when entering into a new segment. More recently, in 2010, Three began competing in the business segment, trebling its market share in three years, although its market share is still fairly low, at [0–5]*% on the basis of 2012 figures and [0–5]*% on 2013 figures.
- (397) This section sets out how, in addition to being an important competitive force on the overall retail telecommunications services market, Three is also an important competitive force in certain segments of it, making an important contribution to competition and affecting the behaviour of its competitors. The Commission examines Three's importance in mobile broadband, where Three has a leading market share position. The Commission continues its assessment by examining Three's importance in the post-paid segment and then in the pre-paid segment. The Commission concludes that in mobile broadband, post-paid and pre-paid segments, Three is an important competitive force. Finally, the Commission considers Three's position in the business segment, where it concludes that Three is not yet an important competitive force.

The Notifying Party's arguments in its Response to the SO

- (398) In its Response to the SO, the Notifying Party largely repeats the arguments made for the overall market analysis. The Notifying Party argues that the SO relies heavily on selective and subjective internal documents, fails to conduct a proper investigation of the objective facts of market reality (such as an objective comparison of tariffs and offers available in the market) and fails to investigate the level of aggressiveness of other operators in order to make a comparison with the level of aggressiveness of Three.

The Commission's assessment

- (399) The Commission has addressed the Notifying Party's general arguments in recital (281). The Commission considers that some of these arguments relate to Three's interpretation of the legal test for finding that Three is an important competitive force. As discussed in recital (283), the Commission does not contest that players other than Three may also be aggressive and potentially disruptive in relation to certain segments in Ireland, as they may also be in relation to the overall retail mobile telecommunications services market. The Irish market is a concentrated market. All MNOs contribute to competition and are therefore arguably important. This does not invalidate Three's role as an important competitive force on the overall retail mobile telecommunications services market and on specific segments.
- (400) Recitals (401) to (464) set out Commission's assessment that Three is an important competitive force in the mobile broadband, post-paid and pre-paid segments.

Following the Response to the SO, the Commission considers that while Three is growing significantly in the business segment, it has not yet achieved the status of an important competitive force, although this might happen in the future.

7.5.3.2. Mobile broadband segment

The Commission's analysis in the SO

- (401) The Commission considers that Three is an important competitive force in the mobile broadband segment. Three is a market leader with a [30–40]*% market share in that segment. Three was the last operator to enter the mobile market in Ireland and still managed to achieve the leading position in this segment. This is because of its successful data growth strategy.
- (402) Three's strategic management documents show Three's plans for mobile broadband. For example:
- (a) Three's 2013 Budget Plan states that [...]*²⁷⁶
 - (b) Three's 2012 Budget Update refers to Three introducing a "[...]*" with 21Mb MiFi product.²⁷⁷
- (403) Other strategic documents also show that Three [...]*.²⁷⁸
- (404) Further Three internal documents show that Three is an important competitive force in mobile broadband, exercising an important competitive pressure both on O2 and its other competitors. For example:
- (a) Three considers that it offers "[...]*" and that it is "[...]*";²⁷⁹
 - (b) a Three presentation states that Three [...]*;²⁸⁰
 - (c) a further Three presentation shows that [...]*;²⁸¹
 - (d) as recently as September 2013, Three confirmed that it [...]*.²⁸²

The Notifying Party's Response to the SO

- (405) In its Response to the SO, the Notifying Party argues that the mobile broadband segment has not developed as Three had originally expected. Even at its peak time, the Notifying Party submits that it did not represent more than 10% of the overall subscribers of mobile telecommunications. Therefore, the Notifying Party argues that its position in mobile broadband is not an indication of its position in the overall retail mobile telecommunications services market.

²⁷⁶ Three, Budget presentation 2013, 27 November 2013, slide 75, [ID 1055-137].

²⁷⁷ Three, Ireland Budget 2012 Update, 27 November 2012, [Ref: 000895383], [ID 1302-23124].

²⁷⁸ Three, Ireland Business Update, 30 June 2011, [Ref: 001188287], [ID 1300-16624].

²⁷⁹ Three, Ireland 2011 Budget, 25 November 2010, [ID 1055-135]. See also Three, Briefing Note. CIMA Network News Magazine, 7 March 2012, referring to rapidly becoming the market leader in mobile broadband and bringing down prices across the board, [Ref: 001180019], [ID 1300-31704].

²⁸⁰ Three, Market/Competitor Update, [...]*, 18 May 2012, [Ref: 000800338], [ID 1299-7135]. See also KPI Boot Camp 2012, referring to Three having the best value rates, saving customer money, as well as the choice of data allowances suiting all needs in mobile broadband post-paid, [Ref: 001198407], [ID 1300-17713].

²⁸¹ Three, KPI's, 5 June 2012, [Ref: 000801804], [ID 1299-7229].

²⁸² Three, September '13 PROMS pack, [Ref: 000000371], [ID 1049-2194].

- (406) In its Response to the SO,²⁸³ the Notifying Party also presents a tariff comparison, [...]*. Three introduced a EUR 8 offer in response to a similar offer by Vodafone.
- (407) In its Response to the SO, the Notifying Party also argues that [...]*.
- (408) The Notifying Party argues that [...]*.

The Commission's assessment

- (409) The Commission does not agree with the Notifying Party's assessment. The Commission considers that Three's strength in mobile broadband is an indication of how its data growth policy has made Three an important competitive force. This strategy is employed by Three in a variety of segments, as will be shown Sections 7.5.3.3 to 7.5.3.5. The data growth strategy has ensured Three's competitiveness, first in mobile broadband and then in the post-paid and pre-paid segments.
- (410) The Commission is not disputing the fact that other MNOs may also be competing in the market and that they too might have certain competitive tariffs. However, the Commission's tariff comparison shows that Three is one of the cheapest providers of mobile broadband and also that it is the provider with the largest bundle, serving the most innovative and data-hungry customers.
- (411) The Commission has reviewed the Notifying Party's tariff analysis. Three's largest bundle is three times larger than the largest bundle of Vodafone and twice that of Eircom. The Notifying Party accepts that this bundle is attractive for high-volume users but considers [...]*. The Commission agrees that such [...]* is only important to a certain user profile. This is the case for all bundles and this is the reason why each MNO offers a variety of packages of different sizes and prices. In addition, a large bundle, such as Three's 60 GB bundle, can act as a flagship for advertising and marketing purposes, demonstrating Three's strength and competitiveness in mobile broadband to potential customers.
- (412) In relation to innovation, the Commission accepts that other competitors may also be innovative in the same way as Three or in different ways. The Commission also considers that when designing tariffs and offerings, some proposals will succeed and others will fail. Three's market position in mobile broadband is a resounding indication that it finds appeal with the Irish customers.
- (413) The Commission's view that Three exerts competitive pressure in the mobile broadband segment is supported by evidence of other competitors' reaction to Three. An O2 internal document shows that in order to secure its current lead in mobile broadband Three has "[...]*".²⁸⁴ A Vodafone presentation also shows Three's leading position in mobile broadband services.²⁸⁵

Conclusion

- (414) The Commission's conclusion is that Three is an important competitive force in the mobile broadband market segment.

²⁸³ Paragraph 203 and Table 5: Post-pay mobile Broadband Pricing (as at 10 February 2014).

²⁸⁴ O2, Project Ozone, November 2011, slide 7, [Ref: TEL00170580], [ID 1065-45026]. See also O2, "Three Ireland Ltd", 10 July 2013, slide 34, referring to Three offering AYCE broadband from EUR 3 / day, [Ref: TEL00115881], [ID 1063-13710].

²⁸⁵ Vodafone, H3G acquisition of Telefónica "O2 Ireland", 13 October 2013, [ID 1993].

7.5.3.3. Post-paid segment

The Commission's analysis in the SO

- (415) The Commission considers that Three's aggressive strategy, which is based on generous / AYCE data offers, attractive voice/text bundles and aggressive device prices (free or heavily subsidised), has established Three as an important competitive force in the post-paid segment.²⁸⁶
- (416) Three's position as an important competitive force is also shown by Three's internal documents:
- (a) Internal documents show that [...]*.²⁸⁷
 - (b) Three is the only operator to offer unlimited data on almost all voice plans allowing customers to surf for free. Internal documents show that Three's AYCE offers are "[...]*", providing "[...]*". They are also often bundled together with attractive monthly tariff allowances, unlimited or generously bundled Flexi-units (that is, units that can be converted to voice minutes, data bytes or SMS messages and therefore are tailored to each subscriber's needs) and provide a significant competitive advantage to Three.²⁸⁸
 - (c) In benchmarking itself with its competitors, Three frequently [...]*.²⁸⁹ [...]*.²⁹⁰
 - (d) Three also offers competitive monthly tariff allowances.²⁹¹

²⁸⁶ For example, Three, Bill Pay Review 2012-2014, [Ref: 000833611], [ID 1299-9545].

²⁸⁷ Three Ireland, Market/Competitor Update, [...]*, 18 May 2012, [Ref: 000800338], [ID 1299-7135]. See also Three, Email from [...]* to [...]* of 3 January 2013 [...]*, [Ref: 000770407], [ID 1299-10481]; Three, ComReg update Q1 2012, reporting that Three's [...]*, [Ref: 000796057], [ID 1299-6913]; Three, Slide request 28th for 29th, date unknown, probably 2011, referring to Three offering [...]*, [Ref: 000800137], [ID 1299-7114]; Three, Bill Pay Review 2012-2014, on Three's post-paid offers being [...]*, [Ref: 000833611], [ID 1299-9545]; Three, "Competitive Position – September 2012, [Ref: 000828522], [ID 1299-9247].

²⁸⁸ Three, Slide request 28th for 29th, date unknown, probably 2011, which refers to [...]* , [Ref: 000800137], [ID 1299-7114]; Three, Ireland Business Update, 29 January 2013, slide 31, referring to [...]*, [Ref: 000466411], [ID 1051-29782]; Three comments in the Irish Independent on its new advertising campaign, 19 February 2013, referring to Three being the only MNO offering AYCE data allowing the customer unlimited internet usage and customers enjoying the "instantaneous benefits of AYCE data and Flexi-units", [Ref: 000780138], [ID 1299-5862]; Three, Ireland Sales Update, 18 May 2012, referring to Three's exclusive AUCE offer, [Ref: 000802539], [ID 1299-7285]; Three, All you can eat review, undated, referring to Three's AUCE being market leading, [Ref: 000805552], [ID 1299-7595]. Three Sales Update, April 2013, referring to [...]*, [Ref: 001162579], [ID 1300-30189]; Three, [...]*Weekly Sales & Commercial slides, 18 June 2013, referring to [...]*, [Ref: 000014907], [ID 1049-2382]; Three, April '13 PROMS pack, referring to [...]*, [Ref: 000788819], [ID 1299-6483]; Three, presentation unnamed and undated (2H2012), stating that [...]* [Ref: 000751244], [ID 1299-6319].

²⁸⁹ Three, Pricing overview, 3 December 2012, [Ref: 001107642], [ID 1300-22999]; Three, April '13 PROMS pack, [Ref: 000788819], [ID 1299-6483]; Three, [...]*, Weekly Sales & Commercial slides, 18 June 2013, [Ref: 000014907], [ID 1049-2382]; Three internal document "KPI's", undated; Brand Health H2 campaign, [...]* [Ref: 000008512], [ID 1049-1963]; Three wholesale – Presentation to [...]*, 15 November 2012, slide 27, [Ref: 000384312], [ID 1053-9255]; Three, Pricing overview, 3 December 2012, [Ref: 001107642], [ID 1300-22999]; Three, PROMS pack, June 2013, [Ref: 000748631], [ID 1299-10452].

²⁹⁰ H3G, 2012-2016 Budget review, notes of budget meeting on 22 November 2011, [Ref: 000903038], [ID 1302-23815]; Three, AYCE & Tethering, undated, [Ref: 000824470], [ID 1299-8903]; Three, All you can eat review, undated, [Ref: 000805552], [ID 1299-7595].

- (e) In addition to its data plans, text and voice bundles and competitive monthly allowances, Three offers competitive smartphone prices. Internal documents show that Three's handset prices [...]***²⁹² [...]***²⁹³ Three gained traction in the post-paid segment when it launched the free iPhone 4.
 - (f) Finally, Three's 2013 Budget Plan²⁹⁴ and other internal documents²⁹⁵ show that [...]***.
- (417) There are several recent examples of Three's competitive strategy in the post-paid segment. For example:
- (a) In January 2013, Three offered the lowest total cost of ownership and best data allowance for iPhone 5.²⁹⁶
 - (b) In February 2013, Three offered a free Samsung Galaxy SIII Mini including AYCE data and 350 Flexi-units for a price of EUR 40.66 (reduced from EUR 51.64) in order to "[...]***".²⁹⁷
 - (c) In February and March 2013, Three was competing head-on with O2 and Vodafone, "[...]***" (including AYCE data and 350 Flexi-units) for customers who did not wish to purchase a new device. In order to further grow its customer base, Three also improved its trade-in offer providing a free iPhone 5 to customers trading in their iPhone 4s.²⁹⁸

²⁹¹ Three, PROMS pack, April 2013, [Ref: 000788819], [ID 1299-6483]; Three, Bill Pay, referring to Three's Classic Flex max at EUR30.50/month, [Ref: 000713158], [ID 1304-4875]; Three, ComReg update Q1 2012, reporting [...]***, [Ref: 000796057], [ID 1299-6913]; Three, presentation unnamed and undated (2H2012), [...]***, [Ref: 000751244], [ID 1299-6319].

²⁹² Three, Bill Pay, [Ref: 000713158], [ID 1304-4875]; Three email [...]***, [Ref:001234088], [ID 1300-21710]; Three, Proposal for Galaxy S3 Advert, 28 May 2012, referring to Three being the "only network to offer the S III for free at EUR40.66 per month", [Ref: 000753506], [ID 1299-7997]; Three wholesale – Presentation to [...]***, 15 November 2012, slide 27, according to which Three's competitors are charging higher upfront fees for iPhone 5, [Ref: 000384312], [ID 1053-9255]; Three presentation on "ComReg update Q1 2012", reporting on 1 of every 2 post-paid handsets sold being purchased from Three in Q1 to Q2 2012, [Ref: 000796057], [ID 1299-6913]; See also Three presentation on "ComReg update Q1 2012", reporting that Three's current bill pay proposition leads the market with best in the market iPhone4 device price, [Ref: 000796057], [ID 1299-6913]; Three "Slide request 28th for 29th", date unknown, probably 2011, referring to "best device price in the market" for iPhone 4 and Samsung Galaxy S III, [Ref: 000800137], [ID 1299-7114]; Three Ireland "Market/Competitor Update", [...]***, 18 May 2012, according to which Three is the only operator offering iPhone4S and Samsung Galaxy SIII for free with AYCE data, [Ref: 000800338], [ID 1299-7135]; Three, KPI's, undated, on Three offering the lowest Samsung SIII and iPhone pricing on a 24 month contract, [Ref: 000801804], [ID 1299-7229]; Three, PROMS pack, April 2013, [Ref: 000788819], [ID 1299-6483]; Three, Pricing overview, 3 December 2012, [Ref: 001107642], [ID 1300-22999]; Three, presentation unnamed and undated, stating that Three's SIII proposition leads the market, [Ref: 000751244], [ID 1299-6319].

²⁹³ For example Three, Ireland 2011 Budget, 25 November 2010, slide 27, [ID 1055-135]; Three internal email exchange of 14-15 February 2013, referring to [...]***, [Ref: 001125489], [ID 1300-25697]; Three, Switcher Campaign, 16 February to 24 March 2013, [Ref: 001123951], [ID 1300-25281].

²⁹⁴ Three, Ireland Budget Presentation 2013, slide 64, [ID 1055-137].

²⁹⁵ Three, Pricing overview, 3 December 2012, referring to [...]***, [Ref: 001107642], [ID 1300-22999]; Three, Ireland Business Update, 29 January 2013, slide 31, [Ref: 000466411], [ID 1051-29782].

²⁹⁶ Three, Ireland Business Update, 29 January 2013, slide 31 and 45, [Ref: 000466411], [ID 1051-29782].

²⁹⁷ Three, Ireland Business Update, 29 January 2013, slide 32, [Ref: 000466411], [ID 1051-29782].

²⁹⁸ Three, March '13 PROMS pack, [Ref: 000779036], [ID1299-5751]; the Irish Independent, Three's comments on its new advertising campaign, 19 February 2013, [Ref: 000780138], [ID 1299-5862].

- (d) In April 2013, Three launched the iPhone S4 with AYCE data tariffs for EUR 40 per month and offered the SIII at the "[...]" of EUR 49.²⁹⁹
- (e) In June 2013, Three launched its "[...]", the new "[...]" AYCE voice, text and data tariff at EUR 55 (with a smartphone) to maintain its market leading position.³⁰⁰ Three also showed its continued focus on AYCE Everything tariffs campaigns, [...].³⁰¹
- (f) As recently as in September 2013, Three showed that it "[...]".³⁰²
- (g) The market investigation shows that Three is currently the only operator to offer an iPhone 5c for free to customers subscribing to its post-paid plan with unlimited data, voice and text at EUR 55 and also offers the lowest price for the Galaxy S IV.³⁰³
- (418) With its innovative AYCE data and Flex plans, which gives customers greater control over their monthly costs, Three also succeeds in addressing one of the important fears of post-paid customers, which is overspend.³⁰⁴ Three's internal documents show [...].³⁰⁵
- (419) Three's innovative strategy has clearly been successful in the post-paid segment of the market. Three has consistently grown its revenue share from [5–10]*% in 2010 to [10–20]*% in 2012 and currently holds [10–20]*% in 2013. Three itself reports that its market share has grown at twice the rate of the market.³⁰⁶ Moreover, Three's post-paid handset base grew [...]*% year on year, [...]* on the basis of 2012 data.³⁰⁷ Internal documents also show that Three's AYCE plans have been successful in driving gross acquisitions.³⁰⁸
- (420) O2's internal documents show that Three's strategy on the post-paid segment has had a significant impact on the market.³⁰⁹ For example:

²⁹⁹ Three, April '13 PROMS, [Ref: 000788819], [ID 1299-6483].

³⁰⁰ EUR 39.75 for SIM only. Three, Ireland Business Update, 19 April 2013, slides 38-39, [Ref: 001168897], [ID 1300-30742]; Three, PROMS pack, June 2013, [Ref: 000748631], [ID 1299-10452].

³⁰¹ Three, [...]*, Weekly Sales & Commercial slides, 18 June 2013, [Ref: 000014907], [ID 1049-2382].

³⁰² Three, September '13 PROMS pack, [Ref: 000000371], [ID 1049-2194].

³⁰³ O2, Response to Questionnaire Q23, page 3-5, [ID 1480].

³⁰⁴ Three, Bill Pay Review 2012-2014, [Ref: 000833611], [ID 1299-9545].

³⁰⁵ Three, AYCE & Tethering, [Ref: 001187220], [ID 1300-16483]. See also The internal document "Transformation brief: Three Bill Pay" of 27 June 2012, [...]* [Ref: 000798576], [ID 1299-7039]; Three news release of 21 September 2012 on "Three to offer iPhone 5 in Ireland on September 28", [Ref: 000756656], [ID 1299-9652].

³⁰⁶ Three, Ireland Budget Presentation 2013, slides 27-28, [ID 1055-137].

³⁰⁷ Three, ComReg Q4 2012 review, 13 March 2013, [Ref: 000786956], [ID 1299-6338]. See also Three, ComReg update Q1 2012, reporting that Three's handset base grew [...]*% in Q1 to Q2 2012 [Ref: 000796057], [ID 1299-6913].

³⁰⁸ For example, Three, AYCE & Tethering, [Ref: 001187220], [ID 1300-16483]; O2, Telefónica Ireland March 2012 MRM, 16 April 2012, slide 36, [Ref: TEL00090694], [ID 1063-15026].

³⁰⁹ Telefónica, 3 year plan update, March 2013, [Ref: TEL00052141], [ID 1061-23531]; O2, QFC2 1st submission to group, 11 May 2012, slide 7, [Ref: TEL00123842], [ID 1064-4950]. See also O2, Feedback from Q1 Business Updates. Regain Commercial Momentum of 21 February 2012, page 5, [Ref: TEL00017141], [ID 1061-16363]; O2, Business Plan 2013-2015, May 2012, [...]*, [Ref: TEL00025614], [ID 1061-18019].

- (a) an O2 presentation refers to Three being a [...]*;³¹⁰
- (b) an O2 report refers to the fact [...]*;³¹¹
- (c) another O2 presentation refers to [...]*;³¹²
- (d) [...]*.³¹³

The Notifying Party's Response to the SO

- (421) The Notifying Party, in its Response to the SO,³¹⁴ argues that the evolution of market shares in the post-paid segment shows that the fastest growing operator is not Three, but [...]*. In terms of subscribers, Three only gained a [0–5]*% market share in two years, whereas [...]* gained [5–10]*%.
- (422) The Notifying Party sets out a number of "*objective comparisons of the post-paid offers of the Irish MNOs*".³¹⁵ The Notifying Party states that post-paid bundles are multi-dimensional products and that each customer's purchasing decision is complex and driven by a number of factors, including economic factors, such as price of handset and level of monthly charge, volumes included in the bundle and types of units (for example minutes vs. text vs. data, family and friends networks, loyalty programmes, add-ons etc.) and other factors, such as network quality, coverage and brand.
- (423) According to the Notifying Party, even when focusing only on economic factors, post-paid bundles are difficult to compare because the answer to which tariff is considered the most attractive will always depend to an extent upon the individual consumption patterns of each customer.
- (424) [...]*
- (425) [...]*
- (426) The Notifying Party argues that when Three introduced its AYCE offers in April 2011 together with the almost simultaneous launch of Three's free iPhone 4, this [...]*.
- (427) Finally, the Notifying Party argues that no other competitor has replicated Three's AYCE offer in response.

The Commission's assessment

- (428) In relation to Three's market share growth, the Commission considers that the important element here is that Three grew, contrary to Vodafone and to O2 which lost customers. Also, in terms of revenue market shares, Three [...]*. In 2013, Three held [10–20]*% of this segment in terms of revenues.

³¹⁰ O2, Project Ozone, November 2011, slide 6, [Ref: TEL00170580], [ID 1065-45026].

³¹¹ O2, Three Ireland Ltd, 10 July 2013, slide 34, [Ref: TEL00115881], [ID 1063-13710].

³¹² O2, Telefónica Ireland March 2012 MRM, 16 April 2012, slide 36, [Ref: TEL00090694], [ID 1063-15026].

³¹³ O2, O2 Brand & Advertising – Qtr1' 13, 23 May 2013, Millward Brown, slide 9, [ID: 447].

³¹⁴ Response to the SO, paragraph 262.

³¹⁵ Response to the SO, paragraph 210.

(429) In recitals (322) to (372), and in response to the Notifying Party's criticism, the Commission has conducted its own tariff comparison based on a number of common usage profiles. In this section, the Commission considers the tariff comparisons put forward by the Notifying Party in its Response to the SO and concludes that they are consistent with the Commission's conclusion that Three is an important competitive force in the post-paid segment:³¹⁶

- (a) The Notifying Party relies on a comparison based on bundles available at the most popular price point on two dates, 12 February 2013 and 12 February 2014. The Commission notes that, in the 2013 price comparisons, Three and Eircom are the cheapest but Three offers more units and unlimited data. However, Three charges for the particular handset chosen in the Notifying Party's comparison, whereas Eircom does not. In 2014, Three's offer initially seems to be the most expensive of the four MNOs' tariffs at EUR 40.66. However, Three offers a free handset and one of the most generous packages in terms of minutes and text and is the only one to include AYCE data. O2, in its tariff for EUR 35, that is only EUR 5.66 cheaper, still charges extra EUR 139 for the handset. Even calculated on the basis of a 24 months contract, the handset subsidy is then still slightly more expensive, than the added costs of the EUR 5.66 price difference between the monthly tariff rates.
- (b) The Notifying Party relies on a comparison based on total cost of ownership. This is the minimum cost to the consumer over the lifetime of the contract. It equals the total of the minimum monthly cost over the duration of a post-paid contract and the upfront handset price. According to the Notifying Party, this approach compensates for the varied approach of operators who may use a low upfront device cost coupled with a higher recurring monthly fee to create an initially attractive headline price or free device offer. The Commission notes that Three ranks third, just after Eircom and Vodafone and before O2, which has the most expensive offers. Thus Three's offers are more aggressive than its market share would indicate. Three, the fourth MNO in terms of market share (revenues and subscribers) both in the overall retail mobile telecommunications services market and in this particular segment, has a better offering than the number two player in the market, O2.
- (c) Despite its argument that it is not meaningful to compare handset prices without monthly charges, the Notifying Party in its Response to the SO produced a table³¹⁷ counting how many times Three's devices were rated as the leading device in terms of pricing, either individually or together with a competitor. That table, showing only which MNO has a "leading position" in device pricing, is not the right framework of analysis. Three does not have to be the pricing leader to be an important competitive force. It could, for example, have a second best offer and stimulate competition by competing closely with the leader. In addition, the comparison of different handset subsidies is not always straightforward. In any event, the table submitted by the Notifying Party actually supports the Commission's argument. Three is the market leader (alone or with others) 33 times out of 80, which amounts to 41%.

³¹⁶ Response to the SO, paragraphs 215 onwards.

³¹⁷ Response to the SO, Table 12.

Thus the table shows that Three is much more competitive in terms of handset subsidies than what its market share would indicate.

- (430) Finally, the Notifying Party relies on the Eircom price comparison.³¹⁸ Again, Three does not have to be a leader in order to be an important competitive force. A second and third leading offer on the market still has value as it generates competition with the other MNOs.
- (431) In relation to the value of AYCE offers, the Commission accepts [...]*. However, AYCE plans attract the most data hungry customers, who are often the early adopters of technology and also often the higher value customers. AYCE as a strategy also is often used as a flagship for marketing and sales purposes. Finally, customers seem to enjoy the freedom and protection from data "bill shock", as the AYCE packages have increasing popularity with Irish consumers. In this era of data explosion AYCE is important and will become increasingly important in the future. Moreover, O2's internal documents show the important competitive pressure that Three exercises on O2 with AYCE data.
- (432) In relation to Three's argument that Three's initiatives merely lead to "spikes" in the number of new subscribers, the Commission considers that these spikes constitute evidence that Three is an important competitive force. These "spikes" kick-start competition in the market. The Commission does not expect the spike to last indefinitely, as competitors will usually respond with their own competitive offering. However, the "spike" signifies a new innovative offering, which stimulates the market.
- (433) Finally, in relation to Three's argument about competitors not reacting to its offers, the Commission disagrees that there is a need for competitors to always replicate Three's exact business strategy. The important element is that the competitors do respond to Three's offers. For example, [...]*.³¹⁹ Internal documents also show that competitors responded to Three's "*first mover advantage*" consisting in a combination of aspirational devices and attractive proposition positioning (including free device prices, AYCE data and attractive voice and text bundles) by introducing free iPhones, incorporating data into smartphone plans and moving to the same monthly (EUR 40) allowance fee as Three.³²⁰

Conclusion

- (434) The Commission's conclusion is that, based on its data strategy, competitive voice / text bundles, attractive tariffs and strong handset subsidies, Three is an important competitive force in the post-paid segment.

7.5.3.4. Pre-paid

The Commission's analysis in the SO

- (435) Three decided to extend its competitive price offerings to the pre-paid segment a few years ago. In August 2011, Three launched a new pre-paid plan, which for example

³¹⁸ Response to the SO, paragraphs 226 onwards.

³¹⁹ [...]*

³²⁰ Three, Bill Pay Review 2012-2014, [Ref: 000833611], [ID 1299-9545]; Three, Bill Pay, [000751244],

included the first offer by an MNO of AYCE data in this segment.³²¹ [...] referred to developing a new proposition that would "[...]" and include AYCE data and free "[...]"³²².

- (436) On 22 January 2014, Three announced the launch of its LTE services on 27 January 2014. In its press release, it stated that Three will offer "*the first and only 4G service in the Irish market for pre-paid customers*".³²³ The Commission accepts that other MNOs may also have recent innovations. However, this does not negate the fact that Three's innovative offers render Three an important competitive force in the market.
- (437) First, Three's internal documents show that Three exercises important competitive pressure in the pre-paid segment:
- (a) In its March and June 2013 PROMS pack, Three considers that it has "[...]" with its EUR 20 AYCE top-up offer, underlining how well Three's AYCE offer compares to competitors' top-up offers.³²⁴
 - (b) In September 2013, Three introduced a few "[...]" smartphone devices for pre-paid.³²⁵
- (438) Three itself perceives its [...]*.³²⁶ AYCE is moreover perceived as a threat by Three's competitors, for example because it attracts heavy data users to Three.³²⁷ [...]*.³²⁸
- (439) A number of Three documents indicate Three's confidence about the success of its pre-paid strategy. [...]*.³²⁹
- (440) Three's aggressive strategy has clearly also been successful in the pre-paid segment of the market. As recently as in April 2013, Three reported that its pre-paid handset

³²¹ Source: http://press.three.ie/press_releases/three-first-to-market-with-all-you-can-eat-data-on-prepay/ available on 7 April 2014, [ID 3977]

³²² Three, Minutes of a meeting of the Directors of the company, 4 May 2011, [ID 1055-112].

³²³ Source: <http://www.cellular-news.com/story/64018.php> available on 7 April 2014, [ID 3983]

³²⁴ Three, "March '13 PROMS pack", referring to its pre-paid EUR 20 top-up offer [Ref: 000779036], [ID 1299-5751]; Three, PROMS pack, June 2013, [Ref: 000748631], [ID 1299-10452].

³²⁵ Including the Samsung Galaxy Pocket Neo, the Samsung Galaxy Fame and the Samsung S3 Mini, see Three, September '13 PROMS pack, [Ref: 000000371], [ID 1049-2194].

³²⁶ Three, Internal Email from [...] to [...], 3 January 2013 [Ref: 000770407], [ID 1299-10481]; Three brief "Prepay campaign April/May" [Ref: 000788755], [ID 1299-6473]. See also Three internal document "Marketing Communications – Campaign Master Brief" for prepay voice, [Ref: 000808037], [ID 1299-7762]; Three, Three wholesale – Presentation to [...], 15 November 2012, slide 26, [Ref: 000384312], [ID 1053-9255], setting out Three's competitive prepay voice position; Three's, KPI's, referring to Three having the best offer for EUR20/25 AYCE data including texts and calls and on 3G handsets, [Ref: 000801804], [ID 1299-7229]; Three, Three Ireland Competitive Position – September 2012, referring to Three being the only operator to offer AYCE data and also referring to generous add-ons, [Ref: 000828522], [ID 1299-9247]; Three, PROMS pack, June 2013, [Ref: 000748631], [ID 1299-10452], referring to being the only network with free AYCE data; Three Ireland "Market/Competitor Update", [...], 18 May 2012, [Ref: 000800338], [ID 1299-7135], according to which Three leads the market at EUR 20 and are introducing value into the EUR 5 and EUR 10 top-ups.

³²⁷ Telefónica, 3 year plan update, March 2013, [Ref: TEL00052141], [ID 1061-23531].

³²⁸ H3G, 2012-2016 Budget review, notes of budget meeting on 22 November 2011, [Ref: 000903038], [ID 1302-23815].

³²⁹ Three, Ireland Business Update, 29 January 2013, slide 23, 33, [Ref: 000466411], [ID 1051-29782]. Three, Pricing overview, 3 December 2012, slide 3, [Ref: 001107642], [ID 1300-22999].

share had increased to [...]%, growing [...]% year on year while the market declined [...]%.³³⁰ Three also reported that it had captured [...]% of new connections.³³¹ Moreover, in January 2013, Three considered that port-ins had increased by [...]% in 2012 compared to 2011 as Three's pre-paid propositions successfully have taken customers from all competitors. Three concluded that it was "[...]*", delivering a [...]% growth in 2012.³³²

- (441) Third, O2's internal documents also show that Three's strategy on the pre-paid segment has had an impact on the market. For example:
- (a) O2 documents show that [...]*,³³³
 - (b) an O2 document shows that Three offers [...]*,³³⁴
 - (c) an O2 email also shows that [...]*.³³⁵
- (442) In addition, Three drives competition in the pre-paid market by [...]*.³³⁶
- The Notifying Party's arguments in the Response to the SO*
- (443) The Notifying Party makes a number of arguments why Three is not an important competitive force in the pre-paid segment.
- (444) First, the Notifying Party argues, in its Response to the SO, that Three only has a [...]% market share, which is very small given that Three started offering pre-paid services in 2006. It argues that Tesco Mobile and Lycamobile have been growing faster.
- (445) Second, the Notifying Party puts forward price comparisons and argues that the SO claims that Three is not [...]* is not sufficient to qualify Three as an important competitive force.
- (446) Third, in terms of handset pricing, the Notifying Party complains that the Commission does not provide any comparison in the SO. In this respect, it is argued that Three is unable to offer the most popular handsets and that this is the most important constraint to Three's competitiveness in the pre-paid segment. The Notifying Party also states that it is not possible for Three to subsidise its pre-paid

³³⁰ Three, Three Ireland Sales Update, April 2013, [Ref: 000805286], [ID 1299-7565].

³³¹ Three, Ireland Budget Presentation 2013, 27 November 2012, slide 30, [ID 1055-137].

³³² Three, Ireland Business update, 29 January 2013, slide 26 and 27, [Ref: 000466411], [ID 1051-29782].

³³³ O2, Telefónica Ireland March 2012 MRM, 16 April 2012, slide 36 referring to [...]*, [Ref: TEL00090694], [ID 1063-15026]; O2 "2012 Budget review", 27 October 2011, slides 9, referring to [...]*, [Ref: TEL00164537], [ID 1065-44050].

³³⁴ Telefónica, 3 year plan update, March 2013, [Ref: TEL00052141], [ID 1061-23531]; O2, QFC2 review, 17 April 2013, slide 2, referring to [...]*, [Ref: TEL00058185], [ID 1061-24489]; O2 presentation "QFC2 1st submission to group", 11 May 2012, slide 7, referring to [...]*, [Ref: TEL00123842], [ID 1064-4950]; O2, "Three Ireland Ltd", 10 July 2013, slide 34, referring to [...]*, [Ref: TEL00115881], [ID 1063-13710].

³³⁵ For example, O2, e-mail from [...]* to O2 management, 22 May 2012, [Ref: TEL00024006], [ID 1061-17658].

³³⁶ Three, Bill Pay Review 2012-2014, [Ref: 000833611], [ID 1299-9545]. See also for example Three, Bill Pay, [Ref: 000713158], [ID 1304-4875]; O2, TEF IE September 2012 Review, 25 October 2012, slide 7, referring to [...]*, [Ref: TEL00095882], [ID 1063-8689]; Three, presentation unnamed and undated referring to [...]*, [Ref: 000751244], [ID 1299-6319].

3G devices so as to make them as cheap as 2G devices because of the significant price difference.

- (447) Fourth, in its Response to the SO, the Notifying Party repeats its arguments in relation to the post-paid segment, set out in recitals (421) to (424), that [...]*
- (448) Finally, the Notifying Party, in its Response to the SO, argues that a number of factors limit Three's competitiveness in the pre-paid segment:
- (a) The fact that Three only has a 3G network and cannot serve 2G handsets which are very popular with pre-paid customers;
 - (b) the importance of on-net allowances, where pre-paid subscribers place a high value on free calls to friends / relatives who are on the same network;
 - (c) inability to offer additional features such as top-up via banks and an IOU service.

The Commission's assessment

- (449) The Commission notes that the Notifying Party acknowledges that Three is aggressive, or at least "*as aggressive as its competitors*". The Commission agrees with the Notifying Party's position on this point.
- (450) In relation to the evolution of market shares, the Commission has considered the arguments put forward by the Notifying Party. It considers that Three's market share is small but that its competitive impact goes beyond what its market share indicates.
- (451) As for the comparison with MVNOs, the Commission disagrees with the Notifying Party's claim that Three cannot be considered an important competitive force if other operators are growing faster in a particular segment. Although Three entered the pre-paid segment in 2006, it only made a conscious effort to start replicating its success from the post-paid segment also in pre-paid as from 2011 onwards, for example by introducing AYCE data in this segment.³³⁷ From that point onwards, Three's market share grew by [...] * each year, that is from a [0–5] *% market share in 2010 to [5–10] *% in 2012 and held a [0–5] *% market share in 2013 in terms of subscribers. In terms of revenues, Three grew from a [0–5] *% market share in 2010 to a [0–5] *% share in 2012 and held a [5–10] *% market share in 2013.
- (452) Any comparison with Tesco Mobile is of limited relevance because Tesco Mobile is not independent from O2 and [...] *. Between 2011 and 2012, Tesco Mobile grew from a [0–5] *% to a [0–5] *% market share in terms of subscribers. In 2013, Tesco Mobile achieved [0–5] *%. In terms of revenues, Tesco Mobile grew from a [0–5] *% to a [0–5] *% market share and in 2013 it still held [0–5] *% market share.
- (453) In addition, the fact that Lycamobile's pre-paid market share reached 3.8% since its market entry in June 2012 does not change the Commission's assessment of Three's importance in this segment. Three's importance as a competitor in the market is measured in absolute terms in relation to what its market share would suggest, irrespective of the importance or growth of other operators.
- (454) The Notifying Party has given an overview of pre-paid top-up offers in Ireland in February 2014 and argues that this overview shows that there is no MNO or MVNO

³³⁷ Source: http://press.three.ie/press_releases/three-first-to-market-with-all-you-can-eat-data-on-prepay/ available on 7 April 2014, [ID 3977].

that can be generally regarded as "*the most price aggressive*".³³⁸ In fact, the Notifying Party's table shows that Three's offers are competitive and likely to exert an important competitive constraint on O2 and the other operators. The top-up values offered by the Irish MNOs in February 2014 are almost the same as those offered in November 2013 and the Commission has conducted an objective comparison of those values in Section 7.5.2.3. That comparison shows that Three's offers are competitive. One of the differences between November 2013 and February 2014 is that O2 now also offers unlimited internet for a EUR 20 top-up offer, whereas in November 2013, Three was the only operator to do so. This shows that competitors have reacted to Three's innovative and competitive AYCE data offer. Although O2 now also offers unlimited internet at EUR 20, its offer is still less competitive than that of Three because it does not come with any voice minutes, whereas Three offers unlimited on-net calls and unlimited any-net calls in the weekend. O2 also offers fewer SMS (350 SMS versus unlimited SMS with Three) and takes away EUR 10 of credit on activation, whereas Three's customers keep their full EUR 20 credit. Hence, regardless of the customer's consumption pattern, O2's EUR 20 "internet" pre-paid offer will always be less attractive than Three's.

- (455) Based on an overview of top-up offers in February 2014, the Notifying Party also argues that the EUR 20 offer of 48 is the outright best value. However, the Notifying Party fails to mention that this brand is exclusively offered to customers between 18 and 22 years old (the 48 refers to the 48 months between 18 and 22)³³⁹ and therefore is not accessible to the majority of Irish customers. In any event, the fact that the offer of 48 is attractive does not negate the fact that Three's offer is also attractive. The Notifying Party also mentions the value offered by Eircom for EUR 20 as the best value.³⁴⁰ In fact, Three's offer for EUR 20 provides better value than Eircom. Both Three and Eircom offer on-net calls, but on top of that, Three offers free off-net calls in the weekend, free SMS, and much more data than Eircom.
- (456) [...] ³⁴¹, the Commission notes again that Three does not have to be a leader. [...]*, the 48 brand of O2 is consistently marked as market-leading. However, as mentioned in recital (455), this brand is exclusively offered to people aged between 18 and 22.³⁴² In any event, the fact that the pre-paid tariff of 48 is attractive does not negate the fact that Three's offer is also attractive and constrains the other operators to an important degree.

³³⁸ Response to the SO, paragraphs 266 onwards.

³³⁹ See www.48months.ie/boiler-plate/about-us (which mentions that 48 is Ireland's first mobile network exclusively for 18 to 22 year olds and states that "If you are between your 18th and 22nd birthday, we're your kind of network. (...) If you're not, I'm afraid we're not for you but there are other offers out there for you.") [ID 3491]; <http://community.48months.ie/t5/Most-Popular-Questions/bd-p/faq> (under "I am not between the age 18 to 22, can I join 48?") [ID 3490]. See also Form CO, page 102, footnote 106.

³⁴⁰ Response to the SO, paragraph 271.

³⁴¹ Response to the SO, paragraphs 272 onwards.

³⁴² See www.48months.ie/boiler-plate/about-us (which mentions that 48 is Ireland's first mobile network exclusively for 18 to 22 year olds and states that "If you are between your 18th and 22nd birthday, we're your kind of network. (...) If you're not, I'm afraid we're not for you but there are other offers out there for you.") [ID 3491]; <http://community.48months.ie/t5/Most-Popular-Questions/bd-p/faq> (under "I am not between the age 18 to 22, can I join 48?") [ID 3490]. See also Form CO, page 102, footnote 106.

- (457) In relation to handset pricing, the arguments put forward by the Notifying Party are contradicted by the following evidence:
- (a) in the second half of 2011, Three started to refer to the need to replicate its significant growth in post-paid in the pre-paid market, where it experienced a "stagnant growth" due to low 3G penetration. In order to do so, Three aimed to sell 3G handsets at 2G handset prices to drive data and "use excess voice capacity in network & replicate same level of aggression in prepay as postpay ... market leading offer with EUR20 Top Up ... Free any network Texts ... Free any network weekend Calls ... Free 3 to 3 calls ... All you can eat data ... AND Lowest priced Androids handset in market...";³⁴³
 - (b) [...]*
 - (c) the Notifying Party's own comparison of pre-paid handset prices in its Response to the Letter of Facts shows that Three's offer was competitive. This is discussed in recital (343).
- (458) In any event, the Commission expects 2G-only devices to phase out from the market in the near future (replaced by 3G and LTE devices), in which case Three will no longer be at a disadvantage.
- (459) In relation to AYCE data, and similarly to the Commission's arguments in the post-paid segment in recitals (431) to (433), the Commission considers that AYCE is important and will be more so in the future. Three's offer exerts an important competitive constraint on other MNOs. This is shown by the fact that O2 has also introduced unlimited data in its pre-paid offering. Indeed, as of February 2014, O2 offered unlimited internet for a top-up of EUR 20,³⁴⁴ whereas it did not yet have that offer in November 2013.³⁴⁵
- (460) In relation to Three's competitiveness, the Commission has considered the Notifying Party's arguments. The points in this recital set out the Commission's response to them.
- (a) In relation to the fact that Three only has 3G network, the Commission considers, as discussed in recital (458), that this limitation will be eliminated in the future, as 2G will be switched off in the next few years. In any event, the Commission notes that data is the growth driver both for pre-paid as well as for post-paid. This is the future of the segment and it is where Three is particularly strong.
 - (b) In relation to on-net allowances, the Commission agrees that these allowances can be an important consideration. The shift of balance between on-net and off-net calls is an automatic consequence of a more limited subscriber base. The larger the subscriber base, the higher the likelihood that someone's friends and relatives will be in the same network. However, the Commission notes that Three partially addresses this problem by offering free any net weekend calls.
 - (c) In relation to additional features such as the ability to a consumer to top-up a pre-paid mobile allowance through the consumer's bank, the Commission notes

³⁴³ Three, Ireland Business Update, 11 July 2011, Slides 41-43, [Ref: 001188360], [ID 1300-16627].

³⁴⁴ Response to SO, paragraph 268.

³⁴⁵ Figure 19 of this Decision.

that such features are not available to 48 or to Tesco Mobile and Lycamobile customers either.

- (461) Finally, the Commission, in the Letter of Facts, refers to [...]***³⁴⁶ [...]*. The Commission considers that this document, together with all the evidence presented in the SO and in this decision demonstrates that Three is an important competitive force.
- (462) The Notifying Party, in its Response to the Letter of Facts, argues that that document does not contain relevant evidence that Three is an important competitive force, as all operators are mentioned in the assessment and each operator is noted as having a unique offer. Secondly, the Notifying Party argues that the Commission uses Three's AYCE offer in an attempt to substantiate its theory that Three is an important competitive force.
- (463) The Commission does not agree with the Notifying Party's arguments, both as to the legal standard for finding that Three is an important competitive force and as to the factual significance of having an AYCE offer.

Conclusion

- (464) The Commission concludes that, based on its data strategy and competitive voice / text bundles and tariffs, as well as handset prices, Three is an important competitive force in the pre-paid segment.

7.5.3.5. Business segment

The Commission's analysis in the SO

- (465) In the SO, the Commission reached the preliminary conclusion that Three is rapidly becoming an important competitive force in the business segment by targeting small and medium-sized enterprises with attractive business tariff offers on the basis of Three's growth in the business segment.
- (466) For example, the Three Budget Presentation of 2013 shows the growth in the business segment and states that Three is "[...]*". Between 2010 and 2011, Three reports a [...]*% growth and between 2011 and 2012 a [...]*% growth.³⁴⁷

The Notifying Party's arguments in the Response to the SO

- (467) The Notifying Party argued that Three is not an important competitive force in the business segment for a number of reasons:
- (a) Three's market share growth of [...]*% per year only cannot be an indication of "important competitive force";
 - (b) [...]*;
 - (c) Three cannot offer multi-play bundles which are particularly important in the business segment;
 - (d) [...]*;
 - (e) [...]*;

³⁴⁶ [...]*

³⁴⁷ Three, Ireland Budget Presentation 2013, 27 November 2012, slide 71 [ID 1055-137].

(f) [...]*

The Commission's assessment

(468) The Commission has considered the arguments put forward by the Notifying Party. In the light of the evidence, the Commission accepts that Three is not yet an important competitive force in the business segment, although it may become so in the future.

Overall conclusion

(469) On the basis of the above, the Commission concludes that Three is an important competitor in the retail mobile telecommunications services market, as can be shown by its overall strategy and Three's impact in a number of segments, such as mobile broadband, post-paid and pre-paid.

7.5.4. *Conditions in the absence of the merger*

7.5.4.1. Introduction

(470) As set out in Section 7.5.2, the Commission considers that Three currently is an important competitive force on the retail mobile telecommunications services market. In this section, and prior to assessing the merged entity's ability and incentives to compete in Section 7.5.5.3. and Section 7.5.5.1, the Commission establishes the competitive conditions that will prevail in the absence of the merger.

(471) According to the Horizontal Merger Guidelines, the Commission, in order to evaluate the effects of a merger, conducts its analysis "*by comparing the competitive conditions that would result from the notified merger with the conditions that would have prevailed without the merger*".³⁴⁸

(472) In most cases, the competitive conditions existing at the time of the merger constitute the relevant comparison for evaluating the effects of the merger. In such a case, the Commission takes into account the situation that exists at the time when the Commission reviews the merger. In the case at hand, the relevant point of comparison is the situation where all four MNOs would continue to operate in the market and compete vigorously with each other.

(473) Section 7.5.4 examines the Parties' respective positions in the absence of the merger. With regard to the Parties, the Commission considers that, in the absence of the merger, (i) Three is likely to remain an important competitive force, and (ii) O2 is likely to remain an important number two player with a strong brand. In addition, the Commission considers that in the absence of the merger both the Mosaic network sharing agreement between O2 and Eircom and the Netshare agreement between Three and Vodafone would continue, as originally planned before the merger.

7.5.4.2. Three's ability and incentive to compete in the absence of the merger

The Commission's analysis in the SO

(474) In the SO,³⁴⁹ the Commission reached the preliminary conclusion that in the absence of the merger, Three would most likely continue to have the ability and the incentive

³⁴⁸ Horizontal Merger Guidelines, paragraph 9.

³⁴⁹ SO, Section 7.4.3.1.

to compete and that it would continue to compete vigorously with the other MNOs on the Irish market.

The Notifying Party's arguments in the Response to the SO

- (475) In the Response to the SO, the Notifying Party submits that Three may have every incentive to continue to grow and compete but it is not likely to have the ability to do so. This is based on various reasons:
- (a) The Notifying Party claims that Three has been loss-making in each of the last eight years since market entry despite EUR [...] invested by Hutchison. As a result, Three has increased its prices on a number of bundles and decreased the level of subsidy on certain handsets. Additionally, Three has not been able to invest in the business segment and in the fixed business and grow its market share because of negative cash flow. Three's cash flow had also constrained its behaviour in the 2012 spectrum auction in which it did not acquire 800 MHz spectrum in spite of its importance for LTE deployment. Three's services in the NBS area would also deteriorate because of cash flow constraint.
 - (b) The Notifying Party claims that Three will face additional constraining factors in the coming years because it will only be able to reach 75% LTE population coverage and its network will be congested more quickly than its rivals' due to its smaller spectrum holdings. Additionally, the Notifying Party submits that, with carrier aggregation, Vodafone will be able to offer headline speeds for LTE services of 225 Mbit/s. Three would be unable to replicate such offers. Because of these capacity and speed constraints, Three is likely to become the MNO with the worst quality of service.
 - (c) The Notifying Party claims that the Commission's reliance on Three's 2013 budget plan and other internal documents is not sustainable. The Notifying Party argues that past budget forecasts do not constitute a reliable measure of [...] future performances to the extent that [...]. In addition, the Notifying Party considers that internal documents pre-dating 2013 cannot be relied upon by the Commission to illustrate Three's continued aggressiveness in the absence of the merger. Recent internal party documents from 2013 are on the other hand also discarded by the Commission on the basis that individual tariffs plans are deemed entirely unsuited to predict the future competitiveness of Three and fail to properly assess the objective market facts.
 - (d) The Notifying Party claims that the Commission has disregarded the investment constraints placed on Three by its shareholder which may not continue to fund Three's investments in spite of Three's negative cash flow. First, Three is likely to invest more with its own cash than Hutchison considering agency problems and information asymmetries between the group and its subsidiary. Second, the Notifying Party considers that the fact that Hutchison is willing to finance the acquisition of O2 is irrelevant to the extent that the merger would turn the merged entity into a profitable entity with positive cash-flow. Third, the Commission's claim that Three's positive cash flow could be used by Hutchison for other investment opportunities is not substantiated to the extent that budget allocations in Hutchison depend [...]. Fourth, the Notifying Party submits that cash flow of the Three group is a very important driver of Hutchison's credit rating by the Moody's agency. Fifth, short term cash flow constraints are currently a major driver of Three's investment decisions and the internal documents quoted by the Commission

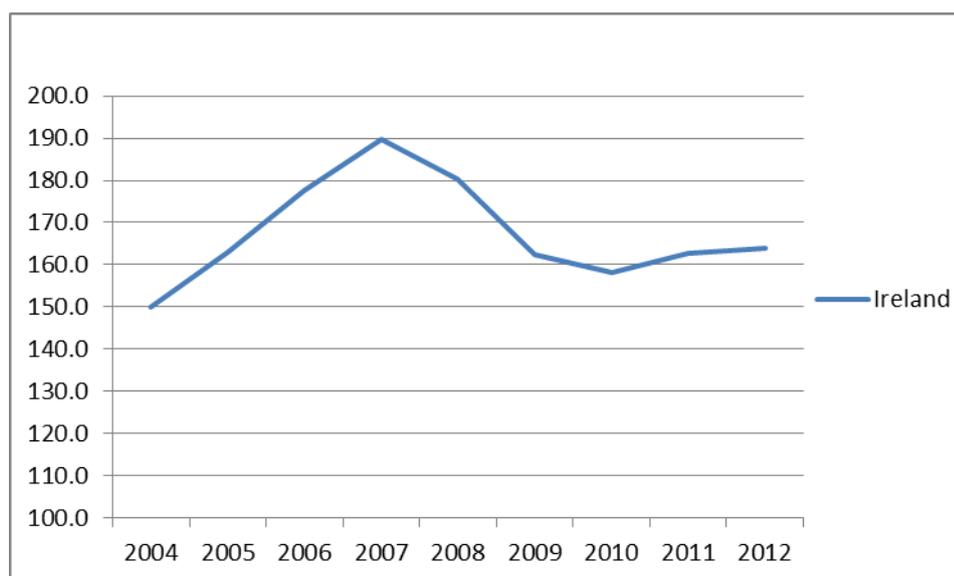
show the importance of cash flow considerations. Sixth, the Notifying Party submits that the Commission failed to demonstrate that the general correlation between cash flow and investment does not apply in this case. Seventh, the fact that Three currently invests more in comparison to its turnover is an additional indication that its current position is not sustainable.

The Commission's assessment

- (476) With respect to Three's viability, the Commission does not contest that Three has been loss-making since its entry in the market in 2005. As explained in Section 7.4.2, the Irish mobile market is characterised by very high barriers to entry. A new MNO has first to acquire spectrum holdings, then to deploy a nation-wide network and then to acquire a sufficient customer base. These steps are lengthy and the new entrant has to endure a significant period of losses before becoming profitable. However, markets with very high barriers to entry also have other characteristics: (i) established players are likely to be more profitable as a result of less competitive pressure by potential entrants and (ii) new entrants who have reached a break-even point and who become established players are likely to be profitable for a significant period of time. Hutchison is present in other mobile market in the Union and therefore it can be assumed that it is well aware of the lengthy steps associated with new entry.
- (477) According to Three's internal five year plan 2013-2017,³⁵⁰ Three is [...]*. This gradual improvement will be reached in three steps: (i) reach the EBITDA break-even point in [...]*, (ii) reach the EBIT break-even point in [...]* and (iii) reach the net profit after tax break-even point in [...]*. Following this break-even point, Three forecasts that its profitability will [...]*. In particular, the EBITDA margin will reach [...]***% in [...]*.
- (478) The Notifying Party claims that its budget forecasts cannot be relied upon because [...]*. The Commission disagrees with this argument for various reasons:
- (a) [...]*
 - (b) Since 2011, Ireland's GPD has stabilized and started growing again as shown in the Figure 20, which could be interpreted as an indication of gradual recovery:

³⁵⁰ Three's internal document "Case M.6992 - Confidential - 000043293.xlsx".

Figure 20: Ireland's GDP in EUR billions



Source: Eurostat

- (c) The performance of competing MNOs confirmed the improved business environment in Ireland. These MNOs reported results which are in line with budget forecasts or better than expected. Eircom underlines that the "*Irish economy continues to show positive signs*", in particular the "*unemployment continues to fall*", "*improvement in retail sales volumes, and consumers and business sentiments rising*"³⁵¹. Eircom also refers to OECD's economic forecast in which it is assessed that "*Ireland is successfully emerging from its post-crisis adjustment programme. Economic activity is showing signs of revival and is projected to gradually strengthen in 2014-15*". Eircom's yearly results in 2013 are in line with its budget forecasts. Vodafone has reported a "*Margin improvement*" in Ireland without further details on specific country-per-country results.³⁵²
- (d) Three's first and important milestone in its evolution towards profitability is the EBITDA break-even point which was reached in 2013 according to its plan. In a press release of 1 August 2013, Three makes the following announcement: "*Three, Ireland's fastest growing mobile operator, has announced it is now EBITDA positive for the first time since entering the Irish market. [...] Three continues to win customers over its incumbent competitors with its active customer base increasing by 18% year on year. [...] These interim results highlight yet again the progress Three is making in the Irish mobile market.*"

³⁵¹ Page 6 of Eircom's first quarter 2013/2014 results:
http://siteassets.eircom.net/assets/static/pdf/IR/eircom_first_quarter_results_presentation_FY13_14.pdf, available on 7 April 2014, [ID 3984].

³⁵² Page 4 of 2013 preliminary results:
http://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/preliminary_results_3_1march2013/dl_prelim2013.pdf, available on 7 April 2014, [ID 3979].

*The milestone of EBITDA break-even is an important achievement for the business",*³⁵³

- (e) Moreover, Three's turnover has been consistently growing and, in 2012, was 6% higher than forecast in 2011.³⁵⁴ [...]*
- (479) With respect to LTE deployment, the Notifying Party submits that its role in the market will be significantly reduced due to a sub-national LTE deployment and inferior spectrum holdings compared to other MNOs. The Commission disagrees and considers that Three will still constitute an important competitive force in the market during the next few years for various reasons:
- (a) The vast majority of the Irish mobile market will still be based, during the next few years predominantly on 3G telecommunications (and to a lesser degree also on 2G telecommunications for those MNOs that operate a 2G network). According to the Notifying Party's submission³⁵⁵, three years after the merger, between [...] % and [...] % of subscribers will use LTE services.
- (b) According to the Form CO, Three is going to cover 75% of the population with LTE services by 2017 based on its 1800 MHz band. In order to complement this coverage, Three could use the 900 MHz band. There are active LTE networks using the 900 MHz band in Sweden, the Czech Republic and South Korea. In the Czech Republic in particular, Vodafone is deploying a nationwide LTE network and claims, in a press release of 31 October 2013, that *"the majority of new smart devices support LTE in 800, 900, 1800, 2100 and 2600 MHz bands along with 2G and 3G technologies ensuring their long term viability. All Vodafone customers with a data plan, LTE SIM card and an LTE 900 MHz enabled device will be able to access Turbo Internet. Some of the devices already available from Vodafone shops include Smartphones Sony Xperia Z, Nokia 925, Samsung Express 2, Samsung Note 3, Samsung Galaxy S4, Samsung S4 mini, tablets Sony Xperia Tablet Z and Samsung Galaxy Tab 3 10.1 and modem Vodafone K5150."*³⁵⁶ Vodafone's response to the Commission request for information³⁵⁷ sets out Vodafone's LTE deployment plans in more detail. Furthermore, the Commission legislation on radio spectrum has made available the 900 MHz spectrum for LTE.³⁵⁸ ComReg implemented this

³⁵³ http://press.three.ie/press_releases/18-increase-in-active-customer-base-drives-three-ireland-to-ebitda-break-even-for-the-first-time/, available on 7 April 2014, [ID 3992].

³⁵⁴ In the 2012 budget presentation "Three Ireland budget presentation 2012.pdf", [...]*

³⁵⁵ Annex 1 to the Notifying Party's Response to the Article 6(1)(c) Decision.

³⁵⁶ Source:

<http://www.vodafone.cz/en/about-vodafone/press-releases/message-detail/vodafone-in-december-2014-covers-the-czech-republi/>, available on 7 April 2014, [ID 3994].

³⁵⁷ Vodafone's response to the Commission request for information Q19 of 17 December 2013, [ID 2056].

³⁵⁸ See Commission Decision of 16 October 2009 on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community available <http://eur-lex.europa.eu/legal-content/EN/ALL/?jsessionid=GQhXTpbPDeyjQqyN2NBpS0Jy2i43dXpnYq29JSVmcMFCX2k9Lkyy!1474006058?uri=CELEX:32009D0766> and the Commission Implementing Decision of 18 April 2011 amending Decision 2009/766/EC on the harmonisation of the 900 MHz and 1800MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community. Available http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/2011_251_EU_0.pdf

decision on 16 March 2012.³⁵⁹ Moreover, the most popular handsets are available for LTE under the 900 MHz band.³⁶⁰

- (c) None of the Irish MNOs, including Vodafone, currently have nationwide coverage for LTE. Accordingly, all MNOs are currently competing for customers with incomplete LTE coverage.
 - (d) In a few years' time (after 2017), ComReg indicated that it will auction the 700 MHz band which may also be used by Three in order to complement its LTE coverage. In the coming years, in terms of speeds, Three may use carrier aggregation, based on LTE advanced, and use its different spectrum holdings in the 900 MHz, 1800 MHz, 2100 MHz and 2600 MHz in order to offer higher speeds of LTE services.
- (480) Based on the above, the Commission disagrees with the Notifying Party's view that Three's ability to compete would be significantly constrained in the absence of the merger. Three is [...]*.
- (481) The Commission also considers that Three would most likely have a continued incentive to grow and compete aggressively on the market, whereas this is not the case post-merger, as set out in Section 7.5.5. The Notifying Party does not as such contest that Three would have every incentive to grow and compete in the absence of the merger.
- (482) Three's focus on acquiring new customers is consistent with the Notifying Party's view of its own cost structure, according to which costs of its mobile network are essentially fixed costs with low variable cost.³⁶¹ Such a cost structure combined with a smaller customer base than its competitors and spare capacity on its mobile network provides Three with a stronger incentive than any other MNO to acquire new customers, including under conditions that other MNOs would not envisage.
- (483) This theoretical analysis of Three's incentives to compete is also corroborated by the market investigation.
- (484) Three's 2013 Budget Plan shows Three's continued commitment to customer growth on a stand-alone basis. Although [...]*. On this basis, it is therefore understandable that Three's Budget Presentation predicts [...]*. The same document states that [...]*.³⁶²
- (485) Three's most recent Budget Plan constitutes a valid source for the Commission to predict Three's likely future behaviour in this case. The points below set out the factors for the Commission's assessment:

³⁵⁹ The Multi-band Spectrum Release: Release of the 800MHz, 900MHz, and 1800 MHz Radio Spectrum Bands. ComReg Document 12/25 of 16 March 2012. Available here http://www.comreg.ie/_fileupload/publications/ComReg1225.pdf

³⁶⁰ The Iphone 5S (<http://www.apple.com/ie/iphone-5s/specs/>) or the Samsung Galaxy S5 and S4 are all available for LTE in the 900Mhz (<http://www.samsung.com/ie/consumer/mobile-devices/smartphones/android/SM-G900FZKAVDI> <http://www.samsung.com/ie/consumer/mobile-devices/smartphones/android/GT-I9505ZKAVDI>)

³⁶¹ According to Table 27 of the Form CO, [...]*.

³⁶² Three, Budget Presentation 2013, 27 November 2012, slides 27, 38, 57 and 81 [ID 1055-137].

- (a) The Notifying Party appears to acknowledge that the statements made in Three's Budget Plan show Three's continuous incentives (although not ability) to grow and compete.
- (b) [...]*.³⁶³ [...]*
- (c) [...]*, the Commission also considers it likely that Three would remain committed to customer growth in the absence of the merger as from 2014 onwards.
- (486) In addition, an email by [...]*, shows Three's commitment to continued customer and revenue growth in the absence of the merger as opposed to customer retention post-merger.³⁶⁴ [...]*. However, as set out in more detail in recital (485)(b), Three's [...]* and the Irish economy is improving. On this basis, and in line with Three's ambitious growth plans as set out in its Budget Plans, the Commission considers that Three's incentives to grow as set out in the email from [...]* remain valid today and should therefore be taken into account in the Commission's evaluation of the situation in the absence of the merger.
- (487) The Notifying Party claims that, in the absence of the merger, Three's investments in customer acquisition would be constrained. According to the Notifying Party, as a result of Three's current negative cash flow, Three has already increased certain prices, including for handsets, out of bundle and directory enquiry calls and post-paid mobile broadband. Three has also removed free-in bundle calls to the United Kingdom and Three Like Home roaming from post-paid tariffs and replaced it with add-ons against a EUR 2.99 fee. [...]*. The Notifying Party also argues that it may also increase other prices in the absence of the merger.³⁶⁵
- (488) In respect of the price increases referred to by the Notifying Party, the Commission notes that while slide 38 of Three's 2013 Budget Presentation, to which the Notifying Party refers, mentions the implementation of "[...]*", the same slide also notes that Three would [...]*. Moreover, a later slide of the same presentation states [...]*.³⁶⁶ Moreover, price increases are benchmarked against competitors' pricing and some prices actually decrease.³⁶⁷
- (489) More specifically, with regard to iPhone pricing, Three would still [...]*.³⁶⁸ [...]*.³⁶⁹ Finally, with regard to post-paid mobile broadband, Three also implemented price decreases as of January 2013. Whereas prices for the mobile broadband tariffs "Active" and "Pro" increased, "Light" tariffs decreased.³⁷⁰ [...]*.³⁷¹ [...]*.³⁷²

³⁶³ Response to the SO, page 130.

³⁶⁴ Three, Email from [...]* to [...]*, 2 December 2011, [Ref: 001153716], [ID 001153716].

³⁶⁵ Response to the SO, pages 122-124.

³⁶⁶ Three, Ireland Budget Presentation 2013, 27 November 2012, slides 62, 64 and 75, [ID 1055-137].

³⁶⁷ Three, Ireland Budget Presentation 2013, 27 November 2012, slides 62, 64 and 75, [ID 1055-137].

³⁶⁸ Three, Ireland Budget Presentation 2013, 27 November 2012, slide 64, [ID 1055-137].

³⁶⁹ Three, Ireland Budget Presentation 2013, 27 November 2012, slide 62, [ID 1055-137]. See also SO response, Annex 6, which confirms this. Annex 6 to the Response to the SO describes that the removal of free in-bundle calls to the UK from post-paid tariffs and creating of EUR 2.99 add-on obeys to the idea of improving margins.

³⁷⁰ Response to the SO, Annex 5. [...]*

³⁷¹ Three Ireland Budget Presentation 2013, 27 November 2012, slides 75, 76, [ID 1055-137].

- (490) In the Commission's view, strategic price increases that maintain Three's competitive position cannot be taken as evidence of a change in strategy by Three as a result of cash flow constraints. The emphasis in Three's presentation on the fact that [...] further indicates the absence of a fundamental shift in strategy. Instead, the Commission considers it likely that price increases of this type reflect normal pricing decisions which companies will make during their regular course of business as market conditions evolve. The fact that price increases may occur during the regular course of business also does not imply that a merger would not generate additional incentives to increase price for the merged entity. Instead, the Commission's assessment of the merged entity's incentives and the quantitative assessment of price effects in Section 7.5.7 captures the extent to which prices are likely to increase over and above any changes that would occur during the regular course of business in the absence of the merger.
- (491) In addition, and contrary to the Notifying Party's claims in recital (c), the Commission considers that the internal party and competitor documents on Three's individual tariff plans and on the continued important competitive pressure that Three exerts on the market as set out in recitals (492)-(494), are relevant for the assessment of Three's future incentives to compete. Those documents show Three's continued commitment to customer growth and overall objective to maintain its competitive position, despite the already implemented price increases, as set out in its most recent Budget Plans.
- (492) First, Three's internal documents show that Three has continued competing aggressively on the market in 2013. For example:
- (a) in January 2013, Three refers to the budgeted price increases having been implemented "[...]" and with Three still offering the lowest total cost of ownership and best data allowance for iPhone 5. It also refers to a number of actions in place to drive iPhone;³⁷³
 - (b) in January 2013, Three decreased its mobile broadband "Light" tariffs, which lead to Three being present in the lowest (EUR 7.99) price band;³⁷⁴
 - (c) as recently as June 2013, Three launched a new unlimited AYCE tariff (unlimited flex max) in post-paid to drive acquisition.³⁷⁵
- (493) Second, documents from other competitors show the continued competitive pressure from Three in 2013:
- (a) an O2 document from 2013 corroborates that Three [...], in particular with regard to data;³⁷⁶
 - (b) another O2 document concerning Christmas 2013 shows that O2 is considering [...];³⁷⁷

³⁷² See Annex 4 to the Response to the SO in page 2 states that Three proposes to [...].

³⁷³ Three Ireland Business Update, 29 January 2013, slide 31 and 45, [Ref: 000466411], [ID 1051-29782].

³⁷⁴ Three Response to the SO, Annex 5.

³⁷⁵ Three, June '13 PROMS pack, 19 April 2013, slides 38-39, "Ireland Business Update", [Ref: 000748631], [ID 1299-10452].

³⁷⁶ Telefónica, 3 year plan update, March 2013, [Ref: TEL00052141], [ID 1061-23531].

³⁷⁷ O2, "Christmas 2013. [...]*?", [Ref: TEL00083726], [ID 1062-2162].

- (c) [...]*.³⁷⁸
- (494) In relation to the O2 Christmas 2013 document referred to in recital (b) the Notifying Party, in its Response to the Letter of Facts, argues that nothing in this presentation supports a finding that Three is an important competitive force in the pre-paid segment. The Notifying Party claims that O2's decision to launch the Christmas promotion had not been prompted by Three's offer and states that O2 perceived this unlimited offer as [...]*.³⁷⁹
- (495) The Commission has considered the Notifying Party's arguments and accepts that O2 may have had a number of reasons for introducing a new offer. However, the Commission concludes that Three's strategy and aggressiveness was taken into account by O2 and influenced its decision.
- (496) Third, other less recent O2 internal documents also show that the perception on the market is that Three will continue to compete. In O2's spectrum auction 2012 document,³⁷⁹ O2 conducts a competitor analysis of all MNOs in Ireland. It considers Three to "[...]*". Other O2 documents call Three a "[...]*".³⁸⁰ O2 also estimates that [...]*.³⁸¹
- (497) Fourth, the fact that Three has continued competing aggressively is also confirmed by a number of other objective market factors, such as:
- (a) as set out in Section 7.5.2.3, the Commission's comparison of post-paid and pre-paid tariffs shows that Three's tariffs are competitive and exert an important competitive constraint on the other players on the market; these comparisons include recent tariffs from 2013 which demonstrate that Three continues to exert an important competitive pressure on the market;
 - (b) as shown by Figure 3, Three's revenue per GB data continuously follows a downward trend.
- (498) The Notifying Party also argues that Three has had to shelve plans to invest in new product lines and that, due to its negative cash-flow, it has been unable to pursue investments in the business customer segment and fixed line products. The Commission disagrees with the Notifying Party's claims in this respect for the following reasons:
- (a) First, despite the fact that Three held a [0–5]*% market share in the business segment in 2013, Three's market share has grown from [0–5]* to [0–5]*% between 2010 and 2012. Three's strategic documents also refer to Three's wish of "[...]*".³⁸² The Commission therefore considers that Three has invested and also grown in this more profitable segment of the market. This reflects Three's ability and willingness to invest, where it considers there is growth.
 - (b) Second, although the Commission does not rule out the possibility that fixed/mobile bundle products may become increasingly important, bundled

³⁷⁸ [...]*

³⁷⁹ O2, Spectrum Auction 2012, SLT Meeting, 1 February 2012 [Ref: TEL00013686], [ID 1061-15631].

³⁸⁰ Telefónica, September 2012 Review, 25 October 2012, [Ref: TEL00095882], [ID 1063-8689].

³⁸¹ O2, Spectrum Auction 2012, SLT Meeting, 1 February 2012 [Ref: TEL00013686], [ID 1061-15631].

³⁸² Three, Ireland Budget Presentation 2013, 27 November 2012, slide 71 [ID 1055-137].

subscriptions that include a mobile voice service currently only represent a marginal part of the market.³⁸³ According to ComReg's estimates, only 1.3% of all mobile voice subscribers purchase mobile voice and fixed services (fixed voice and/or fixed broadband) from the same supplier. Furthermore, the Commission notes that Hutchison rarely, if ever, offers fixed/mobile bundles anywhere where it provides mobile services in Europe. Given that the Notifying Party has [...]*. Therefore, the Commission does not accept Three's argument that it is disadvantaged for not offering fixed / mobile bundles.

(499) In addition, Section 7.10.2 on LTE deployment efficiencies and Section 7.10.3 on efficiencies related to the coverage of sparsely populated areas deal in more detail with Three's respective claims of increased network investments as set out in recital (475)(b) and continued services in the NBS area post-merger, as set out in recital (475)(a).

(500) Finally, with respect to the constraints imposed by Hutchison, the Commission's assessment of those constraints is detailed in Section 7.10.1 on scale efficiencies.

Conclusion

(501) On this basis, the Commission concludes that in the absence of the merger Three will be likely to continue to compete vigorously.

7.5.4.3. O2's ability and incentive to continue being a viable competitor in the absence of the merger

The Commission's analysis in the SO

(502) In the SO,³⁸⁴ the Commission reached the preliminary conclusion that O2 is still an important competitor on the retail mobile telecommunications market and that it would most likely continue to compete vigorously in the absence of the merger.

The Notifying Party's view

(503) In its Response to the SO,³⁸⁵ the Notifying Party submits that O2 has [...]*. In this respect, it is submitted that:

(a) O2 only ranks third in a speed measure realised by the web site speedtest.net in December 2013.

(b) [...]*

(c) O2's decline is based on [...]*

(d) Telefónica group has decided [...]*

(504) Moreover, the Notifying Party argues that O2's participation in the 2012 spectrum auction was [...]*

(505) Finally, the Notifying Party submits that while the Commission is examining a "situation absent the merger" and therefore ignoring the specific merger, the Commission cannot simply ignore, in this case, the fact that Telefónica has decided and made public its decision to sell O2 and exit Ireland.

³⁸³ ComReg Observations, page 34, [ID 2090].

³⁸⁴ Section 7.4.3.2.

³⁸⁵ Response to the SO, paragraphs 306 onwards.

Commission's assessment

- (506) The Commission's market investigation shows that O2 is still an important competitor. Internal documents indicate that O2 is a strong number 2 player with a respected brand.³⁸⁶ Despite its declining market shares, O2 remains the second largest competitor in the market, with an approximately 30% market share, some distance ahead of Eircom with 20% market share. O2's alleged weakness in terms of network quality does not appear to have jeopardised its clear number two position on the market.
- (507) The Commission does not accept the Notifying Party's argument that O2's network is ranked third in terms of quality. Three's customer surveys, on which Three seems to put significant weight, also indicate that O2 holds a clear second place after Vodafone in terms of factors relating to network quality, such as network coverage and having the latest technology offers. In any event, any alleged weakness in terms of network quality is not reflected in the Irish consumer perception and choice. Brand perception reflects the views of consumers about a particular product or service offering. O2 ranks number two in terms of being a high quality brand and having a brand that one can believe in. This indicates that the alleged weakness in O2's network quality has not had a significantly negative impact on O2's brand positioning. Therefore, the alleged weak network quality is not reflected in the Irish consumer perception and choice.³⁸⁷
- (508) O2's internal documents show that O2 plans to be reasonably competitive and in close proximity to Vodafone. For example, in a presentation of April 2013, O2 compares its pricing schemes to those of Vodafone and considers the need for [...]*.³⁸⁸
- (509) The same O2 document shows that O2 deployed an ambitious LTE network together with Eircom through the Mosaic agreement.³⁸⁹ The Commission acknowledges that O2, contrary to the other MNOs, has not yet launched 4G services in Ireland. However, O2 has made a significant investment in spectrum and the Commission considers that, in the absence of the merger, it would not make commercial sense for O2 not to deploy networks to realise the benefits of its investment in spectrum. The Commission therefore disagrees with the Notifying Party's claims that Telefónica would be likely to put [...]*. Nor would it make commercial sense for Telefónica to adopt such a strategy given that [...]* than most of its competitors.³⁹⁰
- (510) The Commission also notes that in the near future more data intensive users will require LTE. Not investing in this technology would deteriorate the quality of the O2 network compared to its rivals and increase the loss of consumers to other operators. This is very likely to relate to high value consumers, such as intensive

³⁸⁶ For example, Telefónica Business Plan 2014-2016: Key Strategic Choices dated April 2013, slide 9 and 48 [Ref: TEL00107915], [ID 1063-11269].

³⁸⁷ Red C's fourth quarter 2013 market research report, Response to the SO, Annex 2.

³⁸⁸ Telefónica Business Plan 2014-2016: Key Strategic Choices dated April 2013, slide 9 [Ref: TEL00107915], [ID 1063-11269].

³⁸⁹ Telefónica Business Plan 2014-2016: Key Strategic Choices dated April 2013, slide 21 [Ref: TEL00107915], [ID 1063-11269].

³⁹⁰ ComReg Q4 Report, p. 50 [ID 3967].

data users and business users who demand high reliable networks. This increases O2's incentives to invest.

- (511) The Commission considers that it is unclear whether Telefónica will reverse its decision to sell O2, in the absence of the merger. In this respect, internal documents also indicate that although Telefónica considered market consolidation a desirable outcome, [...]*.³⁹¹ In any event, even if O2 was sold to another buyer that is not an MNO in Ireland, the new owner would have an incentive to invest to maximise the value of O2's brand image and customer base.
- (512) The Commission notes that O2's business plans for 2013-2015 in the absence of the merger were [...]*.³⁹² O2 estimates that it will grow its market share from [30–40]*% in 2012 to [30–40]*% in 2015. O2 considered that its growth would be driven by [...]*. O2 declared its ambition to [...]*. O2 was projecting that it would [...]*.³⁹³
- (513) Three's customer surveys, on which Three seems to put significant weight, also indicate that customers consider that O2 is a company that is here to stay.³⁹⁴
- (514) Moreover, the fact that O2 made significant investments in the MBSA spectrum auction and also entered into and significantly invested in a network sharing agreement with Eircom show O2's intention to stay on the market. In addition, internal documents indicate that the anticipated benefits of O2's network sharing agreement with Eircom [...]*.³⁹⁵ [...]*.³⁹⁶ O2 intended to "[...]*"³⁹⁷ and to take "[...]*"³⁹⁸ that would lead to the sharing of more than [...]* of its sites ([...]* sites) by 2015.³⁹⁹
- (515) The Commission therefore considers that O2 would have been likely to make further investments and increased its network quality under the agreement in the absence of the merger.

Conclusion

- (516) On this basis, the Commission concludes that in the absence of the merger O2 will most likely continue to compete vigorously.

³⁹¹ O2, Project Ozone, November 2011, slide 6, 7, 10 [Ref: TEL00170580], [ID 1065-45026].

³⁹² Telefónica, Our Business Plan, 2013-2015, July 2012 [Ref: TEL00030500], [ID 1065-25229].

³⁹³ Telefónica, Our Business Plan 2013-2015, July 2012 [Ref: TEL00030500], [ID 1065-25229].

³⁹⁴ Red C Report Q4 2013, Response to the SO, Annex 2.

³⁹⁵ For example, O2, presentation, page 5 [Ref: TEL00143364], [ID 1065-49174].

³⁹⁶ For example, O2, e-mail of 27 April 2012 from [...]* to [...]* and others, [Ref: TEL00090872], [ID 1063-15066].

³⁹⁷ Strategic review of O2 IE situation, February 2012, page 5 (in this presentation the term "Netshare agreement" is used to refer to the Mosaic agreement with Eircom), [Ref: TEL00090163], [ID 1063-14914].

³⁹⁸ O2, In Country review, June 2012, O2 response to Questionnaire Q14, [ID 1104].

³⁹⁹ Telefónica, Business Plan 2013-2015, Discussion Pack, June 2012, slide 53, [Ref: TEL00303919], [ID 1278-3586].

7.5.5. *Merged entity's incentives to compete after the merger*

7.5.5.1. The Commission's analysis in the SO

- (517) In the SO, the Commission considered that the merged entity is likely to have lower incentives to compete in comparison to Three's and O2's current incentives pre-merger.
- (518) First, the merger would eliminate competition between two separate MNOs. Prior to the merger Three and O2 are constrained *inter alia* by each other as some subscribers would switch to the other in case of a price increase. This competitive constraint that the Parties impose on one another would be lost as a result of the merger.⁴⁰⁰ The merged entity would therefore have an incentive to raise prices as sales that pre-merger would be lost to the other Party following a price increase would no longer be lost post-merger. By way of example, absent the merger an increase of Three's tariffs would lead some Three customers to choose O2's tariffs instead. With the merger, this switch the merged entity would not occur. This may make a price increase of the merged entity's tariffs profitable post-merger where it would not have been for Three on standalone basis.
- (519) Second, the merged entity would have fewer incentives to compete in comparison to Three pre-merger. This is because the merger would significantly increase Three's customer base by adding O2 subscribers. The merged entity would thus focus on customer retention, rather than on growth, as explained in recital (533).

7.5.5.2. The Notifying Party's views in the Response to the SO

- (520) The Notifying Party, in its Response to the SO, argues that the merged entity would not have reduced incentives to compete.
- (521) The Notifying Party argues that Three and O2 are not each other's closest competitors and that therefore the competitive constraint they exert on each other is lower than in many other four to three competitor mergers.
- (522) In relation to the argument that a company with a larger customer base would focus more on customer retention than growth, the Notifying Party argues that the incentives to compete are not exclusively a function of size but also determined by a variety of other elements which suggest that Three will continue to have strong incentives to compete post-merger.
- (523) Specifically, the Notifying Party argues that post-merger the incentives of the merged entity to compete would be influenced by the desire to realise economies of scale and increased by the large amount of spare capacity it would have.
- (524) The Notifying Party further claims that Three would have strong incentives to offer very competitive prices post-merger in order to reduce the risk of churn resulting from the phase out of the O2 brand.
- (525) In relation to the internal documents that discuss the merged entity's incentives to compete, the Notifying Party argues that the Commission should take into account the assumptions of the post-merger business plan that has recently been reconfirmed in the process of the formal adoption of Three's 2014-2018 budget by Hutchison in

⁴⁰⁰ Horizontal Merger Guidelines, paragraph 24.

December 2013.⁴⁰¹ This business plan foresees continued subscriber growth from [...] immediately post-merger to [...] by 2018. At the same time, the 2014-2018 budget is based on the assumption that [...]. According to the Notifying Party, this shows that Three expects [...].

- (526) Finally, the Notifying Party argues that the merged entity would have an increased ability to compete, as its network quality would improve. This would pitch Three in head to head competition with Vodafone.

7.5.5.3. The Commission's assessment

- (527) The Commission does not agree with the Notifying Party's arguments.
- (528) 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.
- (529) As discussed in the SO, the Commission considers that the merger would lead to two effects: namely the elimination of competition between the Parties and the fact that the merged entity would have a larger customer base that would lead to lower incentives to grow.
- (530) The main effect of any horizontal merger is the elimination of competition between the 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 due to such a price increase pre-merger would be captured post-merger.
- (531) The Commission considers that irrespective of whether Three and O2 are each other's close competitors, the Commission's investigation has shown the important competitive constraint that Three exerts on its competitors, including O2, and the significant reduction of competition that is likely to result from Three's removal from the market as it currently operates. This has been set out in Section 7.5.2.2.
- (532) In addition, Section 7.5.7 sets out the quantitative assessment of the merger and shows that the merged entity is likely to have substantial incentives to increase its prices. The Commission's quantitative analysis takes into account the degree of closeness between Three and O2 as measured by the diversion ratios on the basis of the MNP data.
- (533) Second, in this case, the Commission considers that the increase in size in terms of revenues and customer base is likely to affect the merged entity's incentives to compete aggressively on the market. Following the merger, the important competitive force that is Three, seeking to grow its customer base, will be transformed into a more established player focusing on customer retention.

⁴⁰¹ Response to the SO, Annex 7.

- (534) In relation to the argument of the Notifying Party that the merged entity's incentives to compete are not exclusively a function of size, the Commission accepts that large operators also contribute to competition and that all MNOs arguably compete to a certain degree in a concentrated market such as the Irish.
- (535) However, the Commission considers that Three's incentives to grow and compete aggressively post-merger are likely to be less than they are today as a result of its larger customer base.
- (536) 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 cases COMP/M.6497 - *Hutchison 3G Austria / Orange Austria* and COMP/M.3916 – *T-Mobile / Tele.ring*.⁴⁰² Attracting new customers by bringing out new offers and adopting an aggressive pricing policy will reduce the profitability of the existing customer base over time as those tariffs and conditions will also have to be extended to existing customers.
- (537) As already set out in the decision in case COMP/M.3916 – *T-Mobile / Tele.ring*, 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"*.⁴⁰³ 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"*.⁴⁰⁴
- (538) In this case, as the most recent MNO entrant, Three has the smallest subscriber base of the four MNOs. Through the merger, Three would expand its existing customer base for which it would wish to protect its current margins. The subscriber base of the merged entity (including Tesco Mobile) would be more than 2.2 million subscribers compared to the 0.5 million subscribers of Three and the 1.7 million subscribers of O2 and Tesco Mobile. This is likely to reduce the merged entity's incentives to offer attractive tariffs in order not to run the risk of losing profits on the existing customer base and encouraging existing customers who are no longer locked into contracts to switch to cheaper tariffs.
- (539) In relation to the Notifying Party's claims that the merged entity will have increased incentives to compete because it will have a large amount of spare capacity, the Commission considers that it is not the level of spare capacity which provides an incentive for a company to grow its market share. In a situation where MNOs offer

⁴⁰² Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring*, paragraphs 74 and following.

⁴⁰³ Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring* , paragraph 77.

⁴⁰⁴ Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring* , paragraph 77.

differentiated products such as in this case, an important factor affecting incentives to acquire additional customers is rather the fact that the costs of serving additional customers are very low. Low costs of serving additional customers are related to the existence of spare capacity, because the existence of spare capacity implies that acquiring additional customers does not require investments to expand capacity and associated costs in the short run. However, both Three and O2 already have spare capacity pre-merger, that is, both Three and O2's incremental costs of acquiring additional customers are already very low. In addition, before the merger, Three and Vodafone concluded the Netshare agreement which ensures that Three will increase capacity from the additional sites of Vodafone. Therefore, it is not likely that in the absence of the merger Three will become capacity constrained and the merger does not change the situation in that regard. Hence, the capacity post-merger would not change Three's incentives to grow its market share compared to the pre-merger situation.

- (540) In relation to the Notifying Party's argument that the merged entity will have an increased incentive to compete to reduce the risk of churn resulting from the phasing out of the O2 brand, the Commission notes that public statements made by Three suggest that the O2 brand would be phased out over two years.⁴⁰⁵ Very little will change for these customers, as O2's business and network will constitute an integral part of the combined entity. As a result O2 customers are not likely to face any significant changes to the services provided by the merged entity in comparison to the services that were provided by O2 prior to the merger. Therefore, the Commission does not consider that the loss of the O2 brand is likely to have an impact on the merged entity's incentives.
- (541) The merged entity's incentives post-merger are also evidenced by internal documents:
- (a) In Three's 2012-2016 budget review, [...]*.⁴⁰⁶
 - (b) Three predicts that the merged entity will approximately attract an additional [...] subscribers between 2012 and 2018 (increasing its subscriber base from approximately two million and a 37% market share to approximately [...] million and a [40–50]*% market share). However, this claim is not consistent with other internal documents on file, which point towards a much more modest customer growth (a market share of around [40–50]*% by 2021) as the merged entity focuses on customer retention. [...] concludes that "[...]*".⁴⁰⁷ Another of Three's internal documents contains a combined business plan for O2 and Three with an estimate of the evolution of the merged entity's market shares over time. It refers to the merged entity having "[...]*".⁴⁰⁸ This market share ([40–50]*%) is also the estimate of a BNP Paribas study commissioned

⁴⁰⁵ Evening Herald, Mobile firm Three buys O2 for €780 (24 June 2013), [ID 3258].

⁴⁰⁶ H3G, 2012-2016 Budget review, notes of budget meeting on 22 November 2011, [Ref: 000903038], [ID 1302-23815].

⁴⁰⁷ Email from [...] to [...]*, 2 December 2011, discussing the potential effects of the creation of a 50/50 joint venture with O2, compared to a stand-alone scenario. This more modest customer acquisitions plan reflects an assessment by BNP Paribas. [Ref: 001153716], [ID 001153716].

⁴⁰⁸ Three, Project O, [Ref: 001116318], [ID 1300-24053].

by Three for the merged entity for 2017.⁴⁰⁹ Other documents refer to a modest customer growth to a market share of around [40–50]*% by 2021.⁴¹⁰

- (c) Internal documents also show that price increases are likely to take place in the event of a market consolidation between O2 and Three. For example, an email from [...]*, from 23 May 2013 states that [...]*.⁴¹¹
- (542) In the Commission's view, the internal documents which predate the merger and foresee a [...]* carry more weight than Three's recently confirmed business plans for 2014-2018 which were adopted post-notification and which may be influenced by the merger approval process.
- (543) The Commission disagrees with the statement that Three's internal documents [...]*.⁴¹²[...]*.
- (544) In its Response to the Letter of Facts, the Notifying Party disputes the probative value of [...]*. The Notifying Party also argues that the porting data evidence show that Three is not the most important destination for customers porting away from O2. The Notifying Party argues that the term "[...]*" in the BNP Paribas document⁴¹³ has been used to refer to required structural adjustment in mobile markets in the light of economic circumstances.
- (545) In any event, the Notifying Party argues that the Letter of Facts is wrong to conclude that [...]*. According to the Notifying Party, [...]*.⁴¹⁴
- (546) The Commission disagrees with the Notifying Party's argument that the BNP Paribas presentation does not have probative value. The Commission considers that an objective assessment from an investment bank such as BNP Paribas can be relied upon, together with other evidence which is presented in the SO and in this Decision.
- (547) The Commission notes that the words [...]*.⁴¹⁵ [...].
- (548) Finally, in relation to the assumptions of the post-merger business plan that have recently been reconfirmed in the process of the formal adoption of Three's 2014-2018 budget by Hutchison in December 2013,⁴¹⁶ the Commission notes that those budget plans were prepared at a time when the merger was being contemplated. Moreover those business plans were formally adopted while the merger was already under review by the Commission and after the Commission had indicated the nature of its concerns to the Notifying Party. The Commission therefore considers that these suggestions of future growth incentives may be influenced by the merger process and their probative value is accordingly limited.
- (549) In relation to the Notifying Party's claims that the merged entity will have a stronger ability to compete post-merger due to its quality repositioning and will be better able

⁴⁰⁹ BNP Paribas, Opportunity Review, Project Ozone, March 2013 [Ref: 001119301], [ID 1300-24539].

⁴¹⁰ Three, Email from [...]* to [...]* [Ref: 001153716], [ID 1300-29348].

⁴¹¹ O2, Email from [...]*, 23 May 2013, [Ref: 00270908]. [ID 1065-39545].

⁴¹² BNP Paribas, "Opportunity overview", 21 November 2011, [Ref: 001212499], [ID 1300-19061].

⁴¹³ BNP Paribas, "Opportunity overview", 21 November 2011, slide 15 [Ref: 001212499], [ID 1300-19061].

⁴¹⁴ O2, Email from [...]* to [...]*, 28 April 2012, [Ref: 00194618], [ID 1065-49209].

⁴¹⁵ The meaning of the term "[...]*" will be discussed in more detail in recitals (560) to (582).

⁴¹⁶ Response to the SO, Annex 7.

to compete head to head with Vodafone as a result, the Commission considers the following.

- (550) First, as set out in Section 7.5.2, the Commission considers that Three is currently competing strongly on the retail mobile telecommunications services market and is able to exercise an important competitive constraint on O2 and on all other MNOs, including Vodafone. Moreover, the Commission has concluded in Sections 7.5.4.2 and 7.5.4.3 that in the absence of the merger both Three and O2 will continue to have the ability and incentive to compete effectively on the Irish market.
- (551) Second, although it is true that the merged entity will have more spectrum than O2 or Three in the absence of the merger, these higher spectrum holdings will not necessarily result in the merged entity providing services that are of a higher quality than those that O2 or Three would have offered without the merger.
- (552) In this respect, the Commission considers that in the absence of the merger O2 would achieve LTE coverage similar to that of the merged entity.⁴¹⁷ The claim that Three would have more extensive LTE coverage by obtaining access to 800 MHz spectrum is therefore unlikely to materially change the analysis.⁴¹⁸
- (553) Moreover, while the merged entity would have more spectrum in the 900 MHz, 1800 MHz and 2100 MHz bands than either Three or O2,⁴¹⁹ this additional spectrum is unlikely to provide the merged entity with higher download speeds than Three or O2 without the merger. First, the Commission notes that, without carrier aggregation, Three would be able to offer a peak speed of 150 Mbps using the 1800 MHz band, which is the same peak speed as the merged entity.⁴²⁰ Second, peak speeds or headline speeds are theoretical values. Actual download speeds which customers experience also depend on factors other than spectrum such as, for example, the number of carriers being deployed or the number of users using the same network resource at the same time ("contention"). The merged entity will have more subscribers and its network will have higher levels of contention than the networks of O2 and Three in the absence of the merger. This would, all else being equal, reduce the actual download speeds that the merged entity can offer. Finally, it is also unlikely the merged entity would deploy all of its carriers in the near future, that is, it is unlikely that all of the combined spectrum would be activated by the merged entity.⁴²¹

⁴¹⁷ See Sections 7.5.4.3 and 7.10.2.2.

⁴¹⁸ Moreover, as noted in recitals (479)(b) and (840), the Commission also considers that in the absence of the merger, Three could use its spectrum in the 900 MHz band to increase its LTE coverage.

⁴¹⁹ See Section 5.4.2.

⁴²⁰ See Response to SO, paragraph 679 and Section 7.6.2.2 on the effect of spectrum imbalance on Eircom. Moreover, while the technology of carrier aggregation (which the Commission understands is already available and is expected to be used in the near future) would allow the merged entity to reach higher peak speeds, the expected availability of additional spectrum in the 2600 MHz band in 2016 would also allow Three and O2 to further increase headline speeds in the absence of the merger, see Section 7.6.2.2.

⁴²¹ [...]*. Similarly, the commitments submitted by the Notifying Party on 19 March 2014 foresee – with respect to spectrum that would be transferred to the new entrant at the exercise of the MNO option and which would subsequently be pooled with the merged entity's spectrum in an active network sharing deal – that "the hardware on the sites in the Active Shared Radio Network [to activate additional spectrum] will be deployed by Three on a gradual basis as required" (page 7). This indicates that the activation of spectrum is driven by capacity considerations. As the MNO option in these commitments was unlikely to

- (554) Further and in any event, even if the quality improvements were verifiable and were to materialise such that the merged entity were better able to compete, the Commission does not consider that the Notifying Party has demonstrated that the merged entity would have a sufficient incentive to do so for the reasons set out in this Section and in Section 7.5.7.3
- (555) Therefore, the Commission does not consider it likely that the merger would lead to the effects on quality re-positioning and network quality that the Notifying Party is claiming.
- (556) An increase in network quality resulting from the merger is also an efficiency claim made by the Notifying Party and may constitute such efficiency subject to meeting the three cumulative criteria set out in paragraphs 76 to 88 of the Horizontal Merger Guidelines (see Section 7.10.2).

7.5.5.4. Conclusion

- (557) In light of the above, the Commission considers that the merged entity's incentives to compete aggressively would be significantly weaker than those of Three and O2 pre-merger.

7.5.6. *Likely reaction of competitors following the merger*

7.5.6.1. The Commission's analysis in the SO

- (558) In the SO, the Commission reached the preliminary conclusion that Vodafone would not have the incentive to engage in aggressive price competition with the merged entity. On the contrary, Vodafone would likely have the incentive, following a price increase by the merged entity, to also increase its prices.
- (559) The situation of Eircom post-merger is considered in Section 7.6.
- (560) Vodafone's strategy on the Irish market is focused on high quality high value consumers. It has the largest customer base in the market and the highest ARPU. Accordingly, its strategy is focused on customer retention to the extent that customer retention constitutes the majority of its revenues. [...] ⁴²²[...]*. If Vodafone were to decide to adopt an aggressive customer acquisition strategy, it would lead to a greater risk of cannibalisation. Accordingly, Vodafone is focused on customer retention and has little incentive to offer price-aggressive tariffs. Three's and O2's internal documents further support this view. Those documents commonly refer to the effects of [...]*:
 (a) [...] * ⁴²³
 (b) In Three's 2012-2016 budget review, [...] * ⁴²⁴
 (c) [...] * ⁴²⁵[...] *."

be exercised before the end of the third year post-merger and as activation of additional spectrum was foreseen only "as required" at certain sites thereafter in this remedy scenario, the Commission considers it unlikely that the full spectrum of the merged entity would be used in the foreseeable future in a merger scenario without remedies where the merged entity would not need to set aside capacity for a new entrant.

⁴²² Telefónica, Project Ozone, November 2011, [Ref: TEL00170542], [ID 1065-45024].

⁴²³ Hutchison, Email from [...] * to [...] *, 13 December 2011, [Ref: 001153742], [ID 1300-29357].

⁴²⁴ H3G, 2012-2016 Budget review, notes of budget meeting on 22 November 2011, [Ref: 000903038], [ID 1302-23815].

- (d) Another analysis document of O2 considers that [...]*.⁴²⁶
- (e) [...]*.⁴²⁷
- (f) [...]*.⁴²⁸
- (561) Finally, respondents to the market investigation also stated that Vodafone would be likely to increase prices following the merger. Specifically, respondents identified that the most likely result of the merger is an overall decrease of competition and that competing MNOs would be likely to increase their prices:
- (562) Liberty Global has stated the following: "*Liberty Global considers that the removal of one operator from the market will lead to an outcome where the remaining operators have a clear advantage in certain segments (Eircom; pre-paid and voice; Vodafone: business customers and Three/O2: mobile data). Liberty Global considers that such a strategic positioning would reduce competition to the benefit of the remaining MNOs and the detriment of consumers*".⁴²⁹
- (563) Moreover the Consumer Association of Ireland considers that "*The reduction of competition will be significant in what is a very high user Member State with an already low level of competition from quite dominant providers. [...] A guarantee of profits within a lucrative and captive group of consumers. There will be no competitive challenge to any incumbent provider*".⁴³⁰
- 7.5.6.2. The Notifying Party's arguments in the Response to the SO
- (564) In its Response to the SO, the Notifying Party claims that the Commission misinterprets the internal party's documents referred to in recital (560).
- (565) First, it is argued that none of those documents are specific to the transaction at hand but relate to either discussions between Three and O2 with respect to a joint venture which would combine the two Parties' activities in Ireland in 2011 or to Three's bid for Eircom in 2012.
- (566) Second, the Notifying Party claims that the Commission has erroneously linked in absolute terms the concept "market repair" with an intention to increase prices, whereas the concept is commonly used in Ireland to mean a structural adjustment to ensure that there are two other viable MNOs with sufficient scale to compete effectively with Vodafone. It is also claimed that the term "ARPU improvement" cannot simply be equated to price increases, but that it refers to an increase in average revenues from users that would arise following an increase in usage, such as occurs when data usage increases.
- (567) Third, even if the documents do refer to price increases, it is argued that it is highly unlikely that the merged entity and Vodafone would be able to achieve them. Hence, no credit can be given to these expectations.

⁴²⁵ Telefónica, Project Ozone, November 2011, [Ref: TEL00170542], [ID 1065-45024].

⁴²⁶ Telefónica, Project Ozone: status and emerging conclusions, [Ref: TEL00086710], [ID 1063-8697].

⁴²⁷ Telefónica, Business Plan 2013-2015, [Ref: TEL00025614], [ID 1061-18019].

⁴²⁸ O2, note of [...]*, 23 May 2013, [Ref: TEL00270908], [ID 1065-39545].

⁴²⁹ Liberty Global, response to Questionnaire Q9 to MVNOs of 1 October 2013, question 58.2 [ID 807].

⁴³⁰ Consumer Association of Ireland, response to Questionnaire Q11 to consumer associations of 1 October 2013, questions 29.1 and 29.2, [ID 751].

- (568) Fourth, the Notifying Party refers to its post-merger business plan which forecasts [...]*. It also refers to [...]*. It is argued that this plan provide a more accurate picture of the merged entity's likely behaviour than the internal documents referred to in recital (560)
- (569) Fifth, the Notifying Party claims that the submissions by Liberty Global and the Consumer Association of Ireland cannot be relied upon to show Vodafone's likely price increases as they contain certain flaws and inconsistencies.

7.5.6.3. The Commission's assessment

- (570) According to the Horizontal Merger Guidelines, "*Non-merging firms in the same market can also benefit from the reduction of competitive pressure that results from the merger, since the merging firms' price increase may switch some demand to the rival firms, which, in turn, may find it profitable to increase their prices. The reduction in these competitive constraints could lead to significant price increases in the relevant market*".⁴³¹
- (571) In line with the Horizontal Merger Guidelines, the Commission Decision concerning *Hutchison 3G Austria/Orange Austria* noted that just as the merged entity, "*competitors would also face the same trade-off between attracting additional new customers by practising lower prices and cannibalising the flow of customers who would anyway have switched to them*"⁴³² and found that "*other competitors are unlikely to increase supply or reduce prices in response to a price increase by the merged entity. Even assuming 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*".⁴³³
- (572) In the Commission's view, the reasoning in recital (571) is in line with economic theory and applies to this case. Three exerts an important competitive pressure on all MNOs, including Vodafone (see Section 7.5.2 on Three as an important competitive force). The change of incentives of the merged entity following the merger and the likely price increase by the merged entity would significantly reduce this pressure on Vodafone's customer base and lead some of the merged entity's customers that would have remained with the Parties in the absence of the transaction to switch to Vodafone. Accordingly, Vodafone would find it easier to retain its customers and could even attract new customers who would switch away from the merged entity. This resulting increase in the demand faced by Vodafone provides Vodafone with an incentive to raise its prices in turn. Despite Vodafone's claims during the Oral Hearing and written submissions⁴³⁴ that it would continue to effectively compete post-merger, the Commission therefore considers that Vodafone's likely strategy

⁴³¹ Horizontal Merger Guidelines, paragraph 24.

⁴³² Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recital 374.

⁴³³ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recital 367.

⁴³⁴ For example, Vodafone submission of 17 February 2014 [ID 2884].

would be a moderate price increase (inferior to that of the merged entity) in order to optimise profits from this additional demand.

- (573) The finding that competing firms have incentive to raise prices as a response to a price increase by another firm is called "strategic complementarity" of pricing decisions and is a general characteristic in standard models of oligopolistic competition.⁴³⁵ This feature is also reflected in the Commission's quantitative analysis which shows that, in response to a price increase by the Parties, the Parties rivals, including Vodafone, would, all else being equal, also likely raise their prices so that the transaction is likely to lead to general price increases on the market compared to what would be the case in the absence of the merger.
- (574) In the Commission's assessment, the finding that the Parties' rivals would increase their prices following price increases by the merged entity is also in line with the documents on market repair and other documentary evidence discussed in the SO. The Commission disagrees with the Notifying Party's arguments that such documents or submissions cannot be relied upon for the reasons specified in recitals (575) to (581).
- (575) First, and as mentioned in recital (543), internal documents indicate that [...]*.⁴³⁶[...]*.
- (576) Whereas it is true that the document quoted in recital (560)(e) relates to the consolidation resulting from an expected bid from Three for Eircom, the document is still relevant when assessing the impact of the current transaction. The document deals with [...]*. This assessment includes the impact of a consolidation from four to three players involving Three. [...]*.
- (577) The Commission also considers that the document quoted in recital (560)(f) is relevant in this context as it explicitly refers to [...]*.⁴³⁷[...]*.
- (578) Second, the Commission has carefully reviewed the relevant documents and notes that the Parties themselves link the concept of market repair and APRU improvement to price increases, rather than to a wider and legitimate need to adjust the market structure, as claimed by the Notifying Party. For example, in a budget meeting on 22 November 2011, [...]*.⁴³⁸ The Commission therefore considers that the intent of the documents' phrasing is clear.
- (579) [...]*.⁴³⁹[...]*. ⁴⁴⁰ [...]*.
- (580) Third, the Commission does not accept the Notifying Party's claims that its post-merger five year business plan provides an accurate picture of the merged entity's incentives. First, and as mentioned in recital (542), this business plan was adopted post-notification and may be influenced by the merger approval process. In addition,

⁴³⁵ See also Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, recital 369.

⁴³⁶ BNP Paribas, "Opportunity overview", 21 November 2011, [Ref: 001212499], [ID 1300-19061].

⁴³⁷ Email from [...]*, 19 November 2011, [Ref: TEL00170483], [ID 1065-45005].

⁴³⁸ Three, "2012-2016 Budget Review", Notes of Budget Meeting on 22 November 2011, [Ref: 000903038], [ID 1302-23815].

⁴³⁹ Three, Email by [...]* of 13 December 2011 on Ozone, [ID 1300-29356].

⁴⁴⁰ Three, Email by [...]* of 13 December 2011 on Ozone, [ID 1300-29356].

whereas the Commission notes that this plan forecasts [...]*, it disagrees with the Notifying Party's conclusion that prices would not rise as a result of the transaction. [...]*. ⁴⁴¹

- (581) Fourth, the Commission considers that the submissions by Liberty Global and the Consumer Association of Ireland can be relied upon to show Vodafone's likely price increases. The fact that Liberty Global points to certain advantages that the remaining MNO may have in some of the segments does not invalidate its conclusion on the effects of the transaction. Moreover, the statement of the Consumer Association of Ireland that there is already a low level of competition on the market does not invalidate its conclusion on the lack of competitive challenge resulting from the merger.

7.5.6.4. Conclusion

- (582) Considering that the likely outcome of the merger is a "market repair" in which Vodafone and the merged entity would increase their prices and in line with economic theory and its findings in previous cases, the Commission concludes that in response to price increases by the merged entity, Vodafone would refrain from competing aggressively and would also increase its price although to a lesser extent than the Parties.

7.5.7. *Quantitative assessment of horizontal non-coordinated effects*

- (583) The Commission has also carried out a quantitative assessment of the likely price effects resulting from the elimination of competition between the Parties through the merger using "upward pricing pressure" ("UPP") and merger simulation techniques.
- (584) As recognised in the Horizontal Merger Guidelines, the removal of the competitive constraint that the Parties exercise on one another pre-merger is the most direct effect of a horizontal merger. The removal of this constraint can lead to price increases by the Parties. As such price increases may increase demand for rival firms' products in the market, rivals may find it profitable to raise their prices in turn. The removal of the competitive constraint between the Parties through the merger can therefore lead to significant price increases in the market overall.
- (585) The Commission's quantitative assessment focuses on this most direct effect of a merger. The assessment does not take into account incentives to raise prices due to an increased subscriber base of the merged entity, as set out in Section 7.5.5. Moreover, the assessment abstracts from the anti-competitive effect of the merger on Eircom's and MVNO's ability to compete, as well as other factors (such as, for example, barriers to entry or countervailing buyer power).
- (586) The Parties need not be each other's close competitors for a unilateral price increase to be profitable for the merged entity. However, the higher the substitutability between the merging firms' products and the higher the observed margins, the more likely it is that the elimination of competition between the Parties will lead to significant price increases. Similarly, the price reactions by rivals will depend on their closeness of competition with the merging firms. ⁴⁴²

⁴⁴¹ Telefónica, Project Ozone, November 2011, [Ref: TEL00170542], [ID 1065-45024].

⁴⁴²

(587) The degree of substitutability between different firms' products and margins are hence key inputs for the quantitative assessment of likely price effects resulting from the merger. The Commission has examined two possible ways to measure substitutability: first, the Commission has derived diversion ratios between MNOs from data on customer switching as recorded in the mobile number portability ("MNP") data; second, as a complementary approach, the Commission has also tried to estimate demand reactions to price changes econometrically.

7.5.7.1. Quantitative analysis based on diversion ratios and margins

Description of the approach

(588) To quantify the likely competitive harm arising from the elimination of competition between the Parties, the Commission has analysed the implications of observed diversion ratios, prices and margins on (i) the unilateral incentive to increase prices by the merged entity that ignores reactions from rival firms (as in a standard UPP analysis) and (ii) 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). While UPP analyses provide indications on price increases by the Parties, accounting in addition for reactions by rivals in the calibrated merger simulation provides an indication of likely overall price rises in each segment and in the market as a whole. To derive indicative price increases, the Commission used the assumption of linear demand.⁴⁴³

(589) The substitutability between products in the market is accounted for using diversion ratios computed from MNP data.⁴⁴⁴ MNP database records events when customers switch MNO and port their mobile number to their new MNO.⁴⁴⁵ The data also makes it possible to identify the origin and destination segments of switching events. In combination with information from MNOs on switches between segments within the same MNO the Commission was able to compute diversion ratios between all MNO-segment combinations.⁴⁴⁶

(590) For the purposes of this analysis the Commission used average revenue per user ("ARPU") for each MNO at the segment level as a price measure (excluding revenue not paid for by own users such as incoming termination revenues). The Commission further employed two margin measures: for a baseline case, the Commission uses contribution margins which account for direct costs of usage, such as termination fees and handset subsidies; as sensitivity test, the Commission also used conservatively high estimates of the incremental margins which in addition to the

⁴⁴³ 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).

⁴⁴⁴ Technically, the diversion ratio between two products is defined as the number of customers switching from the first product to the second expressed as a percentage of all customers switching away from the first product.

⁴⁴⁵ MNP data only related to tariffs including voice services.

⁴⁴⁶ Pre-paid voice tariffs are predominantly taken up by private consumers while the majority of businesses voice tariffs are post-paid (see section 6.1.1.3). The key switching between payment type relates to private consumers switching between pre-paid and post-paid voice tariffs.

costs accounted for in the contribution margin also account for the Parties' estimates of how substantial variations in subscribers would affect their OPEX or CAPEX.⁴⁴⁷

- (591) The Commission considers that at every given point in time MNO's only compete over a subset of customers. This is because post-paid customers are unable to switch during the minimum term of their contract. Moreover, a percentage of customers that are technically able to switch are not actively monitoring their options as they are not considering changing or upgrading their current tariff for other reasons. The analysis therefore uses measures of new and retained subscribers to approximate the number of customers over which MNOs compete in a given month. However, the Commission considers that predicted price increases would, over time, affect the entire subscriber base as contract terms expire and customers change tariffs or upgrade handsets.

The Commission's analysis in the SO

- (592) In the SO, the Commission reported results for the UPP analysis and for the calibrated merger simulation, for the baseline scenario using contribution margins and for the sensitivity scenario using estimated incremental margins. The results in the SO allowed for price based switching of consumers between MNOs within and across segments based on the diversion ratios. To allow for switching across segments, the Commission used an extended version of the UPP analysis. For the calibrated merger simulation exercise, the Commission further accounted for O2's 50% share in the joint venture with Tesco.

- (593) The results in the SO can be summarised as follows:

- (a) The multi-segment UPP analysis allowing for switching across segments indicated very substantial unilateral price rises. In the baseline case using contribution margins, Three (respectively O2) was predicted to raise prices by 24% (respectively 14%) in the pre-paid segment, 11% (respectively 9%) in the post-paid private segment, and 14% (respectively 5%) in the business segment. In the sensitivity scenario based on estimated incremental margins, the analysis indicated unilateral price rises of 17% for Three and 9% for O2 in the pre-paid segment, 6-7% in the post-paid private segment, and 3% (for O2) to 9% (for Three) in the business segment.
- (b) The results in the SO of the calibrated merger simulation, which took account of equilibrium price reactions of rivals, indicated in the baseline scenario overall average price increases by segment of 12% in the pre-paid segment, 11% in the post-paid private segment, 5% in the business segment and an overall market wide average of 10% across the three segments. In the sensitivity scenario based on conservative estimates of the incremental margins, overall market wide average price increases were 9% for pre-paid, 7%

⁴⁴⁷ The Commission estimated incremental margins on the basis of the Parties' estimates of how a substantial variation in their subscriber base would affect OPEX and CAPEX costs. To do so, it followed corresponding calculations by the Notifying Party which were underlying arguments by the Notifying Party in response to the Commission's Article 6(1)(c) Decision. The Commission's estimates are based on a hypothetical reduction in subscribers of 10% for O2 and 50% for Three. This likely overstates the incremental costs and hence understates the incremental margin which would be applicable for more limited variations in the subscriber base. As higher pre-merger margins will imply higher price effects the price predictions in the sensitivity scenario are likely underestimated.

for post-paid private, 3% in the business segment, and 7% across the three segments.⁴⁴⁸

The Notifying Party's arguments in the Response to the SO

- (594) In the Response to the SO, the Notifying Party argues that the Commission's quantitative analysis is not appropriate for assessing price effects in this case as it ignores (i) the implications of the merger on quality competition and repositioning; (ii) the implications of customer inertia; and (iii) the disappearance of the O2 brand post-merger.
- (595) The Notifying Party further argues that the Commission's diversion ratio based analysis has methodological flaws:
- (a) According to the Notifying Party, MNP data are not appropriate to calculate diversion ratios. As diversion ratios are a key input of this analysis, results are unreliable.
 - (b) The Commission's model predicts abnormal volume reactions which lead to implausible post-merger equilibria.
 - (c) The Commission's analysis relies on problematic assumptions about contestable customer basis and is not robust to changes in those assumptions.
 - (d) The predicted price effects from the approach are not conservative as the approach does not account for reductions in usage, the threat of MNVO entry, product repositioning by rivals and the disappearance of the O2 brand, and countervailing efficiencies.
- (596) The Notifying Party therefore submits that the predicted price increases from the Commission's quantitative assessment based on diversion ratios cannot be relied upon.

The Commission's assessment

- (597) The Notifying Party's arguments on quality competition and repositioning and customer inertia are assessed in Section 7.5.7.3. As explained in that section, the Commission disagrees with these arguments and that they would imply that its quantitative analysis is inappropriate for the assessment of the merger.
- (598) The Commission's assessment of the methodological arguments of the Notifying Party and the argument about the disappearance of the O2 brand are assessed in detail in Annex I. In summary:
- (a) The Commission considers that as MNP data relate to actual switching events by customers they provide a reliable basis to infer consumer preferences and hence how customers would react post-merger. However, the Commission accepts that observed switching across different segments may be less likely to be driven by price and is hence less likely to be informative for consumer

⁴⁴⁸ Note that the results for the calibrated merger simulation relate to segment or market wide 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 UPP analysis) by the merged entity in the new equilibrium. See Annex I for detailed figures by MNO.

reactions to price changes than observed switching within segment. The Commission therefore presents results in recitals (603) to (615) which assume no price-based switching across segments while using diversion ratios from MNP data as a basis for price based switching within segment.

- (b) The Commission acknowledges that the analysis in the SO assumes that subscribers will not stop using mobile phones in the event of market wide price increases, which is at the heart of what the Notifying Party describes as "abnormal volume reactions". While this assumption appears reasonable, the Commission considers that following market wide price increases consumers may reduce the usage of mobile phones. To account for this effect, the Commission presents results in recitals (603) to (615) that proxy for a reduction in usage following market wide price increases.
 - (c) As noted in the SO, the Commission's assumption on contestable pre-paid customers, which the Notifying Party criticises, was made because the Parties could not provide information on retained pre-paid customers. However, the Commission considers that its conclusions are robust to reasonable alternative assumptions as will also be demonstrated in recitals (603) to (615).
 - (d) The Commission considers that if the phase-out of the O2 brand led to substantial customer switching to Vodafone or Eircom as the Notifying Party argues, then this would worsen the effect of the transaction on consumers compared to the effect implied by the Commission's quantitative analysis. The price effects predicted in the Commission's analysis which assumes that the O2 brand continued or could be migrated to Three without triggering substantial customer switching hence provide a conservatively low estimate of the price effect of the merger. The Commission also considers that product repositioning is unlikely to be significant.
 - (e) With regard to the Notifying Party's claims that the merger will lead to quality improvements of the merged entity's products, the Commission considers, as explained in recital (555) that the merger is not likely to lead to a quality improvement relative to the situation in the absence of the merger. Moreover, to account for the Notifying Party's claimed quality improvements in the quantitative assessment, the claimed improvements would need to be quantified which the Notifying Party has not done.
 - (f) The Commission's position on entry was assessed in Section 7.4. As mentioned, the possibility of reductions in usage is accounted for in the revised results in recitals (603) to (615).
- (599) In light of the above, the Commission has modified the diversion ratio based quantitative approach in the SO to account for the following: (i) that a certain proportion of an MNO's existing pre-paid base is actively retained to stay with the MNO and therefore should be considered as contestable; (ii) that customer switching from one segment to another is unlikely to be price driven; and (iii) that a market wide price increase may lead to a reduction in usage.
- (600) Regarding the number of retained pre-paid customers, the Commission notes that the Parties have not provided figures on how frequently existing customers actively consider switching MNO, but subsequently decide to stay with their current MNO. In the absence of such quantification, the Commission considers it reasonable to assume that, on average, an MNO's existing pre-paid customer base is actively retained

[...]*, that is, [...]* (or around [...]*%) of the existing pre-paid customer base is retained every month. As new customers account, on average, for [...]*% of the existing pre-paid base each month, this implies that each pre-paid subscriber is contestable, on average, once every [...]*,⁴⁴⁹ while on average [...]* contestable pre-paid customers actively decide to stay with their current MNO. The number of contestable customers that chose each MNO in a given month (that is the MNO's new and retained pre-paid customers) is hence computed as the MNO's new pre-paid customers in a month plus [...]* of the MNO's existing pre-paid subscriber base in the analysis in recitals (603) to (615).

- (601) 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.⁴⁵⁰ 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 in respect of different MNOs and hence provide a good basis from which to infer consumer switching following price increases within a segment.
- (602) To account for the possibility that segment or market wide price increases affect usage, the Commission has further assumed a diversion ratio of 20% to an outside good which implies that aggregate demand in the calibrations is no longer (near) 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.⁴⁵¹ While this is unlikely, the Commission considers this approach to proxy the effect of a reduction in usage to market wide price increases.
- (603) Table 33 reports the results of introducing these modifications in the Commission's UPP analysis of diversion ratios and margins. The table gives indicative price rises by the Parties by segment predicted by a UPP analysis which assumes no reactions from other MNOs (and assumes linear demand). 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 for variations in subscribers numbers that do not affect OPEX or CAPEX expenditure. Panel (b) gives results for the sensitivity scenario which accounts for additional incremental OPEX and CAPEX cost savings which the Parties would expect from a substantial reduction in subscriber numbers post-merger.
- (604) The different columns introduce the modifications discussed in recitals (598) to (603). Column (1) corresponds to the results in the SO. Column (2) introduces the first two modifications, that is, the change in the measure of contestable pre-paid customers and the absence of price based cross-segment switching. Column (3) introduces, in addition, a diversion ratio of 20% to the outside good.

⁴⁴⁹ This is computed as [...]*.

⁴⁵⁰ Technically this amounts to setting cross-segment diversion ratios from the diversion ratio matrix used in the SO to zero and rescaling the within segment diversion ratios so that they add up to 100%.

⁴⁵¹ The (within segment) diversion ratios between Three and O2 in the resulting analysis (with zero cross segment diversions) range between [...]*% and [...]*% across the three segments. In the literal interpretation, a 20% of diversion ratio to an outside implies that subscribers leaving one of the Parties are approximately as likely to stop using a mobile phone than to switch to the other merging party.

Table 33: Indicative price rises from UPP analysis

<i>(a) Predicted illustrative price rises in baseline case based on contribution margins</i>				
Segment	MNO	Illustrative price rise		
		(1)	(2)	(3)
Pre-paid private	Three	23.0%	21.1%	16.2%
	O2	13.0%	6.3%	4.7%
Post-paid private	Three	10.5%	8.6%	6.1%
	O2	8.7%	9.0%	6.8%
Business	Three	13.5%	13.5%	10.2%
	O2	4.7%	4.7%	3.5%
<i>(b) Predicted illustrative price rises in sensitivity scenario based on incremental margins</i>				
Segment	MNO	Illustrative price rise		
		(1)	(2)	(3)
Pre-paid private	Three	15.9%	15.2%	11.6%
	O2	9.0%	4.6%	3.4%
Post-paid private	Three	7.0%	5.8%	4.1%
	O2	5.8%	6.2%	4.7%
Business	Three	8.5%	8.5%	6.4%
	O2	2.9%	2.9%	2.1%

Source: Commission analysis based on data from MNOs

- (605) The first two modifications have only a relatively minor net effect on the results presented in the SO, as can be seen from a comparison of column (2) with column (1). Predicted unilateral price increases by the Parties after the first two modifications are implemented are 21% for Three and 6% for O2 in the pre-paid segment, around 9% for both Parties in the post-paid private segment and 5-13% in the business segment in the baseline case. In the sensitivity scenario which uses lower incremental margins, the level of price effects is lower but again comparable to the equivalent results in the SO.
- (606) The introduction of a 20% diversion ratio to an outside good in column (3) (as a proxy for usage reductions following price increases) reduces unilateral incentives to increase price as measured by the UPP analysis somewhat as expected.⁴⁵² In the baseline scenarios, the predicted unilateral price increases by the Parties (ignoring rival reactions) are 16% for Three and 5% for O2 in pre-paid, 6-7% for both Parties in post-paid private, and 4-10% in the business segment.
- (607) In the sensitivity scenario, based on incremental margins for substantial variations in subscriber numbers, the predicted price effect for the Parties from a UPP analysis

⁴⁵² A 20% diversion ratio to an outside good scales down diversion ratios between the Parties by a factor 0.8.

with a 20% diversion to the outside good are 3-12% in pre-paid, 4-5% in post-paid private and 2-6% in the business segment.

- (608) Table 34 reports segment and market wide average price increases when rival equilibrium reactions are accounted for. The table has the same structure as Table 33: panel (a) reports results for the baseline scenario and panel (b) for the sensitivity scenario based on incremental margins; column (1) corresponds to the specification in the SO; column (2) introduces the modification on contestable pre-paid customers and assumes no price based cross-segment switching; column (3) in addition assumes a 20% diversion ratio to an outside good to proxy for usage reductions. In response to unilateral price increases by the merged entity, rival MNOs will also raise their prices, although to a lesser extent. The segment and market wide average price effects reported in the table are computed as weighted averages over all MNOs in the predicted new equilibrium. Detailed results for each MNO are included in Annex I.

Table 34: Predicted average price increases by segment from revised calibrated merger simulation

<i>(a) Average price increases in baseline case based on contribution margins</i>			
	(1)	(2)	(3)
Pre-paid private	13.5%	5.3%	3.2%
Post-paid private	11.1%	9.3%	5.7%
Business	5.2%	5.2%	3.2%
Average private	12.1%	6.6%	4.0%
Total average	10.5%	6.4%	3.9%
<i>(b) Average price increases in sensitivity scenario based on incremental margins</i>			
	(1)	(2)	(3)
Pre-paid (private)	9.7%	4.0%	2.4%
Post-paid private	7.1%	6.4%	3.9%
Business	3.4%	3.4%	2.0%
Average private	8.2%	4.8%	2.9%
Total average	7.1%	4.6%	2.8%

Source: Commission analysis based on data from MNOs

- (609) The cumulative introduction of the first two modifications in column (2) leads to lower predicted average price effects than reported in the SO. This is, in particular, because the assumption of no priced based switching across segments reduces equilibrium reactions by rivals to price increases by the merged entity. In the baseline scenario, and including the first two modifications, segment wide predicted price increases are 5% for pre-paid, 9% for post-paid private and 5% for business. The average over the two segments for private consumers is 7%. The market wide average including the business segment is 6%. In the sensitivity scenario using incremental margins, the corresponding figures are 4% in pre-paid, 6% in post-paid private (overall 5% for private consumers) and 3% in business with a market wide average of 5%.

- (610) Allowing in column (3), in addition, for a reduction in usage in the baseline scenario (as proxied by a 20% diversion to an outside good) results in a 3% average price increase in pre-paid, a 6% average price increase in post-paid private (overall 4% for all private consumers) and a market wide average of 4%. Once usage reductions are accounted for in the sensitivity scenario, the average increases are 2% in pre-paid, 4% in post-paid private (3% for private consumers overall) and 2% in business leading to a 3% market wide increase.
- (611) With segment and market wide price increases, one can also approximate the aggregate elasticity implied by the assumption of a 20% diversion to the outside good. In the baseline scenario, the approximate implied elasticity is [-0.5 to 0]* for the post-paid private segment and [-0.5 to 0]* in the other segments and overall. In the sensitivity scenario, the 20% diversion of an outside good implies an approximate elasticity of [-0.5 to 0]* for pre-paid, [-1 to -0.5]* for post-paid private and [-1 to -0.5]* for business. The approximate elasticity overall as well as for the two private consumer segments is [-0.5 to 0]*.
- (612) As explained, the Commission considers that the diversion to an outside good is a proxy for possible reductions in usage following general price increases. Interpreted as a reduction in usage, the approximate aggregate elasticities of [-1 to 0]* in the analysis in this section corresponds to a reduction in usage by [0-10]*% (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.⁴⁵³
- (613) Overall, the three modifications introduced to account for those 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 presented in the SO. However, the predicted price increases from the analysis remain significant after applying the three modifications. In the post-paid private segment, where the Parties have the strongest position, predicted segment wide average price increases are 6% (respectively 4%) in the baseline scenario (respectively in the sensitivity scenario). The corresponding predicted overall market wide average price increase is 4% (resp. 3%). The analysis also continues to predict significant price increases by the Parties.
- (614) The Commission further notes the following:
- (a) The interpretation of predicted post-merger price increases is not limited to price but encompasses all mechanisms and competitive parameters by which the merged entity could increase its margins relative to the situation in the absence of the merger, such as, fewer improvements in services or other factors affecting quality, or a reduction of handset subsidies.
 - (b) As the assessment relied on pre-merger facts and data, it provides a prediction of the price effect for current generation (2G and 3G) products. While next generation (LTE) technologies will be rolled out in the near future, 2G/3G will remain the predominant technology used by subscribers over the next few

⁴⁵³ An economic study by Lukasz Grybowski 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 (Gryzbowski L, and P. Pereira (2008), "The complementarity between calls and messages in mobile telephony", *Information Economics and Policy* 20, 279-287).

years. Moreover, all other things being equal, the predicted price effects for LTE products would be in all likelihood higher.⁴⁵⁴

- (615) Overall, the Commission therefore considered that the quantitative implications derived from diversion ratios and margins indicate that the elimination of competition between the Parties is likely to lead to significant price increases.

7.5.7.2. The Commission's complementary quantitative approach in the SO and Letter of Facts

Description of the approach

- (616) To complement the diversion ratio based quantitative approach (explained in Section 7.5.7.1), in the SO the Commission also used a demand estimation based simulation model. This method also leads to a merger simulation exercise which predicts the price effects of the merger. However, instead of using diversion ratios based on MNP data, an econometric estimation of demand was implemented.
- (617) These estimations and simulations were carried out for the post-paid private segment only. For the purpose of performing these estimations, the Commission has requested monthly tariff level data from the five main operators on the Irish mobile telecommunications market (Three, O2, Eircom, Vodafone and Tesco Mobile) for the period of 2010-2013. The data contains information on tariff characteristics (monthly fees, allowances/bundles, out-of-bundle prices, commitment periods, add-ons etc.) and the monthly evolution of tariff level subscriber numbers and usage (voice, text and data).⁴⁵⁵
- (618) Based on this data, the demand model quantifies the relationship between the number of contestable (new plus retained) subscribers of a given tariff and changes in its price. To do so, the Commission has chosen the so-called discrete choice demand model family as an estimation framework.⁴⁵⁶ The price of a given tariff was calculated as the hypothetical monthly bill paid by a new subscriber with a typical usage profile of mobile telecommunications services. The demand model was complemented with a supply side where the operators compete with each other by setting their tariff prices optimally. The model was then used to predict the operators' post-merger prices by assuming that Three and O2 set their post-merger tariff prices jointly.
- (619) As the Commission further explained in the SO, due to the complexity of the data, estimation and simulation it was not possible to get technically acceptable, reliable estimated models for the pre-paid segment. Hence, the Commission concluded that it was able to produce demand estimation based models for the post-paid private segment only.⁴⁵⁷

⁴⁵⁴ The Notifying Party's estimation of the additional value consumers place on LTE implies that MNOs would earn higher margins per user on LTE products. For fixed diversion ratios, higher pre-merger margins imply higher price effects from a merger.

⁴⁵⁵ SO, paragraphs 317-317 and Annex I to the SO, Section 4, pages 17-23.

⁴⁵⁶ "Estimating Discrete-Choice Models of Product Differentiation," *Rand Journal of Economics*, Berry, S. T., 1994, Vol 25, 2, Summer, 242-262.

⁴⁵⁷ SO, paragraph 314 and Annex I to the SO, point 117.

- (620) The results from the demand estimation based simulation of the SO showed that Three's prices would increase by about 8% and O2's by about 3-3.5% in the post-paid private segment. This would lead to an overall price increase of about 3% in the segment. In the Letter of Facts, the Commission made further refinements to its post-paid model.⁴⁵⁸ The refinements ensured that the calculated prices are in line with the observed post-paid usage patterns (following the Notifying Party's criticism of the SO),⁴⁵⁹ and that the model's implied margins are in line with the observed margins of the operators. The results show a predicted price increase for the post-paid private segment not less than 4%.

The Notifying Party's arguments in the Response to the SO and Letter of Facts

- (621) In the Response to the SO and Letter of Facts, the Notifying Party argues that the Commission's demand estimation based analysis has methodological flaws.⁴⁶⁰ First, the price variable calculated by the Commission is flawed. This variable over-estimates the tariff prices set by Three and under-estimates those set by one of the competitors. Once the prices have been re-calculated so as to correct for these over- and under-estimations, the Commission's model predicts significantly lower price increases, around 1% in the post-paid segment.⁴⁶¹ Second, the price and market share data that are the basis for the demand and merger simulation models of the SO are flawed and are bound to produce unreliable results as the post-paid prices are based on the pre-paid usage patterns.⁴⁶² Third, the demand model the Commission relies upon for its predictions (the random coefficients model) is overly sensitive to the underlying methods used and produces implausible results. The more standard simple logit model (that the Commission also estimated but did not rely upon) leads to very modest predicted price increases.⁴⁶³ Fourth, an extended simulation model of the Notifying Party that incorporates both the pre-paid and post-paid segments leads to negligible predicted price increases.⁴⁶⁴

The Commission's assessment

- (622) Regarding the first criticism (tariff prices with under- and over-estimation problems), the Commission concludes that its calculations do have to be modified. In particular, one operator's handset subsidy figures were under-estimated which resulted in over-estimated tariff prices for that operator. Also, the tariff prices of Three were under-estimated due to the aggregation of the SIM-only tariffs with the handset tariffs (in the SO's aggregation, the monthly fees of Three's SIM-only tariffs are over-stated and the monthly fees of Three's handset tariffs are under-stated).⁴⁶⁵ The Notifying

⁴⁵⁸ Letter of Facts, Section B, pages 11-14.

⁴⁵⁹ Response to the SO, Annex 8, "Assessment of the SO's demand estimation and merger simulation ("second approach")", pages 13-18.

⁴⁶⁰ Response to the SO, Annex 8, "Assessment of the SO's demand estimation and merger simulation ("second approach")"; Response to the Letter of Facts, 31 March 2014.

⁴⁶¹ Response to the Letter of Facts, Annex I, pages 11 and 12.

⁴⁶² Response to the SO, Annex 8, "Assessment of the SO's demand estimation and merger simulation ("second approach")", pages 13-18.

⁴⁶³ Response to the SO, Annex 8, "Assessment of the SO's demand estimation and merger simulation ("second approach")", pages 10 and 11.

⁴⁶⁴ Response to the SO, Annex 8, "Assessment of the SO's demand estimation and merger simulation ("second approach")", pages 3-10.

⁴⁶⁵ Response to the Letter of Facts, Annex II, pages 13 and 14.

Party re-calculated the tariff price variable to correct these problems, and re-estimated the Commission's demand model. The results show a post-paid price increase of around 1%.⁴⁶⁶ The Commission notes, however, that those models fail to match the observed margins of the post-paid segment. In particular, the models' implied margins are only 27-36% of the incremental margin computed using the methodology proposed by the Notifying Party. It should be noted that, in this estimation modelling framework, the overall level of the margins is not identified. In other words, the fact that the model does not fit the observed incremental margin level is not an indication that the "true" economic margin is below the observed one. Rather, it is an indication that the model is not able to properly explain some of the most important market facts (prices and/or quantities and/or margins). The post-merger price predictions of the models proposed by the Notifying Party are clearly driven by the implausibly low implied margins..⁴⁶⁷

- (623) While this type of modelling approach, that is, the so-called estimated discrete choice demand based simulations, has proved to be able to give valuable insights in some previous cases⁴⁶⁸ and is well established in the economic literature,⁴⁶⁹ due to the technical complexity of the approach, it is not always possible to obtain reliable results with such an approach. In this case, because of the models' inability to approximate the level of the observed incremental margins or even to predict pre-merger margins that are close to the observed margins the Commission considers that the models are unreliable or, at best, seriously under-estimate the merger's price effects. In the light of this and considering the high sensitivity of the models' results to small changes in the details of the tariff price calculations (which in this case require assumptions and are prone to errors), the Commission considers the results from this approach to be unreliable and uninformative in this case and hence does not put any weight on the demand estimation based modelling in its assessment of the proposed merger.
- (624) As to the second and third criticisms of the Notifying Party related to the demand estimation based modelling, the Commission does not agree. However, given the overall unreliability of those modelling results it is not necessary for the Commission to discuss these points in detail.
- (625) In the fourth criticism (alternative model of the Notifying Party), the Notifying Party presents an alternative, "calibrated" simulation model.⁴⁷⁰ The model is extended to cover both the pre-paid and post-paid segments. The model is based on the so-called

⁴⁶⁶ Response to the Letter of Facts, Annex I, pages 11 and 12.

⁴⁶⁷ Note that along the same line of reasoning, the Commission presented (demand estimation based) models in the Letter of Facts which matched the observed margin level with a 1% point difference. While these models suffered from errors in the tariff calculations and, therefore, are not relied upon in this Decision, they predicted significant price increases in the post-paid private segment. The Commission further notes that the both the simple logit and random coefficient models based on the corrected tariff calculations lead to implausibly low implied margins.

⁴⁶⁸ For example, Commission Decision of 17 November 2010 in Case No COMP M.5658 *Unilever/Sara Lee Body Care*.

⁴⁶⁹ "Estimating Discrete-Choice Models of Product Differentiation," *Rand Journal of Economics*, Berry, S. T., 1994, Vol 25, 2, Summer, 242-262.

⁴⁷⁰ Response to the SO, Annex 8, "Assessment of the SO's demand estimation and merger simulation ("second approach")", pages 3-10.

nested logit demand model. The Notifying Party argues that this alternative model leads to negligible price increases.

- (626) The Commission first notes that the Notifying Party's alternative model is unreliable as it is not quantified on the basis of observed factual data of the Irish mobile telecommunications market. The model's parameters are not quantified by fitting the observed quantities (as in a demand estimation framework), or by fitting the observed prices and margins (as in a calibration based framework). The quantification of the parameters is entirely arbitrary. The parameters are set by assuming that the margins fall into the same tight range in both the post-paid and pre-paid segments. The observed margins, and especially those in the pre-paid segment, are outside this range.
- (627) Second, the Commission notes that some of the Notifying Party's alternative model simulations, with this model, use data inputs which give a distorted picture of the structure of the Irish mobile market. In particular, in a subset of the simulations a dataset is used in which the ratio of the pre-paid to post-paid subscribers is 99.1 to 0.9.⁴⁷¹ In other words, despite the Notifying Party's claim that its nested logit models incorporate both the pre-paid and post-paid segments, this is actually only true for a subset of the models.⁴⁷²
- (628) Third, the Commission notes that the Notifying Party's alternative model produces implausible results in terms of demand elasticities.⁴⁷³ For example, the typical aggregate demand elasticity of the post-paid segment is [5–10]* (in absolute value) for the model scenarios used by the Notifying Party.⁴⁷⁴ As explained in recital (612), and in line with the results of relevant academic research⁴⁷⁵ the Commission considers that actual demand elasticities are likely to be much lower (not exceeding [0.5–1]* in absolute value). That is, the Notifying Party's model produces implausible results because it is not quantified (estimated or calibrated) based on the observed factual data of the Irish mobile market. Moreover, the alternative model's cross-elasticities between the pre- and post-paid segments are also very high (in the range of 2 to 10).⁴⁷⁶ This implies that the price based diversion between the pre-paid and post-paid segments is particularly strong. This is in contradiction with the Notifying Party's claims made elsewhere.⁴⁷⁷ In summary, the Commission concludes

⁴⁷¹ Response to the Statement of Objections, Annex 8, "Assessment of the SO's demand estimation and merger simulation ("second approach")", Tables 1 and 2, page 7 are based on this data.

⁴⁷² Response to the Statement of Objections, Annex 8, "Assessment of the SO's demand estimation and merger simulation ("second approach")", Tables 5 and 6, pages. 8 and 9.

⁴⁷³ As explained above, the price elasticity of demand gives the percent change in demand as a result of a one percent price increase.

⁴⁷⁴ A post-paid elasticity with absolute value of nine implies that as a response to a 10% price increase of all post-paid tariffs 90% of post-paid subscribers would either switch to pre-paid or stop using their mobile phones altogether, or decrease usage by this extent.

⁴⁷⁵ Cf., footnote 453.

⁴⁷⁶ For example, a cross-elasticity of 10 from pre- to post-paid (the typical value for the Notifying Party's models) means that a 10% price increase of the pre-paid tariffs would induce almost all pre-paid subscribers to switch to post-paid. Similarly, cross-elasticity of 3 from post- to pre-paid (the typical value for the Notifying Party's models) means that a 10% price increase of the post-paid tariffs would induce 30% of post-paid subscribers to switch to pre-paid.

⁴⁷⁷ Response to the SO, paragraph 528.

that the Notifying Party's alternative model is unreliable as it produces implausible results.

7.5.7.3. Assessment of the Notifying Party's quality competition and customer inertia arguments

(629) In addition to the specific arguments on the Commission's quantitative analysis, the Notifying Party argues that the Commission's assessment is inherently inappropriate and unreliable as it ignores important features of the industry and of the merger. According to the Notifying Party, the Commission's assessment ignores the consequences of quality competition and the fact that the merger would create a challenger to market leader Vodafone. Moreover, the Commission's assessment ignores the implications of the existence of customer inertia as well as the implications of the disappearance of the O2 brand.

(630) The Commission disagrees with these arguments. The Notifying Party's arguments on quality competition and customer inertia will be summarised and assessed in this section. The Notifying Party's arguments about the disappearance of the O2 brand are discussed in Section 7.5.7.1 and Annex I.

(a) The Notifying Party's arguments on quality repositioning and quality competition

(631) The Notifying Party argues that the merger would allow the merged entity to narrow the gap with Vodafone in terms of quality of products and services and that it would transform Three into a well-funded high-quality provider able to challenge the market-leader Vodafone in head-to-head competition to the benefit of consumers.⁴⁷⁸

(632) In this context, the Notifying Party submitted a report on product repositioning and investments in quality which was accompanied by a theoretical economic model with vertical product differentiation ("VPD") in a separate technical paper.⁴⁷⁹ According to the Notifying Party, that VPD model demonstrates, first, that a merger which sufficiently increases the quality of the products of the merged entity compared to the pre-merger quality levels of the Parties' products⁴⁸⁰ can have a competition-enhancing effect which can outweigh the negative effect of the loss of a competitor following the merger. Second, the merged entity and the market leader will have continued incentives to keep investing in quality to differentiate themselves from one another and avoid margin erosion resulting from increased head-to-head competition. The Notifying Party considers that the situation in the Irish market is such that the merger between Three and O2 is likely to generate these effects.

The Commission's analysis in the SO

(633) In the SO, the Commission explained that efficiencies in the form of a merger-induced increase in quality of the products and services of the merged entity can be accounted for in its quantitative approaches. While the Commission acknowledged that its quantitative approaches do not model subsequent decisions to invest in quality by firms, the Commission provisionally considered that the Notifying Party's

⁴⁷⁸ Response to the Article 6(1)(c) Decision on Efficiencies, page 7.

⁴⁷⁹ Compass Lexecon, "Horizontal Merger Effects with Quality Competition and Repositioning", 26 November 2013 [Ref 131126][ID 1449], and Kalmus, P., Kamat, V. and V. Kumar (2013) "Mergers with repositioning and investments in quality", Paper presented by Compass Lexecon on behalf of Three, [Ref 131125], [ID 1448].

⁴⁸⁰ The Notifying Party refers to this as "product repositioning in a model without investments".

model had no informative value for the assessment of the claimed quality repositioning or quality competition effects.

- (634) The main points raised by the Commission in the SO with respect to the Notifying Party's VPD model can be summarised as follows:
- (a) The Commission noted that the results of the Notifying Party's model are driven by the *assumption* that the quality shift resulting from the merger is large enough to outweigh the loss of a competitor and to lead to a shift in regime in which the merged entity can overtake Vodafone with sufficient probability, while this is not possible for O2 or Three in the absence of the merger.
 - (b) The Commission noted that the model is not appropriate for the industry at hand as it is highly abstract and does not reflect key features of the industry such as the existence of horizontal product differentiation and the fact that investments in network technology generate deterministic (rather than random) improvements in capacity, coverage or other objective quality parameters. The Notifying Party' also made no attempt to calibrate the model to the specific case. The Commission also noted that the model was incomplete as it did not model equilibrium investments with or without the merger. Hence the model did not allow an internally coherent analysis of the effect of a merger with the abstract framework.
 - (c) The Commission also showed that a substantial merger-induced shift in quality of the merged entity need not result in an increase in consumer welfare even within a simple abstract framework of vertical product differentiation with investments in quality that is very similar to the one proposed by the Notifying Party.

The Notifying Party's arguments in the Response to the SO

- (635) In the Response to the SO, the Notifying Party argues that it considers the Commission's quantitative assessment in the SO inappropriate and unreliable for the assessment of the merger, as it abstracts from the competitive dynamics resulting from investments in quality.
- (636) The Notifying Party argues that the claimed merger-induced increase in the merged entity's quality should not be considered solely as an efficiency claim. Because the Commission's quantitative approaches would always predict price increases in the absence of synergies, doing so would unduly shift the burden of proof on the Notifying Party.⁴⁸¹ Moreover, the Notifying Party considers that it has sufficiently demonstrated a large increase in quality and the Commission has implicitly acknowledged it.⁴⁸² The Commission should therefore consider the claims about quality improvements as part of the competitive assessment.
- (637) The Notifying Party also argues that the Commission's criticisms of its model of quality competition are incorrect. In particular:
- (a) The Notifying Party argues that pointing out the abstract nature of its VPD model and the lack of quantification is not sufficient for the Commission to

⁴⁸¹ Response to the SO, paragraphs 473, 479

⁴⁸² Response to the SO, paragraphs 477, 483-486.

disprove its results. The Notifying Party argues that its conclusions do not hinge on the absence of horizontal product differentiation and argues that investments in quality are risky which it illustrates with examples of investments that have been commercially unsuccessful.⁴⁸³

- (b) The Notifying Party considers that the criticism that its analysis is incomplete and hence unreliable is misleading as the VPD model was not meant to simulate the effects of the merger. Instead, the purpose of the model was to highlight the importance of considering quality competition in the assessment of the merger.⁴⁸⁴
- (c) Moreover, the results of the Commission's alternative illustrative model are fragile and designed to allow for the unrealistic assumption of the possibility of quality degradation. Furthermore, the Commission should base its assessment based on total welfare rather than on consumer welfare.⁴⁸⁵

The Commission's assessment

- (638) As set out in recitals (549) to (553), the Commission accepts that increases in the quality of the merged entity's network and associated quality positioning are potentially relevant when assessing the merged entity's incentives and ability to compete post-merger. However, the Commission considers that in this case no such quality improvements are likely (relative to the situation in the absence of the merger) and even were such improvements to occur, the Notifying Party has not demonstrated that such improvements would be sufficient to materially alter the merged entity's incentives to compete.
- (639) With respect to the Notifying Party's VPD model, the Commission considers the following:
 - (a) The Notifying Party does not dispute that its analysis is based on the assumption that the merger leads to a quality improvement which is large enough to outweigh competitive harm and to lead to a shift in regime in which the merged entity can catch up with the leading firm in a way that is not possible for either party pre-merger. As this is an assumption, the Notifying Party's model provides no basis for assessing whether the claimed quality improvement would actually be sufficient to outweigh competitive harm. As explained in recitals (554) to (556), the Commission does not consider it likely that the merger would lead to an improvement in the quality of the merged entity's products or services relative to the positions of the Parties in the absence of the merger. The Commission also does not consider it likely that the merger would lead to head-to-head competition with Vodafone that would not exist in the absence of the merger.⁴⁸⁶ The Commission therefore disagrees with the basic premises on which the Notifying Party's VPD model is built.

⁴⁸³ Response to the SO, paragraph 481.

⁴⁸⁴ Response to the SO, paragraph 489.

⁴⁸⁵ Response to the SO, paragraph 488.

⁴⁸⁶ According to the Notifying Party, O2 enjoys a quality perception and strong brand image similar to that of Vodafone in the absence of the merger (Form CO paragraphs 436 and following). As the merger is also not likely to lead to any quality improvement, the competitive pressure on Vodafone is unlikely to be increased.

- (b) 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 has not demonstrated this. The Notifying Party has not attempted to adapt or calibrate the simple VPD model to the Irish mobile telecoms industry. Moreover, the existence of horizontal product differentiation, for example, will likely reduce the incentives of the merged entity to invest aggressively to differentiate itself in quality terms from Vodafone.
- (c) The examples of investments given by the Notifying Party to demonstrate that investments are risky in terms of the quality effect achieved (which is another important assumption in the VPD model) all relate to the commercial success of certain investments. The examples do not demonstrate that investments would have ex-ante uncertain effects on the objective quality of service. The Commission considers that investments in the mobile telecommunications industry largely deliver deterministic outcomes in terms of objective quality. For example, in contrast to investments in R&D in other industries, network investments in mobile telecommunications generate known improvements in capacity or other quality parameters. To the extent that the Notifying Party's claim about riskiness is about commercial success, such as the outcome of marketing campaigns or the success of building brand image, the Commission notes that the Notifying Party's arguments about the loss of the O2 brand would, all else being equal, suggest that the merged entity might have *lower* perceived quality than O2 pre-merger. That is, the Notifying Party's arguments about the loss of the O2 brand would work against the Notifying Party's claim that the merged entity could sufficiently narrow the quality gap to market leader Vodafone in terms of perceived quality. The Commission further notes that the Notifying Party's argument that its VPD model is only intended to "*highlight the importance of considering quality competition in the assessment of the merger*"⁴⁸⁷ does not respond to the Commission's criticism that the Notifying Party's analysis is incomplete. In order to shed light on the importance of considering quality competition, the Notifying Party would still need to make an internally consistent assessment within its VPD model of how investments and prices of all firms in the industry evolve with the merger compared to the situation in the absence of the merger. The Notifying Party does not provide such an assessment.
- (d) Finally, the Commission's alternative simple illustrative VPD model, which is assessed in Annex II, is designed to examine the incentives of firms to position themselves vertically relative to their competitors following the standard economic literature and using a complete and internally consistent assessment. It is not designed to lead to a quality degradation of the merged entity. But it highlights that if MNOs have as strong an incentive to differentiate themselves vertically from one another in order to avoid competition as the Notifying Party claims, then the merged entity may not enter into quality competition with Vodafone but may instead refrain from doing so by positioning itself close to O2's current position. The Commission does not consider this to be implausible, in particular in the light of the Notifying Party's arguments about

⁴⁸⁷ Response to the SO, paragraph 489.

the loss of the O2 brand. The alternative model hence demonstrates that even if one assumes substantial quality improvements from the merger, the effect of quality competition is ambiguous and need not lead to a net benefit to consumers, which is the relevant standard for assessing such effects.⁴⁸⁸

- (640) In light of the above, the Commission maintains its view that the Notifying Party's VPD model is not informative for the assessment of this case.
- (641) Finally, the Commission does not accept the Notifying Party's argument that its quantitative assessment of the merger is bound to produce misleading and incorrect results as it ignores that MNOs compete not also on price but also on investments in quality. While the Commission acknowledges that its quantitative approach does not model dynamic investment incentives which over time might lead to different quality levels, the Commission considers that its approach captures the most immediate and direct effect of the merger which is the effect of the elimination of competition between the Parties on prices for given quality levels.
- (642) Moreover, the Commission's quantitative approach can take account of quantified quality efficiencies arising from the merger. However, since the Commission does not consider it likely that the merger will lead to quality improvements and since the Notifying Party's has not quantified the alleged improvements sufficiently, the Commission was unable to incorporate the claimed 'quality improvements' in its quantitative analysis..⁴⁸⁹
- (643) Overall, the Commission concludes that the Notifying Party's VPD model is not informative for the assessment of the case. Finally, the Commission does not consider that the fact that firms make investments which may affect quality parameters invalidate the conclusions regarding the direct effect of the merger on prices from its quantitative assessment.

(b) The Notifying Party's arguments on customer inertia

- (644) The Notifying Party argues that customer inertia is an important feature of the industry as post-paid customers can only change MNO upon expiry of their contracts and some customers do not often shop around and stay with the same MNO for a longer period of time. According to the Notifying Party, the focus on new and retained (or contestable) customers in the Commission's quantitative analysis does not fully address the implications of the existence of inert or non-contestable customers for the competitive dynamics and hence for the merger assessment.
- (645) The Notifying Party submitted a simple theoretical model of a market with customer inertia. In the model symmetric firms each have a set of "non-contestable" customers and compete for a set of "contestable customers" on price without the possibility to price discriminate and without product differentiation.
- (646) According to the Notifying Party, the results from that model are consistent with the findings from the Notifying Party's price concentration analysis that small markets with three MNOs have lower prices than small markets with four or more MNOs, as

⁴⁸⁸ The Commission considers the effect on consumers (for example, as measured as the effect on quality adjusted prices to be the relevant standard for its assessment. As explained in the SO, in abstract models of this type, the relevant measure to assess the effect on consumers is consumer welfare.

⁴⁸⁹ In any event, the Notifying Party has not quantified its quality improvement claims in a way that would allow the Commission to incorporate them in its quantitative analysis.

the model shows that a reduction in the number of firms is more likely to lead to lower prices than in small markets than in large markets.

- (647) Moreover, according to the Notifying Party, in the equilibrium of its model, firms focus less on pricing aggressively to acquire new customers as the number of firms increases. This result is consistent with the Notifying Party's argument that, in the absence of the merger, Three would be forced to abandon its aggressive pricing strategy to acquire new customers, while it would continue an aggressive pricing approach with the merger. The same results also imply that mergers may increase competition for contestable customers and, by extension, may also benefit non-contestable customers. The model also demonstrate that firms will not price below average avoidable costs of serving contestable customers regardless of whether these costs are fixed or variable.

The Commission's analysis in the SO

- (648) In the SO, the Commission took the preliminary view that the Notifying Party's model was not relevant or informative for the assessment of the merger. This conclusion was based on a number of reasons, including: that the model was of an abstract nature without any attempt to calibrate the model to the specific circumstances of the case; that the model could not reflect the effect of mergers as it was comparing situations between symmetric firms rather than a situation in which the assets of two firms would be combined as a result of the merger; that the claim that the model provided a theoretical underpinning for the results of the Notifying Party's empirical price concentration study was irrelevant in the light of the Commission's assessment of that study; and that the model could not motivate a change in strategy by Three in the absence of the transaction as in the absence of the merger, there would be no change in the number of firms. Additional points of a more technical nature that were raised in the SO are assessed in Annex II.

The Notifying Party's arguments in the Response to the SO

- (649) In the Response to the SO, the Notifying Party re-emphasises its conclusions from its model and argues that the Commission's arguments on which it based the preliminary conclusion in the SO that the Notifying Party's model was not relevant and not informative for the assessment of the case are incorrect. The main arguments by the Notifying Party are as set out in recitals (650) to (653).⁴⁹⁰
- (650) The Notifying Party does not dispute that its model is not a model of mergers in general or in this specific case. Instead, the Notifying Party states (without substantiation) that "*it should be obvious that the results of Compass Lexecon's model are robust to changes in this [symmetry of firms] assumption*" and that the Commission's criticism in this respect and more generally the criticism of the abstract nature of the model "*does not meet [the] rebuttal standard, which is generally accepted in academia*" because the Commission had not shown that the conclusions would be different if the model was a model of mergers or if other abstract assumptions were relaxed.⁴⁹¹

⁴⁹⁰ Additional arguments of a more technical nature by the Notifying Party summarised and assessed in Annex II.

⁴⁹¹ Response to the SO, paragraph 308.

- (651) The Notifying Party further states that "*Compass Lexecon's model is not a merger simulation model. It is not seeking to calibrate the pre-merger situation and estimate price effects of the merger. Instead, it should be read in conjunction with the cross-country empirical analysis submitted by Compass Lexecon showing that four-player markets are not more competitive than three-player markets in small economies. In that respect, the model is developed to help understand how the strength of competition varies across a large number of countries with different market structures*".⁴⁹²
- (652) Moreover, the Notifying Party defends its claim that the model could explain the change in strategy of Three without the merger compared to the post-merger situation because the current pre-merger situation is not an equilibrium.
- (653) Finally, the Notifying Party argues that the Commission's focus on contestable customers in its quantitative approaches is insufficient to fully address the implications of the existence of inert customers for the assessment of the merger.

The Commission's assessment

- (654) The Commission disagrees with the Notifying Party's views. The Notifying Party's main arguments in the Response to the SO are assessed in the recitals (655) to (662). Additional arguments of a more technical nature by the Notifying Party are assessed in Annex II.
- (655) First, in the Commission's view, insights from an abstract theoretical analysis that does not model the effect of a merger in general or in the specific case and which only seeks to be read in conjunction with an empirical study (which in itself does not generate robust results)⁴⁹³ cannot be given any evidentiary weight in the specific assessment of this merger. The Commission does not consider that it has to extend the Notifying Party's theoretical model to a merger context or to calibrate it to the market at hand to come to this conclusion. Moreover, the economic literature on customer inertia cited by the Notifying Party also does not study mergers and hence provides no guidance on the impact of switching costs on the assessment of mergers.
- (656) Second, the Notifying Party's model assumes that non-contestable customers never change MNO (regardless of the prices charged), while the MNO that wins the contestable customers has to immediately extend the conditions it offers to these customers to its non-contestable customers. This implies that non-contestable customers of an MNO would immediately switch to the most advantageous tariff within their MNO (and could do so regardless of their remaining contract duration) but would never consider switching to a different MNO.
- (657) In contrast, the Commission considers that while not all customers are contestable at any given point in time, all customers become contestable at some point in time (for instance at the end of their contract or when they decide to shop around or upgrade handset). For this reason, the Commission's quantitative analysis assumes that competition at any given point in time is in relation to contestable customers only (this is to say that this competition does not affect prices of non-contestable

⁴⁹² Response to the SO, paragraph 512, a substantively very similar response is repeated at paragraph 514.

⁴⁹³ See recitals (800) and following.

customers immediately), but considers that this competition for contestable customers will ultimately affect all customers as they become contestable.⁴⁹⁴

- (658) The Commission regards the assumptions of the Notifying Party on the absence of price discrimination within MNO combined with complete inertia of a substantial proportion of customers between MNOs to be implausible. It considers the assumptions used by the Commission in its quantitative assessment to be more realistic.
- (659) The Commission acknowledges that its quantitative assessment does not explicitly model dynamic competition in the presence of customer inertia or customer switching costs. Developing a full model of dynamic competition in the industry is a complex exercise which the Commission regards infeasible within the context and timeframe of a merger investigation. The Notifying Party's model also does not capture competitive dynamics as it only covers one period.⁴⁹⁵ In the light of this, the Commission considers that its quantitative approaches and its interpretation of the results are reasonable and sufficiently address issues arising from the fact that not all customers are contestable at any given point in time.
- (660) Third, the Notifying Party's central claim derived from its model that the merger may increase competition for contestable customers is technically incorrect⁴⁹⁶ and is also contradicted by statements from Three which imply that post-merger, Three would focus more (rather than less) on customer retention than on acquisition of new customers.⁴⁹⁷
- (661) Moreover, these statements as well as other statements on pricing decisions in section 7.5.4 do not support the view that there would be a change in strategy in the absence of the merger and contradict the Notifying Party's view that the pre-merger situation is not an equilibrium.
- (662) In light of the above and the discussion in Annex II, the Commission does not consider the Notifying Party's model on customer inertia to be relevant for the assessment of the case or that it would imply that the existence of customer inertia would invalidate the results from the Commission's quantitative assessment.

7.5.7.4. Conclusion on the quantitative assessment

- (663) The Commission's quantitative assessment provides a measure of the likely effect of the elimination of competition between the Parties. In generating these price predictions, the Commission has taken into account a number of arguments raised by the Notifying Party in its Response to the SO. In particular, the Commission agrees

⁴⁹⁴ See recital (600) above. See also paragraphs 33 to 35 of Annex II to the SO, where the Commission further notes that the same reasons that imply that some customers will be non-contestable at any point in time (ongoing contracts, reluctance to shop around etc.) will likely lead to a degree of price discrimination at any given point in time between an MNO's contestable and non-contestable customers.

⁴⁹⁵ For example, the economic paper by Alan Beggs and Paul Klemperer cited by the Notifying Party (Beggs, A. and P. Klemperer (1992), "Multi-Period Competition with Switching Costs" *Econometrica*, vol. 60, 651-666) notes that drawing inferences on the effect of switching costs (which lead to customer inertia) based on two period models is problematic. The paper also notes that prices are higher in markets with switching costs which may make entry easier. However, the paper does not study the effect of mergers.

⁴⁹⁶ See recital (50) and following in Annex II.

⁴⁹⁷ See recital (642)(b).

that switching across segments may not be price based and that market wide price increases may lead to some limited reduction in usage.

- (664) Taking account these arguments the Commission's quantitative approach based on diversion ratios and margins predicts average price increases across all MNOs in the post-paid private segment of 6% and market wide average price increases across all voice segments⁴⁹⁸ of 4% in the baseline case using contribution margins as a measure for margins. In the sensitivity scenario based on incremental margins, the corresponding predicted average price effects are 4% in the post-paid private segment and 3% across all voice segments.⁴⁹⁹
- (665) The Commission does not agree with the Notifying Party's arguments about quality competition and re-positioning, the disappearance of the O2 brand or customer inertia or that these arguments invalidate the conclusions from the Commission's quantitative assessment. The Notifying Party's abstract economic studies on quality competition and on customer inertia are not specific enough to allow concrete inferences for the merger. Among other shortcomings, the Notifying Party's customer inertia study does not model the effect of mergers while the Notifying Party's claims about increased quality competition rely on the assumption of significant quality improvements resulting from the merger in an abstract framework and even if such improvements were to materialise, which the Commission does not consider to be the case, produces ambiguous results. The studies hence provide no basis for concluding that the results from the Commission's quantitative assessment is biased.
- (666) Overall, the Commission's quantitative assessment indicates that (in the absence of synergies) the merger would most likely lead to significant price increases in voice segments.

7.5.8. *Conclusion*

- (667) The Commission concludes that the merger is most likely to remove an important competitive force from the retail mobile telecommunications services market in two ways:
- (a) the merger will reduce the number of MNOs in Ireland from four to three and will eliminate the competition currently existing between the Parties, providing the merged entity with an incentive to increase price;
 - (b) Three is currently an important competitor in Ireland on price and unlimited data services; its commercial strategy is to grow both its subscriber and revenue share is based on (i) a limited scale/subscriber base and (ii) low costs of acquiring additional customers due to available spare capacity which provide strong incentives to grow by competing vigorously; the increase in subscriber base resulting from the merger will entail a further incentive to increase price.

⁴⁹⁸ Voice segments include both mobile voice offers and packages with voice and data services, as explained in Section (143).

⁴⁹⁹ As discussed, in the first quantitative approach, the Commission further assumes that contestable customers in a given month are the sum of new customers plus one twelfth of the existing subscriber base. Absent cross-segment switching, this assumption has no effect on the estimated effects in the post-paid private and the business segment.

(668) The merged entity's incentives to increase prices are unlikely to be offset by competitors, who in turn are likely to raise their prices as well.

7.6. The merger is likely to reduce competition from Eircom in the retail and wholesale markets

(669) This section explains why the merger is likely to significantly impede effective competition in the Irish retail and wholesale mobile markets by reducing competition from Eircom. The merger will reduce Eircom's ability to compete, leading to less competition.

7.6.1. Eircom's contribution to competition in the absence of the merger

(670) As the third largest operator, Eircom contributes to competition in the Irish retail mobile telecommunications services market. It was the first operator to launch bundled packages of mobile and fixed-line services in October 2012 and quad-play in October 2013. Quad-play or quadruple play is a bundled offering of fixed-line television, fixed-line telephony, fixed-line broadband and mobile telephony. Eircom was also the first operator to launch LTE in Ireland in September 2013,⁵⁰⁰ one month ahead of Vodafone.

(671) Without the merger, competition from Eircom is likely to become more effective in the coming years. This is because Eircom is set to increase the coverage of its network, as a result of the Mosaic agreement with O2. At present, Eircom's mobile network does not cover some areas in the West of Ireland.⁵⁰¹ Eircom's network therefore does not have national coverage.⁵⁰² [...] in those areas, Eircom relies on a roaming agreement with Vodafone. The roaming agreement relates to an area in the West of Ireland that [...] accounts for a comparatively small percentage of the population.⁵⁰³ [...] The roaming agreement with Vodafone serves to fill those gaps. [...] Hence, [...], Eircom does not offer its customers nationwide coverage.

(672) The lack of national coverage is a restraint on Eircom's ability to compete. It results in additional costs for Eircom in the form of roaming fees. It also makes Eircom less attractive for MVNOs (see recital (706)) and retail customers. Business customers, for instance, may have retail outlets throughout Ireland and expect their mobile operator to provide 3G coverage throughout the country. The importance of having national coverage has also been recognised in previous Commission decisions.⁵⁰⁵

(673) Without the merger, the Mosaic agreement would lift this restraint on Eircom's ability to compete. Eircom and O2 are both committed to implementing the Mosaic agreement and using it to expand coverage and save costs. Internal documents show that O2 intended to "[...]"⁵⁰⁶ and to take "[...]"⁵⁰⁷ that would lead to the sharing

⁵⁰⁰ Eircom's submission of 8 October 2013, page 5, [ID 1071].

⁵⁰¹ Eircom's submission of 3 December 2013, page 18, [ID 2382].

⁵⁰² Eircom's presentation of 29 July 2013, slide 24, [ID 1070].

⁵⁰³ Eircom's submission of 3 December 2013, page 18, [ID 2382].

⁵⁰⁴ Eircom's Briefing Note of 1 October 2013, page 4, footnote 7, [ID 378].

⁵⁰⁵ Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring*, paragraph 83.

⁵⁰⁶ Strategic review of O2 IE situation, February 2012, page 5 (in this presentation the term "Netshare agreement" is used to refer to the Mosaic agreement with Eircom), [Ref: TEL00090163], [ID 1063-14914].

of more than [...] of its sites ([...] sites) by 2015.⁵⁰⁸ [...] .⁵⁰⁹ As a result, it would no longer need to rely on the roaming agreement with Vodafone and become a more effective competitor.

(674) The Mosaic agreement is also key for Eircom's LTE roll-out plans. Eircom was the first operator to launch LTE in Ireland but its LTE coverage is currently limited to [...] of the Irish population.⁵¹⁰ The Mosaic agreement would enable Eircom to roll-out LTE more widely.⁵¹¹ This is another reason why the Mosaic agreement is important for Eircom's ability to compete in the future.

(675) O2's internal documents show the importance of the Mosaic agreement for Eircom. [...] .⁵¹²

7.6.2. *The merger's impact on Eircom*

7.6.2.1. The merged entity is likely to frustrate or terminate the network sharing agreement

Ability to frustrate or terminate Mosaic

(676) The Mosaic agreement [...] .⁵¹³ [...] .⁵¹⁴

(677) [...] .⁵¹⁵ [...] .

Incentive to frustrate or terminate the Mosaic agreement

(678) The merger is likely to reverse O2's pre-merger incentive to actively implement the Mosaic agreement, for at least three reasons.

(679) First, the merger will combine the mobile networks of O2 and Three. Because of the merged entity's more extensive network, it will have much less to gain from network sharing than O2 had before the merger. Continuing the Mosaic agreement may still result in some cost savings for the merged entity, but these are likely to be smaller than the cost savings that the Mosaic agreement would have generated for O2 without the merger. Indeed, one of the main benefits that O2 expected to obtain from Mosaic was access to Eircom's comparatively more dense network of 3G sites in urban areas.⁵¹⁶ However, this is exactly Three's strength, as it only has a 3G network (and no 2G network).

(680) Second, it is likely that the merged entity will focus on integrating the networks of O2 and Three and, hence, invest less in network sharing with another MNO. O2 itself acknowledged the likelihood of such a scenario. [...] .⁵¹⁷ [...] .⁵¹⁸

⁵⁰⁷ O2, In Country review, June 2012, O2 response to Questionnaire Q14, [ID 1104].

⁵⁰⁸ Telefónica, Business Plan 2013-2015, Discussion Pack, June 2012, slide 53, [Ref: TEL00303919], [ID 1278-3586].

⁵⁰⁹ Eircom's submission of 3 December 2013, page 6, [ID 2382].

⁵¹⁰ Eircom's submission of 8 October 2013, page 5, [ID 1071].

⁵¹¹ Eircom's submission of 8 October 2013, page 5 [...], [ID 1071].

⁵¹² O2, Business Plan 2014-2016 – Key Strategic Choices, [Ref: TEL00053138], [ID 1061-23768].

⁵¹³ Form CO, Annex 6.4.1.3 (1), Clause 6 of the agreement.

⁵¹⁴ Form CO, Annex 6.4.1.3 (1), Clause 25.7 of the agreement.

⁵¹⁵ O2, e-mail of 27 April 2012 from [...] to [...] and others, [Ref: TEL00090872], [ID 1063-15066].

⁵¹⁶ O2, Offline PAC – Netshare Review, 11 March 2011, slide 10 ("[...]").

⁵¹⁷ E-mail of 27 April 2012 from [...] to [...] and others, [Ref: TEL00090872], [ID 1063-15066].

- (681) Third, implementing the Mosaic agreement also benefits Eircom and, conversely, terminating or frustrating it impairs Eircom's ability to compete. A weaker Eircom is, in turn, beneficial for the merged entity as Eircom will compete less effectively. Facing less competition, the merged entity could charge higher prices or acquire some of Eircom's customers. Prior to the merger, this benefit was outweighed by the cost savings that O2 expected to derive from the Mosaic agreement, as otherwise O2 would not have entered into the Mosaic agreement in the first place. After the merger, however, the cost savings for O2 (as part of the merged entity) are likely to be much smaller and, hence, the benefits of reduced competition from Eircom may outweigh the benefits from network sharing.
- (682) The change in incentives as a result of the merger is already evidenced by O2's conduct after the announcement of the merger. O2 became less willing to implement the Mosaic agreement actively. [...]*.⁵¹⁹
- (683) In the *T-Mobile / Orange UK* Decision, the Commission found that a party to a network sharing agreement (in that case T-Mobile) would have an incentive to terminate or frustrate ("*compromise*") the agreement after the merger, in order to weaken that player (in that case Hutchison 3G).⁵²⁰
- (684) During the merger review process, the Notifying Party has indicated to the Commission that, after the merger, it intends to engage in network sharing with Eircom.⁵²¹ The Notifying Party has not, however, entered into a binding agreement with Eircom in this respect. Hence, it remains uncertain whether Eircom would benefit from a network sharing agreement with the merged entity after the merger.

7.6.2.2. Spectrum imbalance after the merger

- (685) In the SO, the Commission reached the provisional conclusion that the spectrum asymmetry resulting from the merger would compound the risk that Eircom would be weakened.⁵²²
- (686) In its Response to the SO, the Notifying Party argued that the alleged disadvantage of Eircom is not merger-specific because Eircom's spectrum holdings do not change because of the merger. Hence, Eircom's data speeds and network capacity are also unchanged by the merger. The Notifying Party also questions the relevance of the SO's conclusion that, because of the spectrum imbalance, only Three and Vodafone will be able to reach peak speeds of 150 Mbps. In its view, this would be the case regardless of the merger. Finally, the Notifying Party points out that 2600 MHz spectrum will be auctioned in the near future (2014) and that it will be liberalized. Hence, Eircom could acquire additional spectrum at that time and use it to provide LTE services.
- (687) In submissions to the Commission, [...] has argued that the spectrum asymmetry resulting from the merger would give the merged entity an insurmountable advantage, especially for LTE services. [...]*. [...] has made similar submissions to

⁵¹⁸ Three, E-mail from [...] to [...]*, 18 June 2012, [Ref: 000026229]; [ID 1050-4835].

⁵¹⁹ Eircom, 3 December 2013, slide 10, [ID 2382].

⁵²⁰ Commission Decision of 1 March 2010 in Case COMP/M.5650 *T-Mobile / Orange UK*, paragraph 105.

⁵²¹ Form CO, paragraph 280; Response to the SO, paragraph 676.

⁵²² SO, paragraph 338.

the Commission and argues that the merged entity's spectrum advantage would make other MNOs unable to constrain the merged entity.

- (688) The Commission considers that the change in spectrum holdings resulting from the merger is unlikely to have anticompetitive effects. The merger will not reduce the spectrum holdings of Eircom and Vodafone and, hence, it will not have any impact on the network quality and speed offered by Eircom and Vodafone. The fact that, after the merger, there will be spectrum asymmetry is not, as such, anticompetitive. In this respect, the Commission points out that, at present, each of Vodafone and Eircom have more spectrum than Three. This has not, however, prevented Three from competing effectively in the Irish retail market.
- (689) In addition, the Commission considers that, in spite of the spectrum imbalance, Eircom and Vodafone will still be able to compete effectively, including with respect to LTE services. Recitals (690) to (697) explain why Eircom will still be able to compete effectively but the analysis also applies to Vodafone, which holds more spectrum than Eircom.
- (690) In the 800 MHz band, the merger does not lead to any change, since Three currently does not hold any 800 MHz spectrum. After the merger, the allocation of spectrum in this band would be entirely symmetric, with Eircom, Vodafone and the merged entity each holding 2x10 MHz of spectrum.
- (691) In the 900 MHz band, the merged entity would hold three blocks of spectrum (2x15 MHz), which is one block more than Eircom and Vodafone, which will each hold two blocks (2x10 MHz). The Commission does not consider that, as a result of this imbalance, Eircom would be unable to compete. In this respect, the Commission points out that Three currently has only one block (1x5 MHz) of 900 MHz spectrum, being half of the 900 MHz spectrum held by Eircom and Vodafone. This inferior spectrum holding has not prevented Three from competing.
- (692) In the 1800 MHz band, Eircom currently has more spectrum than the other MNOs until the end of time slice 1, meaning until July 2015. Hence, without the merger, Eircom would have had a spectrum advantage until July 2015. The merger will give the merged entity five blocks of 1800 MHz in time slice 1, which is one more than Eircom and two more than Vodafone. In time slice 2, meaning the period from July 2015 to July 2030, the merged entity will hold seven blocks (2x35 MHz), consisting of a contiguous set of three blocks originally held by O2 and a contiguous set of four blocks originally held by Three. Eircom will have three blocks (2x15 MHz) and Vodafone five blocks (2x25 MHz). However, in spite of its lower spectrum holdings, Eircom will still be able to compete.
- (693) First, Eircom's ability to offer LTE services is evidenced by the fact that it has already started offering LTE services to its customers. In fact, it was the first MNO in Ireland to roll out LTE, one month ahead of Vodafone, and several months before Three.
- (694) Second, even without the merger, Eircom will have lower headline speeds than Vodafone and Three. Vodafone and Three would have 2x25 MHz and 2x20 MHz of 1800 MHz spectrum in time slice 2. Without carrier aggregation, this volume of spectrum will allow Vodafone and Three to offer headline speeds of 150 Mbps using the 1800 MHz band, whereas Eircom would only be able to offer headline speeds of

75 Mbps.⁵²³ There is no indication that, in the absence of the merger, Eircom will be unable to compete with Vodafone and Three as a result of its lower spectrum holdings. The merger does not fundamentally alter this situation. After the merger, Vodafone and the merged entity will each be able to offer headline speeds of 150 Mbps without carrier aggregation.⁵²⁴ Eircom's disadvantage in the 1800 MHz band therefore remains the same.

- (695) Eircom's disadvantage also does not change if carrier aggregation is taken into account.⁵²⁵ The exact combinations of channels that can be aggregated are specified by the 3rd Generation Partnership Product ("3GPP").⁵²⁶ Currently 3GPP Release-11 and -12 specifications provide for inter-band aggregation of two contiguous carriers, in particular in the 800 MHz and 1800 MHz bands up to a maximum of 30 MHz combined. For example, in Ireland this will allow MNOs to aggregate 10 MHz of LTE800 and 20 MHz of LTE1800 to obtain 30 MHz bandwidth. While this type of carrier aggregation has not yet been deployed in Ireland, the necessary equipment is already available on the market and is being rolled-out in other countries.⁵²⁷
- (696) With the inter-band carrier aggregation specified in 3GPP Release-11 and -12, the merged entity and Vodafone will each be able to provide LTE headline speeds of up to 225 Mbps.⁵²⁸ Eircom will be able to offer a lower speed of 150 Mbps. This difference is unlikely to make Eircom unable to compete and, in any event, is not merger-specific, since even without the merger, Vodafone could have offered headline speeds of up to 225 Mbps using carrier aggregation.
- (697) Finally, 2600 MHz spectrum is expected to become available for use by mobile network operators in 2016. This spectrum could also be used to offer LTE services and, hence, Eircom could acquire additional spectrum at that time. This spectrum could be used by Eircom to increase headline speeds through carrier aggregation.

7.6.3. *Conclusion: competition from Eircom is likely to be reduced*

- (698) The merger will give the merged entity the ability and incentive to frustrate or terminate the Mosaic agreement between Eircom and O2. That network sharing

⁵²³ Vilicom, Report 1: Preliminary Analysis of the proposed merge of Hutchison Whampoa and Telefónica Ireland – Technology and Spectrum Considerations, Report for ComReg and the European Commission, 27 January 2014, table 21 [ID 2396],

⁵²⁴ Vilicom, Report 1: Preliminary Analysis of the proposed merge of Hutchison Whampoa and Telefónica Ireland – Technology and Spectrum Considerations, Report for ComReg and the European Commission, 27 January 2014, table 21 [ID 2396].

⁵²⁵ Carrier aggregation is a technique where multiple channels are joined together simultaneously to create a single carrier and increase the data connection speed.

⁵²⁶ 3GPP stands for the 3rd Generation Partnership Project, which is collaboration between various telecommunications associations' groups, to make a globally applicable mobile phone system specifications.

⁵²⁷ LTE carrier aggregation has been commercially launched in South Korea by SK Telekom and others. In Europe, LTE carrier aggregation is being rolled out by Everything Everywhere in the UK. Also, in Germany Telefónica and Vodafone have recently began testing LTE carrier aggregation (ComReg Observations, paragraph 5.23, [ID 2090]).

⁵²⁸ Vilicom, Report 1: Preliminary Analysis of the proposed merge of Hutchison Whampoa and Telefónica Ireland – Technology and Spectrum Considerations, Report for ComReg and the European Commission, 27 January 2014, table 24 [ID 2396].

agreement has important implications for Eircom's network costs and coverage and is important for Eircom's ability to compete effectively in the years to come. Eircom's reduced ability to compete is likely to result in less competition on the Irish retail and wholesale mobile markets.

7.7. Likely effects on the wholesale market for network access and call origination

- (699) In addition to the retail market, the Parties are active on the wholesale market for network access and call origination. On this market, MNOs provide hosting services to MVNOs which in turn offer retail services to subscribers. The Commission has examined whether the merger would lead to reduction of competition for the provision of wholesale access to MVNOs.
- (700) Based on the Notifying Party's estimates, the combined wholesale market share of the Parties in terms of revenues (that is, network access fees) exceeds [80–90]*%, [...]*. Vodafone has around [20–30]*% (recital (259)). The current wholesale market shares however provide only a preliminary indication of the market positions of the MNOs, in particular since the Irish wholesale market is in its developing stage with a limited number of MVNOs present. An important issue for assessment relates to potential competition for future hosting of MVNOs.
- (701) Currently four MVNOs are present on the Irish market: Tesco Mobile (50% owned by O2), Lycamobile, Postfone and Blueface (Section 5.7). The market investigation showed that there is clear interest from potential entrants in launching new MVNOs in the future. Entry is generally expected by the Parties, as well as by the responding MNOs and MVNOs.⁵²⁹ Also, a number of MVNOs have approached the Irish MNOs to negotiate network access in recent years. Therefore, ensuring competitive wholesale access post-merger is important for enabling the development of the Irish MVNO segment, which could also, to some extent, have an effect on the retail market.

7.7.1. The Parties are important providers of wholesale access

- (702) Both Parties are currently important providers of wholesale access to MVNOs.
- (703) Each of them already hosts an MVNO: O2 hosts Tesco Mobile and Lycamobile, while Three hosts Blueface. Moreover, in the last five years, the Parties have, between them, been in negotiations with at least 11 separate potential MVNOs.⁵³⁰ For some of these MVNOs, the Parties competed head-to-head. For example, both of them negotiated with UPC. When the opportunity to host UPC arose, O2 wrote: ["..."]*.⁵³¹
- (704) The Parties have active wholesale strategies. Their internal documents show that the Parties regularly analyse MVNO opportunities.⁵³² Three's active wholesale strategy is also shown by its bid for [...]*.⁵³³

⁵²⁹ Responses to Questionnaire Q8 to MNOs, question 51; Responses to Questionnaire Q9 to MVNOs, question 36.

⁵³⁰ Form CO, paragraphs 349-353.

⁵³¹ O2, presentation (undated), slide 1, [Ref: TEL00044121], [ID 1061-21743].

⁵³² For example, O2, [...] [Ref: TEL00239293], [ID 1065-33621]; O2, memo from Projects Approval Committee, O2 IRELAND MVNO Opportunity, [...] [Ref: TEL00149501], [ID 1065-35357]; Three, Wholesale Market Overview Ireland, explaining Three's wholesale strategy [Ref: 000378452], [ID 1053-

- (705) Furthermore, both Parties have an MVNE which facilitates MVNO entry by lowering the upfront investment costs and time for entry. O2 owns Liffey Telecom Limited, an MVNE active in Ireland. Three previously had X-Mobility as an MVNE partner, but in February 2013 Three selected MVNE Plus+ as its new MVNE platform. This further testifies to the Parties' willingness to provide access to MVNOs.
- (706) The importance of the Parties as wholesale access providers is underscored by the weakness of Eircom in this market. National network coverage is important for MVNOs to attract and retain subscribers.⁵³⁴ The market investigation showed that prospective MVNOs would be less likely to contract with an MNO which does not have national network coverage in Ireland.⁵³⁵ As explained in recital (671), Eircom does not have national network coverage in Ireland. Hence, the attractiveness of Eircom's network is likely to be limited when compared to those MVNOs with a means of offering national coverage on commercially attractive terms.⁵³⁶
- (707) The Notifying Party argues that the credibility of Eircom being a viable host is confirmed by its announced discussions with several MVNOs.⁵³⁷ The Commission considers it natural for prospective MVNOs to approach all MNOs in the beginning when exploring entry. What is important, however, is that beyond these reported discussions so far no MVNO has chosen Eircom as a host. [...]*.⁵³⁸
- (708) In order to provide national coverage to its customers, since 2007, Eircom has been relying on a national roaming agreement with Vodafone. [...]*.⁵³⁹ [...]*.⁵⁴⁰ [...]*.⁵⁴¹ Also, with 98% coverage, Three's 3G network [...]*.⁵⁴² This makes Three a more attractive MVNO host as demonstrated by its hosting of Blueface.
- (709) Furthermore, post-merger, Eircom is less likely to become a viable MVNO host given the potential termination or frustration of the Mosaic agreement by the merged entity (Section 7.6.2.1). Before the merger Eircom had plans to expand its network

8931]; Three, Wholesale, MVNO, M2M Update, setting out the status of Three's several MVNO projects, [Ref: 000398498], [ID 1053-10206].

⁵³³ H3G, Non-disclosure Agreement between H3G and [...]*. *"in connection with discussions and negotiations relating to the provision of mobile network services to [...]**", [Ref: 000329341], [ID 1053-6512]; see also Three, Three wholesale – Presentation to [...]*, 15 November 2012, slide 27, [Ref: 000384312], [ID 1053-9255].

⁵³⁴ Responses to Questionnaire Q27 to MVNOs of An Post [ID 1824], Liberty Global [ID 1738], Lycamobile [ID 1540], iMVNOx [ID 1786], question 1; Eircom's presentation of 29 July 2013, slide 24 [ID 1070]. Also, according to Three's market research, [...]*. (Form CO, paragraph 222). Finally, the importance of national network coverage for attracting customers was also established in previous cases, see for example Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring*, paragraph 83.

⁵³⁵ Responses to Questionnaire Q27 to MVNOs of An Post [ID 1824], Lycamobile [ID 1540], iMVNOx [ID 1786], question 1.

⁵³⁶ [...]*. (see recital (708)).

⁵³⁷ Response to the SO, paragraph 747.

⁵³⁸ [...]*

⁵³⁹ Eircom's response to Questionnaire Q28, question 50 [ID 2308].

⁵⁴⁰ Eircom's response to Questionnaire Q28, question 17 [ID 2308].

⁵⁴¹ [...]*

⁵⁴² H3G response to Questionnaire Q37, question 3 [ID 2159].

and enhance its coverage through the Mosaic agreement. This could have enabled Eircom to enter the wholesale market. Without the Mosaic agreement, Eircom will have to continue relying on national roaming and will be constrained in providing competitive MVNO access terms.

(710) Finally, both Eircom and Vodafone are unlikely to provide wholesale access to prospective MVNOs which plan to offer also fixed line services. This is due to the fact that, in contrast to the Parties, both Eircom and Vodafone sell fixed line services. These MNOs are likely to strive to avoid generating direct competition from MVNOs for multiple-play bundles (such as fixed telephony / fixed broadband / television / mobile telephony bundles). This is shown by the Parties' own analysis. For example, one of O2 presentations states that: "[...]*."⁵⁴³ For operators such as UPC, Sky or resellers of fixed services which aim to provide also mobile services the Parties are likely to be the only alternative.

(711) Based on the above, the Commission concludes that currently each Party is an important provider of wholesale network access in Ireland.

7.7.2. *Reduction in the number of MNOs and decreased bargaining power of MVNOs*

(712) The merger between two important suppliers of wholesale network access will increase consolidation in a market that is already very concentrated.

(713) Respondents to the market investigation expressed concerns that the reduction in the number of MNOs would impede the ability of MVNOs to negotiate favourable wholesale access terms.⁵⁴⁴ For MVNOs, negotiating a commercially viable wholesale agreement with an MNO is one of the key elements for successful operations, since this determines the conditions an MVNO is able to offer on the retail level.

(714) The Commission considers that the reduction in the number of network access suppliers is likely to reduce the bargaining power of MVNOs in the negotiating process. MVNOs are likely to find it more difficult to negotiate favourable pricing or other commercial terms, such as access to newest technologies. This would apply both to prospective MVNO entrants and to existing MVNOs, once they seek to renegotiate their wholesale agreement or try to switch their MNO partner.

7.7.3. *Merger will likely change Three's and O2's incentives to host MVNOs*

(715) The incentive of an MNO to provide wholesale access to MVNOs stems from the better utilisation of the MNO's network which leads to economies of scale. It is economically preferable for an MNO to fill spare capacity on its network through hosting MVNOs rather than leaving this spare capacity unutilised.⁵⁴⁵ However, this incentive may be offset by the risk that the MNO would lose a share of its retail subscribers to the hosted MVNO, which would not be compensated by the network access fees (the so-called "cannibalisation risk"). Finally, an MNO may be incentivised to grant access if there is a credible risk that the MVNO would be hosted

⁵⁴³ O2 presentation (undated), slide 2, [Ref: TEL00044121], [ID 1061-21743].

⁵⁴⁴ Responses to Questionnaire Q9 to MVNOs of An Post [ID 788], Digiweb [ID 718], iMVNOx [ID 975], Liberty Global [ID 807], questions 41 and 58; to Questionnaire Q8 to MNOs of Vodafone [ID 810], question 56 ; to Questionnaire Q27 to MVNOs of Liberty Global [ID 1738], question 21.

⁵⁴⁵ Form CO, paragraph 602.

by another operator. In this case, cannibalisation could occur irrespective of the host, and hence the MNO would seek at least to obtain network access fees.

- (716) According to Vodafone, the latter effect is such that there is no reason to expect retail sales cannibalisation to determine wholesale access conditions as long as there are multiple networks competing to offer wholesale access.⁵⁴⁶ However, the theoretical argument by Vodafone that even two networks would be enough to ensure competitive wholesale access relies on the extreme assumption that MNOs' networks are identical in terms of technical characteristics which is not the case.⁵⁴⁷ Moreover, that considerations of cannibalisation of sales as well as the number of potential MNO hosts are relevant for wholesale access conditions is borne out by the facts of the case.
- (717) Before the merger, both Parties have strong incentives to host MVNOs. This was particularly the case for Three, which, as the newest entrant, has an under-utilised network and is keen to fill its spare capacity to realise economies of scale. As explained by one of Three's executives: *"Our network has lots of capacity so we want more customers - we don't mind if we get them direct or through partners"*.⁵⁴⁸ Three also has a relatively small customer base which mitigated any risk of cannibalisation. This is shown by the views of [...] * who stated in an e-mail that Three "[...] *".⁵⁴⁹ For O2, given its larger customer base, cannibalisation risks are greater and O2 aims to "[...] *".⁵⁵⁰
- (718) After the merger, the merged entity would have a significantly larger customer base, which, for example, would be four times the current customer base of Three. The increased customer base would lead to a greater risk of cannibalisation of the merged entity's retail revenues by the hosted MVNOs. This has been a concern expressed by several market participants in the course of the market investigation.⁵⁵¹
- (719) In its Response to the SO,⁵⁵² the Notifying Party argues that despite any cannibalisation risks, O2 has considered it preferable to host MVNOs. The Notifying Party considers that there is no reason to make a distinction between incentives for different types of MVNO. The risk of losing both the network fees and the

⁵⁴⁶ Vodafone submission of 26 March 2014 on "Incentives to compete in wholesale access for mobile telecoms", March 2014 [ID 3600].

⁵⁴⁷ When networks differ in terms of technical characteristics, MVNOs will have preferences over their preferred MNO and the logic of competitive access irrespective of the number of potential hosts no longer applies. Moreover, with differentiated offerings, the risk of cannibalisation is larger for the MNO offering access (because the MVNO's product will be closer, in terms of characteristics, to those of the host MNO than to those of other MNOs) and increases with the MNOs customer base. The merger will therefore reduce the merged entity's incentives to provide access. The Commission therefore disagrees with the theoretical argument that the wholesale access would be perfectly competitive as long as there are two or more competing networks.

⁵⁴⁸ Irish Times, "Three puts on Blueface", Irish Times Business, 27 January 2012, [Ref: TEL00088370], [ID 1063-13640].

⁵⁴⁹ O2, Email from [...] * to [...] *, 13 February 2013, [Ref: TEL00048502], [ID 1061-22738].

⁵⁵⁰ O2, Email from [...] * to [...] *, 13 February 2013, [Ref: TEL00048502], [ID 1061-22738].

⁵⁵¹ Responses to Questionnaire Q9 to MVNOs of iMVNOx [ID 975], Liberty Global [ID 807], questions 41 and 58.3; to Questionnaire Q27 to MVNOs of iMVNOx [ID 1786], Liberty Global [ID 1738], question 2.

⁵⁵² Response to the SO, paragraphs 740 and 750 onwards.

subscribers will apply irrespective of whether the MVNO has mass-market or niche appeal.

- (720) The Commission considers that while the cannibalisation risk could in theory be countervailed by a likelihood that an MVNO concludes another MNO host, the increased concentration brought by the merger significantly lowers this likelihood.
- (721) Post-merger, the merged entity is likely to host only MVNOs which target non-overlapping customer groups (that is, niche MVNOs). Hence, the Commission has concerns that the merged entity is likely not to provide access to UPC, which plans to target mainstream customer segments with bundled offers.
- (722) Also, the Commission has concerns that even when granting wholesale access the merged entity may not do it on sufficiently favourable commercial terms. In particular, given the reduction in the number of providers, the merged entity is likely to have limited incentive to offer to MVNOs access to advanced technologies such as UMTS 900 or 4G/LTE, which are the primary growth areas. The merged entity is likely not to increase competition in these segments to avoid cannibalisation. A similar concern has been expressed during the market investigation regarding the merged entity not granting access for MVNOs to its network to ensure that only the merged entity is able to offer the highest data speeds on the market, given its spectrum advantage.⁵⁵³
- (723) The Notifying Party argues that concerns with respect to foreclosing MVNOs from access to advanced technologies are unwarranted. According to the Notifying Party, the merged entity would be eager to share its spare LTE capacity as otherwise the MVNO would simply choose a different host.⁵⁵⁴ The Commission disagrees, noting that today in a market with three 4G networks (Three, Vodafone and Eircom) neither Blueface (hosted by Three) nor Postfone (hosted by Vodafone) offers 4G services. This is indicative of the likely situation post-merger, where there also will be three networks for all technologies.
- (724) Therefore, the Commission considers that the merged entity is likely to have lower incentives to host MVNOs on commercially attractive terms than Three and O2 would have in the absence of the merger.

7.7.4. *Likely reaction of competing MNOs*

- (725) The Commission considers that the reduction in competition on the wholesale market is unlikely to be offset by potential changes in behaviour of the remaining competitors, Eircom and Vodafone.
- (726) As explained in recitals (706)-(708), Eircom already has a limited ability to provide wholesale access given its lack of nationwide network coverage. The potential termination or frustration of the Mosaic agreement post-merger would further impair Eircom's prospects of evolving into an attractive MVNO host.
- (727) The Notifying Party argues in its Response to the SO that Vodafone will have the ability and incentives to host MVNOs post-merger.⁵⁵⁵ The Commission considers that Vodafone's incentives to offer attractive hosting terms to MVNOs are reduced /

⁵⁵³ Responses to Questionnaire Q8 to MNOs of Vodafone [ID 810], question 74.3.

⁵⁵⁴ Response to the SO, paragraph 757.

⁵⁵⁵ Response to the SO, paragraphs 743, 744 and -745.

constrained by its large customer base and strong position across the main customer segments, which results in a significant risk of losing customers to hosted MVNOs. While this does not prevent Vodafone from hosting Postfone pre-merger, the fundamental change brought by the merger is the elimination of an important wholesale provider and reduced likelihood that an MVNO will find an alternative host. Together with Vodafone's substantial market position, this is likely to lower Vodafone's incentive to offer favourable hosting terms to MVNOs post-merger.

7.7.5. *Conclusion on the likely effects in the wholesale market for network access and call origination*

(728) The above elements indicate that the merger might lead to a significant impediment of effective competition in the wholesale market for mobile network access and call origination in Ireland. However, there is no need to come to a final decision in this respect, as the commitments proposed by the Notifying Party to address the concerns identified on the retail mobile telecommunications services market will strengthen Eircom's ability to host MVNOs, enable entry of two new MVNOs, and thus address and rule out the possibility that the transaction would lead to negative effects in the Irish wholesale market for mobile network access and call origination.

7.8. Coordinated effects in the retail mobile telecommunications services market

(729) Coordination is more likely to emerge in markets where it is relatively simple to reach a common understanding on the terms of coordination.⁵⁵⁶ In addition, three conditions are necessary for contribution to be sustainable.⁵⁵⁷ First, the coordinating firms must be able to monitor to a sufficient degree whether the terms of coordination are being adhered to. Second, discipline requires that there is some form of deterrent mechanism that can be activated if deviation is detected. Third, 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.

(730) Some characteristics of the post-merger retail mobile telecommunications services market in Ireland make it conducive to coordination, while other characteristics tend to make coordination more difficult. In recitals (731) to (740), the Commission examines both categories of elements in turn.

(731) The merger will remove Three in its maverick role from the market and result in a market with two large players with similar market shares. The merged entity and Vodafone will collectively control over 80% of all subscribers and revenues.

(732) Coordination on retail prices may be possible because prices are transparent. They are publicly available, either on an MNO's website or through its retail channels. All important aspects of the tariff plans offered by MNOs are quantifiable and, hence, could be coordinated. Not surprisingly, operators compare each other's prices frequently and with ease.⁵⁵⁸

⁵⁵⁶ Horizontal Merger Guidelines, paragraph 41.

⁵⁵⁷ Horizontal Merger Guidelines, paragraph 41; Case T-342/99, *Airtours v. Commission*, [2002] ECR II-2585, paragraph 62.

⁵⁵⁸ See, for example, response of O2 to Q23, in particular pages 4 and 5 (comparison of pre-paid and post-paid tariffs); Annex 2 to Three's Response to the Article 6(1)(c) Decision, slide 36 (comparison of prices for post-paid mobile broadband) and slide 38 (comparison of prices for pre-paid mobile broadband),

- (733) Deviation from the terms of coordination could be immediately detected, as most retail prices are publicly available. A deterrent mechanism could consist in a return to competition.
- (734) The Commission found evidence that, at present, there is some convergence between the prices of Vodafone and O2. With respect to mobile broadband, for instance, Vodafone currently sells 5 gigabyte for EUR 20 on a pre-paid basis, while O2 sells the same quantity of data for EUR 19.99. Vodafone and O2 also both offer post-paid tariffs at exactly the same prices: EUR 25, 35, 55 and 75. At each of these price points, they offer packages that are very similar or identical.⁵⁵⁹ Some evidence suggests that this is not a coincidence. Indeed, when Vodafone introduced its EUR 55 tariff (RED) with unlimited calls and texts, O2 launched an almost identical package, O2 Open, which also included unlimited calls and text. [...]*.⁵⁶⁰[...]*.⁵⁶¹.
- (735) The Notifying Party argues that coordination on prices would be impossible because competition also takes place on quality. The Commission acknowledges that competition also takes place on quality but this does not prevent MNOs from coordinating on price. Such coordination would remove an important element of competition, and the fact that MNOs would still compete on other aspects such as quality does not remove the anticompetitive effect of such coordination.
- (736) The Notifying Party argues that market developments and evolving customer preferences, for instance the growth in data demand, would undermine stable coordination. The Commission considers that growing demand does not necessarily make coordination less likely, especially not if, as is the case here, high barriers make new entry unlikely. In any event, nothing indicates that customer preferences change so rapidly that prices could not be coordinated.
- (737) The Notifying Party argues that "previous Commission decisions" have excluded the likelihood of coordinated effects on retail mobile telecommunications services markets. This is incorrect. The Commission assesses the likelihood of coordinated effects on a case-by-case basis. The Notifying Party cites one single decision in which the Commission found that coordination was unlikely.⁵⁶² It ignores the decisions, also relating to the retail mobile telecommunications services market, in which the Commission did not rule out the possibility of coordinated effects⁵⁶³ or found that some characteristics of the retail mobile telecommunications services market may be conducive to coordination.⁵⁶⁴

[ID 1320]; Eircom response to Questionnaire Q25, question 1 (separate annex with comparisons on pages 3, 5 and 6) [ID 1365]; see also Vodafone's response to Questionnaire Q24, question 4 ("Vodafone compares its tariffs with those of our competitors (...)") and question 8 ("Where [redacted] we would quickly move to react by [redacted]").

⁵⁵⁹ O2 response to Questionnaire Q23, page 5, figure 2 (T&T stands for talk and text), [ID 1480].

⁵⁶⁰ O2, Email from [...] to [...]*, 22 April 2013, [Ref: Tel00109285], [ID 1063-11593].

⁵⁶¹ Telefónica, Consumer Postpay New Plans – Background slides for ERB, 22 May 2013, slide 2, [Ref: TEL00270060], [ID 1065-39371].

⁵⁶² Response to the SO, paragraph 715 (referring to Commission Decision of 20 August 2007 in Case No COMP/M.4748 – *T-Mobile / Orange Netherlands*, paragraphs 43 and 44).

⁵⁶³ Commission Decision of 26 April 2006 in Case No COMP/M.3916 – *T-Mobile Austria / Tele.ring*, paragraphs 127-129.

⁵⁶⁴ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*, paragraphs 446-449.

- (738) The Notifying Party argues that MVNOs could disrupt any potential coordination. The Commission considers that the existing MVNOs in Ireland are unlikely to disrupt coordination. At present, the largest MVNO in Ireland is Tesco Mobile. It is jointly controlled by O2 and Tesco. This gives O2 the power to approve or reject Tesco Mobile's business plan. As a result, Tesco is unlikely to disrupt any coordination between O2 and Vodafone. Another MVNO in Ireland, Lycamobile, targets specific foreign/ethnic groups and offers only pre-paid services.⁵⁶⁵ It is therefore unlikely to disrupt coordination. The two remaining MVNOs (Postfone and Blueface) jointly have a market share of 0.3%.⁵⁶⁶ Postfone only offers pre-paid services and, despite having entered the market in 2010, still has only a negligible market share. This suggests that Postfone does not have the ability or incentive to compete aggressively because, if it did, it would likely have grown at a more rapid pace. Postfone is therefore unlikely to undermine coordination on price. Blueface is focused exclusively on business customers and it is therefore also unlikely to undermine coordination.
- (739) Although the elements set out in recitals (730) to (734) suggest that the post-merger market structure will be conducive to coordination, some of the characteristics of the Irish retail market make coordination more difficult. After the merger, the threat of Three disrupting coordination will be removed, but Eircom will still have an incentive not to follow any coordination. With a market share of 20% in subscribers and 18% in revenues, it is much smaller than the two market leaders and has comparatively less to gain from coordination. It will also have a different cost structure from that of its two larger competitors
- (740) In short, there are elements that suggest the merger will make coordination more likely and sustainable, but also indications that coordination will still be difficult to sustain. The Commission does not need to conclude whether, on balance, coordination is more likely than not, because the commitments proposed by the Notifying Party to remedy the non-coordinated effects of the merger on the Irish retail market also exclude the possibility that the transaction will lead to coordinated effects on the Irish retail market. First, the commitments will strengthen Eircom's ability to compete, making it more likely that Eircom disrupts any post-merger coordination. Second, the commitments will allow two MVNOs to enter the Irish market. Those MVNOs will have purchased a fixed amount of network capacity and will not pay their host MNO on a "pay-as-you-go" basis. As a result, the MVNOs will have a strong incentive to fill the purchased network capacity. To do so, they are likely to compete on price, undermining any coordination.

7.9. Absence of countervailing buyer power

- (741) Competitive pressure exercised by customers is what is qualified in the Horizontal Merger Guidelines as countervailing buyer power.⁵⁶⁷ According to the Horizontal Merger Guidelines, even an important player on the market may not be in the position to significantly impede effective competition if it cannot act to an appreciable extent independently of its customers. This countervailing buyer power is to be understood as the bargaining strength of the buyer vis-à-vis its supplier

⁵⁶⁵ Form CO, paragraph 347

⁵⁶⁶ ComReg Q4 Report, page 58, [ID 3967].

⁵⁶⁷ Horizontal Merger Guidelines, paragraphs 64 and following.

relative to its size, its commercial significance to the seller and its ability to switch to alternative suppliers.

- (742) The Commission has found in previous decisions that in the market for mobile telecommunications services to end customers there is no appreciable countervailing buyer power to exercise competitive pressure on the MNOs to offset the expected adverse effects of the merger.⁵⁶⁸
- (743) In the retail mobile telecommunications services markets, individual customers, including business customers, do not have sufficient size and commercial significance to bargain prices.⁵⁶⁹ The Commission considers that even if some business customers may negotiate their contractual clauses and prices, this fragmented group of individuals and businesses has no means to coordinate their behaviour in order to exercise noteworthy competitive pressure on their respective suppliers. Thus the conditions and the level of prices cannot be affected from the buyers' side. Those few customers who might be large enough to resist price increases to some degree would not shelter the remainder of the market from the exercise of market power.
- (744) Furthermore, resellers and distributors of mobile telephony contracts may also not be able to resist price increases by the MNOs. Even if retailers had a certain purchasing power a price increase would, as such, not affect the retailers' economic interests. They could pass on price increases to end consumers and their contractual relationship with the MNO is usually based on commissions without an obligation to market defined quantities.
- (745) As regards the wholesale market for mobile access and call origination, at present MVNOs have only a negligible number of subscribers in Ireland and MNOs do not appear to rely on revenue from MVNOs to any significant extent. There is also no evidence that MVNOs will achieve sufficient scale in the future to have a strong bargaining power vis-à-vis MNOs. Also, the merger would reduce the number of alternative suppliers to MVNOs, thus further restricting the ability of MVNOs to credibly threaten to select another MNO.

7.10. Efficiencies

- (746) According to the Notifying Party, the merger would generate the following three types of efficiencies:
- (a) The merger would lead to economies of scale of a net present value of EUR [...]*. The efficiencies would enable the combined business to make larger investments in network and service quality than would be possible for Three or O2 on a stand-alone basis. They would also permit the merged entity to price more aggressively than in the absence of the merger.
 - (b) Three will gain access to O2's 800 MHz spectrum. This would enable the merged entity (i) to roll out LTE faster than on a standalone basis and (ii) to achieve higher population coverage of LTE than in the absence of the merger.

⁵⁶⁸ Commission Decision of 12 December 2012 in Case No COMP/M.6497 – *Hutchison 3G Austria / Orange Austria*.

⁵⁶⁹ O2 has approximately 1.54 million mobile subscribers, while Three has approximately 500 000 mobile subscribers.

The benefit to consumers would be around EUR 36.4 million from 2015 to 2017.

- (c) The merger would enable the merged entity to maintain broadband services in Ireland's most sparsely populated areas, which are covered by the National Broadband Scheme (NBS). In the absence of the merger, those services would have to be cut down or could be maintained only with significant price increases. The benefit to consumers would be between EUR 0.3 million in the short run and EUR 1.3 million in the long run.
- (747) For the Commission to take into account efficiencies in its assessment of the merger and to conclude that, as a consequence of efficiencies, there are no grounds for declaring the merger to be incompatible with the internal market, the efficiencies must be substantiated and satisfy the three cumulative criteria defined in the Horizontal Merger Guidelines:⁵⁷⁰
- (a) Verifiability: efficiencies have to be verifiable such that the Commission can be reasonably certain that the efficiencies are likely to materialise and be substantial enough to counteract a merger's potential harm to consumers.⁵⁷¹
- (b) Merger specificity: efficiencies have to be a direct consequence of the merger and cannot be achieved to a similar extent by less anticompetitive alternatives.⁵⁷²
- (c) 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.⁵⁷³
- (748) The burden of proof for showing that efficiencies fulfil those criteria lies with the Notifying Party as most of the information is only in the possession of the Parties.⁵⁷⁴ It is therefore 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. 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.⁵⁷⁵ 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 owners and financial markets about the expected efficiencies, historical examples of efficiencies and consumer benefits, 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.⁵⁷⁶

⁵⁷⁰ Horizontal Merger Guidelines, paragraph 78.

⁵⁷¹ Horizontal Merger Guidelines, paragraph 86.

⁵⁷² Horizontal Merger Guidelines, paragraph 85.

⁵⁷³ Horizontal Merger Guidelines, paragraph 79.

⁵⁷⁴ Case T-342/07 *Ryanair v Commission*, paragraph 407; Horizontal Merger Guidelines, paragraph 87.

⁵⁷⁵ Horizontal Merger Guidelines, paragraph 87.

⁵⁷⁶ Horizontal Merger Guidelines, paragraph 88.

(749) In recitals (750) to (886) the Commission will assess whether each of the three claimed efficiencies fulfils the three criteria defined in the Horizontal Merger Guidelines.

7.10.1. *Scale efficiencies*

7.10.1.1. Notifying Party's claims

Verifiability

(750) The Notifying Party submits that the merger will lead to scale economies of a net present value of EUR [...]*. Of the total expected savings with net present value of EUR [...]*, EUR [...]* relate to CAPEX savings and EUR [...]* to OPEX.

(751) In more detail, the scale economies derive from (i) OPEX duplication savings, (ii) CAPEX duplication savings, (iii) tax net operating losses ("NOL") acceleration benefits and (iv) integration costs as set out in Table 35 to Table 39.

(i) OPEX savings

Table 35: Notifying Party's submission on OPEX savings per item (in EUR million)

	Legend	2014	2015	2016	2017	2018
Headcount	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Network	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
IT and technology costs	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Marketing and advertising	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Customer operations	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
G&A/other	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Retail costs	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Total OPEX savings	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source: Notifying Party's submission of 21 November 2013 – Calculation of merger synergies

(752) The Notifying Party has calculated savings set out in Table 35 by considering the difference between, on the one hand, the sum of the OPEX of Three and O2, as they stand in 2013 (before the full network expansion under the Netshare and the Mosaic agreements) and, on the other, the merged entity's planned OPEX.⁵⁷⁷

(753) This leads, after taking into account the taxes and the discount factor (in order to calculate the net present value), to the net present value of OPEX savings set out in Table 36 (over an unlimited period of time).

⁵⁷⁷ Notifying Party's submission, 21 November 2013 – Calculation of merger synergies, paragraphs 18 and 19, [ID 1353].

Table 36: Notifying Party's submission on the net present value of OPEX savings (in EUR million)

	Legend	2014	2015	2016	2017	2018	Sum
OPEX (pre-tax)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
OPEX (post-tax)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Terminal value ⁵⁷⁸	[...]*					[...]*	
Total OPEX	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Discount factor	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Net present value	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source: Notifying Party's submission of 21 November 2013 – Calculation of merger synergies
(ii) CAPEX savings

Table 37: Notifying Party's submission on the net present value of CAPEX savings (in EUR million)

	Legend	2014	2015	2016	2017	2018	Sum
CAPEX	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Terminal value	[...]*					[...]*	
Total CAPEX	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Discount factor	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Net present value	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source: Notifying Party's submission of 21 November 2013 – Calculation of merger synergies

(754) In order to estimate the CAPEX savings set out in Table 37, the Notifying Party has made the following assumptions. First, the Notifying Party considered Three's forecast annual CAPEX of EUR [...]*. Second, the Notifying Party assumed that O2's CAPEX would be identical to Three's CAPEX and the merged entity would have to invest this amount only once over the period [...]*. Third, the Notifying Party assumed that after [the year...], annual savings from duplicate CAPEX would

⁵⁷⁸ [...]*

be of the order of [...]*, which is an estimate of the absolute minimum CAPEX related to non-network IT spend of a standalone business.⁵⁷⁹

(iii) Tax NOL acceleration benefits

Table 38: Notifying Party's submission on the net present value of tax NOL acceleration benefits (in EUR million)

	Legend	2014	2015	2016	2017	2018	Sum
Tax benefit	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Discount factor	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Net present value	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source: Notifying Party's submission of 21 November 2013 – Calculation of merger synergies

(755) Tax NOL acceleration benefits set out in Table 38 occur when allowable tax deductions are greater than the taxable income. This derives from Three's past Net Operating Loss (NOL). These un-recouped tax deductions can be used in order to reduce future tax payments.

(iv) Integration costs which are to be subtracted from the savings in Table 36 and Table 37.

⁵⁷⁹ Notifying Party's submission, 21 November 2013 – Calculation of merger synergies, paragraph 12 [ID 1353].

Table 39: Notifying Party's submission on the net present value of integration costs (in EUR million)

	Legend	2014	2015	2016	2017	2018	Sum
Integration OPEX (pre-tax)	[...]*	[...]*	[...]*	[...]*			
Integration OPEX (post-tax)	[...]*	[...]*	[...]*	[...]*			
IT and technology (capex forecast)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
It and technology (2017 run rate)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
IT and technology (integration driven)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Total integration costs	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Discount factor	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	
Net present value	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

Source: Notifying Party's submission of 21 November 2013 – Calculation of merger synergies

(756) When adding the net present value of these four sources of efficiencies, the final result is EUR [...]* in cost savings, as set out in Table 39.

(757) In the Response to the SO, the Notifying Party claims that it is not appropriate to exclude future cost savings as the foreseeable cost savings affect the behaviour of the firm today. Likewise the Notifying Party argues that the Commission is wrong to exclude the tax NOL benefits. One of the reasons for this is that it would improve cash-flow and would lead to more investments and more attractive prices. Furthermore, the Notifying Party argues that these costs savings will materialize in any case whether or not there are changes in consumption patterns or any other changes in the market.

(758) In addition, the Notifying Party argues in the Response to the SO that its estimate of the integration cost is accurate. In particular, it claims that those IT costs and LTE eNode B costs associated with Three's existing standalone plan should be excluded and that the Notifying Party has included all operating expenditures in its calculation of merger synergies.

Merger Specificity

(759) The Notifying Party submits that the synergies of EUR [...]* have been calculated by comparing the merger scenario with the pre-merger scenario in which each of the merging firms was party to a network sharing agreement. This means, according to the Notifying Party, that the cost savings are net synergies after deduction of the synergies already achieved through the Netshare and the Mosaic agreements.

(760) The Notifying Party considers that the synergies achieved through the merger could not have been achieved through an alternative network sharing agreement for two main reasons. First, the Notifying Party submits that [60–70]*% of merger synergies

do not relate to the network. Hence, the same level of savings cannot be achieved through an alternative network sharing agreement. Second, even when considering the network related efficiencies, the Notifying Party considers four alternative scenarios and estimates that alternative network sharing agreements could not lead to the same level of savings:

- (a) Passive network sharing between O2 and Three would bring no additional benefit as Three is already going to share [...] its network with Vodafone.
- (b) An active network sharing covering all technologies between O2 and Three would lead to savings of EUR [...] over the period 2014-2017.
- (c) Spectrum sharing between O2 and Three would lead savings of to EUR [...] over the period 2014-2017.
- (d) Spectrum sharing between O2 and Three and in parallel active network sharing between Three, O2 and Eircom would lead to savings of EUR [...] over the period 2014-2017.

(761) The Notifying Party considers that the two last scenarios are not reasonably attainable from a business or legal point of view. Considering the existing contractual arrangements, it concludes that none of these scenarios would lead to cost savings similar to the merger. Therefore, the Notifying Party submits that the Commission should consider the entirety of the EUR [...] of savings in its assessment.

(762) The Notifying Party also considers that it would be erroneous to limit the assessment to the next three years even if this should be the review period for merger control purposes. Instead, the full efficiencies must be considered in the merger review.

(763) Furthermore, in the Response to the SO, the Notifying Party argues that the savings from the Netshare agreement and the Mosaic agreement have already been netted off and that the efficiency figures put forward by the Notifying Party do not under-represent the proportion of scale efficiencies that are network related.

Benefit to consumers

(764) The Notifying Party argues that the scale efficiencies will benefit consumers. To support this view, the Notifying Party makes the following arguments:

- (a) The Notifying Party claims that the scale efficiencies would increase the cash flow of the merged entity which in turn will enable the merged entity to make investments that neither Three nor O2 would have been able to make. To support this argument, the Notifying Party submits a review of empirical literature on the relationship between free cash flow and investments. The Notifying Party also submits its own empirical study in which it analyses this relationship for a group of publicly listed Telecom companies worldwide. Furthermore, the Notifying Party submits excerpts of Moody's credit rating report of 27 September 2012 as well as Hutchison's internal policy guidelines towards its subsidiaries;
- (b) The Notifying Party claims that the merger would improve both the quality of the network and the quality of services for Three's customers as well as customers more generally. The Notifying Party has submitted a study according to which consumers would benefit from the proposed merger if the merged entity's quality of service becomes sufficiently similar to Vodafone's level of quality of services; and

- (c) The Notifying Party claims that the proposition that benefits from scale efficiencies would outweigh the reduction of competition resulting from consolidation in a small Member State is also supported by an empirical price concentration study which shows that in small Member States (with the addition of Switzerland but excluding Cyprus) prices tend to be lower when the market is served by three MNOs rather than by four MNOs. The Notifying Party additionally provides a theoretical model of a market with consumer inertia which is meant to be consistent with the findings of the price concentration analysis.

7.10.1.2. Commission's assessment

Verifiability

- (765) First, the Commission considers that any consumer benefit from efficiencies and the competitive harm arising from the merger must be assessed over the same time period. The Notifying Party's claimed scale efficiencies of EUR [...] * are computed over an infinite time horizon. The Commission does not consider this to be an appropriate timeframe for its assessment. 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.⁵⁸⁰ In previous decisions, the Commission used a period of two to four years for the assessment of the effects of a merger.⁵⁸¹ After this period, the prediction of future market conditions becomes more speculative because of a number of factors: consumption patterns could change, new and different mobile services could emerge, players could adopt different strategies, there could be new mergers, etc. These changes make predictions about the likely efficiencies beyond a reasonable period of time highly speculative. The Commission however acknowledges that the annual efficiencies presented by the Notifying Party will not fully materialize until around 2017 because of integration costs in the first years. Therefore, the Commission considers it appropriate to assess the alleged efficiencies on the basis of the yearly run-rate achieved in 2017.
- (766) Second, the Notifying Party has included the so-called tax NOL acceleration benefits in its calculation of scale efficiencies. This benefit corresponds to a tax reduction for the merged entity, which essentially results from previous losses made by Three and the fact that, after the merger, the merged entity is expected to make profits and pay taxes against which it can offset these tax reductions. Without a detailed analysis of the new fiscal situation of the merged entity, the Commission is not in a position to assess whether the merged entity, on the basis of its increased size and possible profitability, would benefit from any overall tax decrease or increase. On this basis, the Commission considers that tax effects should be excluded from the assessment of scale efficiencies. In any event, the tax NOL acceleration benefits do not constitute an efficiency. Without the merger, if Three were to become profitable it could apply the tax reduction resulting from the losses in previous years. They do not constitute

⁵⁸⁰ Horizontal Merger Guidelines, paragraph 83.

⁵⁸¹ See for instance Commission Decision of 30 January 2013 in Case No COMP/M.6570 – *UPS / TNT Express*, paragraph 906.

an efficiency as they do not increase the competitiveness of the industry, improve the conditions for growth or raise the living standards in the Union.⁵⁸²

- (767) Considering the above elements, the profile of the Notifying Party's estimated scale efficiencies over the coming years should be revised to reflect the values set out in Table 40

Table 40: Total net present value of scale efficiencies (in EUR million)

		2014	2015	2016	2017	2018
OPEX	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
CAPEX	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Integration OPEX	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
IT and technology integration CAPEX	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
IT and technology (run-rate 2017)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*
Yearly net savings (before discounting)	[...]*	[...]*	[...]*	[...]*	[...]*	[...]*

- (768) Table 40 shows that the yearly net savings from the merger (row F) are [...]*. The Commission considers that the cost savings in [...]* are representative of the synergies that can be expected from the merger on a yearly basis. In other words, the Commission considers that it is verifiable that the merger will lead to annual cost savings of around [...]* once the costs of integration have disappeared. As described in Table 40 the Commission uses the yearly run-rate from [...]* as a basis for the cost savings from the merger. For these yearly cost savings to qualify as efficiencies the saving must additionally be merger specific and benefit consumers. These conditions are assessed next.

Merger specificity

- (769) The Commission considers that the savings derived from the two network sharing agreements, the Netshare and the Mosaic agreement, have not been netted off the submitted scale efficiencies.
- (770) In relation to CAPEX savings, the Notifying Party submits the following:

"The capex savings have been calculated as follows:

(i) For the years 2014 to 2016, the forecast annual capex of Three's stand-alone LTE roll-out plan was [...]. This constitutes expected expenditure after savings from the Netshare agreement.*

(ii) Three has then assumed that O2's roll-out capex (under the Mosaic agreement) would have been of a similar order. The merged entity would have to make that expenditure "only once", which renders an annual saving of duplicate costs of EUR [...].⁵⁸³*

⁵⁸² Horizontal Merger Guidelines, paragraph 76.

⁵⁸³ Notifying Party's submission of 21 November 2013 – Calculation of merger synergies, paragraph 12 [ID 1353].

- (771) An internal document of Three⁵⁸⁴ explains that this amount of EUR [...]*
- (772) As pointed out by the Notifying Party, the Mosaic agreement involves a joint network complemented by parts of the network which will be separate for O2 and Eircom. The Notifying Party acknowledges in the Response to the SO that part of the [...] equipment will be shared while both parties require separate [...]*.⁵⁸⁵ The Commission therefore concludes that part of the submitted CAPEX savings are not merger specific.
- (773) In relation to the OPEX savings, the Notifying Party submits that:
- "Each of these savings are derived as the difference between the sum of opex for Three and O2 Ireland in 2013 (i.e. operating separately) and Three's estimate of the costs of the combined entity in each of the following years. [...]*
- The benchmark for comparison – the sum of the standalone costs in 2013 – reflects the operators' cost bases before full network expansion under the Netshare and Mosaic agreements. It was then assumed that, given the savings achievable from Netshare and Mosaic, in future years the operators would have been able to keep operating costs at the same level despite gaining access to a larger network".⁵⁸⁶*
- (774) The Commission notes that the Parties' internal documents and the Form CO show that the savings derived from these network sharing agreements would have been very significant once fully implemented:
- (a) The Netshare agreement between Vodafone and Three would lead to [...]*. According to the Form CO,⁵⁸⁷ the net present value derived from the Netshare agreement was as high as EUR [...] and essentially relates to OPEX savings. This includes [...]*. In an internal document, [Three] estimates that the overall savings would be as high as EUR [...]*.⁵⁸⁸ The Netshare agreement was only signed in 2013 and the majority of savings were still to be made at the time the merger was announced.
- (b) The Mosaic agreement would also, in the absence of the merger, lead to a [...] reduction of all network OPEX to the extent that [...]*,⁵⁸⁹[...] *⁵⁹⁰[...] *⁵⁹¹[...] *⁵⁹²[...] *.
- (775) The Notifying Party notes that in computing the potential savings from Three and O2 in the stand-alone scenario it has taken OPEX constant at the level of 2013 and

⁵⁸⁴ Three, Budget Presentation 271112 [Ref: 271112], [ID 1358].

⁵⁸⁵ Response to the SO, paragraphs 796, 797 and 798.

⁵⁸⁶ Notifying Party's submission of 21 November 2013 – Calculation of merger synergies, paragraphs 18 and 19, [ID 1353].

⁵⁸⁷ Form CO, paragraphs 993, 994 and 995.

⁵⁸⁸ Three, Network update, page 3, [Ref: 001197764], [ID 1300-17602].

⁵⁸⁹ Form CO, paragraph 1000.

⁵⁹⁰ O2, presentation, page 5 [Ref: TEL00143364], [ID 1065-49174].

⁵⁹¹ O2, Netshare intensification review – briefing paper, May 2012, [...] [Ref: TEL00195501], [ID 1065-49481].

⁵⁹² Telefónica, Mosaic RFP – CFO PAC Update, 17 May 2013, page 14, [Ref: TEL00267622], [ID 1065-38931].

justifies this choice arguing that this gives access to a larger network.⁵⁹³ The Commission disagrees with the Notifying Party.⁵⁹⁴ In the Form CO the Notifying Party states that [...]*.⁵⁹⁵[...]*.⁵⁹⁶[...]*.⁵⁹⁷[...]*

- (776) In the absence of the merger, both Three and O2 would have achieved network OPEX savings through their respective network sharing agreements. Notably, as the Mosaic agreement is an [...]* share agreement, it would lead to a level of technical integration that is [...]*. The Commission therefore considers that the Mosaic agreement would lead to network savings [...]*. The Netshare agreement however is a [...]* sharing agreement which implies a [...]*.
- (777) In addition, the Commission considers that the merger would be likely to lead to the termination and/or frustration of the Mosaic agreement⁵⁹⁸ as set out in Section 7.6.2.1 and that, according to internal documents,⁵⁹⁹ the merger would likely lead to the termination of the current Netshare agreement between Three and Vodafone. In the light of this, the Commission considers that the merger is not likely to result in higher network savings through one network integration (the integration of the network of Three and O2) than in the absence of the merger where two networks would be integrated (the Mosaic agreement and the Netshare agreement). The Notifying Party disregards this and does not take into account the cost savings that network sharing would generate for Vodafone and Eircom in the absence of the merger. If these cost savings had been taken into account, the network-related cost savings from the merger would likely be inferior to the cost savings derived from the two network sharing agreements. Hence, the Commission considers that the network savings are not likely to be merger specific.
- (778) The Notifying Party argues that the report prepared for ComReg by external consultants Vilicom supports its argument that the merger can achieve higher network savings than the network sharing agreements. In fact, the report from Vilicom states that *"other technical methods examined for achieving such scale efficiencies are not considered to be a complete alternative."*⁶⁰⁰ The scale efficiencies to which Vilicom refers include costs such as retail, marketing and advertising costs. It is obvious that such costs would not be reduced by network sharing. In any event, Vilicom has not quantified the difference between the efficiencies resulting from network sharing and those from a merger and it specifically cautions that *"though some commercial aspects of the efficiency claims are summarised here, it is not possible to analyse this information in any detail, and no conclusion are made here*

⁵⁹³ Response to the SO, paragraph 503.

⁵⁹⁴ SO, paragraphs 446-451.

⁵⁹⁵ Form CO, paragraph 999.

⁵⁹⁶ Eircom "Hutchison/Telefónica Ireland-Impact on competition in the Irish mobile market" of 29 July 2013, slide 25 [ID 1201]

⁵⁹⁷ As a matter of fact the "Annex 11.7 - O2 Budget Projection information 25112013_Business Plan_reply.xlsx" used by the Notifying Party predicts [...]*. [ID 1628-122]

⁵⁹⁸ See Section 7.6.2.1 on the merger's likely effect on the Mosaic agreement.

⁵⁹⁹ In an internal memorandum to [...]* of 21 March 2013 on the post-merger strategy [Ref: 001159926], [ID 1300-29880], [...]* indicates that [...]*

Three's internal presentation "Project Ozone - Network" [Ref: 000690837] [ID 1051-25781] also indicates that the result of the merger is to [...]*

⁶⁰⁰ Vilicom Report 2, page 22.

regarding the validity of the commercial aspects of the claims".⁶⁰¹ Finally, Vilicom has also not taken into account the efficiencies accruing to Vodafone and Eircom from network sharing.

- (779) The Notifying Party submits that the Commission should not disentangle various sources of scale efficiencies and should consider the entire amount of efficiencies as being merger specific if alternative network sharing agreements could not achieve a comparable total amount of efficiencies. The Commission disagrees with this approach for three reasons:
- (a) The Horizontal Merger Guidelines state that efficiencies are only relevant if they are a direct consequence of the merger and they cannot be achieved to a similar extent by less anticompetitive alternatives.⁶⁰² In this case, network sharing was about to be implemented and would have led to similar network efficiencies through the implementation of the Netshare agreement and the Mosaic agreement instead of a single integration of networks between the Parties as a result of the merger. Therefore, network savings cannot be considered as merger specific.
 - (b) There is no reason to consider that savings in network deployment cannot be disentangled from other types of savings such as savings on marketing or general and administrative personnel. Network operations play a different role in MNOs' corporate structure and can be outsourced to specialised third parties such as equipment suppliers (see for example the joint venture structure of the Mosaic agreement). The existence of MVNOs is another indication that network activities are very specific and can be separated from other retail activities.
 - (c) The Commission's position is consistent with previous decisions in which the Commission separately assessed the compatibility of each submitted efficiency with the three criteria defined in the Horizontal Merger Guidelines and did not consider different sources of savings as a single efficiency claim.⁶⁰³

- (780) The Commission concludes that the network-related cost savings resulting from the merger are not merger specific, as the two network sharing agreements that were going to be implemented in Ireland would yield significant cost savings that would at least be comparable to those resulting from the merger.

Benefit to consumers

- (781) The Commission agrees with the Notifying Party⁶⁰⁴ that the claimed scale efficiencies essentially relate to fixed cost savings. They relate to personnel, IT, marketing, customer operation, general and administrative ("G&A"), retail operations and network costs. The Commission therefore does not consider that these cost elements are likely to be, in any material manner, variable or marginal costs.⁶⁰⁵

⁶⁰¹ Vilicom Report 2, page 22.

⁶⁰² Horizontal Merger Guidelines, paragraph 85.

⁶⁰³ See for instance the Commission Decision of 1 February 2012 in Case No COMP/M.6166 - *Deutsche Börse /NYSE Euronext* in which each source of cost savings is analysed separately.

⁶⁰⁴ Form CO, paragraph 1113.

⁶⁰⁵ The Commission also invited the Notifying Party to clarify whether the merger would lead to lower costs for incremental network investment and to include a quantification of such savings (Email of 10

According to the Horizontal Merger Guidelines, fixed-cost savings are generally less likely than marginal or variable cost savings to be passed on to consumers.⁶⁰⁶ This is because, unlike changes in marginal costs, fixed costs savings have no direct effect on firms' pricing incentives and are therefore unlikely to result in lower prices to the benefit of consumers.

- (782) Against this background, the Notifying Party submitted a number of studies to demonstrate that these fixed cost savings are likely to be passed on to consumers. The Commission discussed these studies in the SO. In recitals (783) to (810) the Commission assesses the Notifying Party's claims and the evidence submitted by the Notifying Party as well as its arguments in the Response to the SO.
- (783) As a preliminary remark, the Commission notes that the view that economies of scale would lead to increased competition and lower prices following the merger is inconsistent with the Notifying Party's internal assessment of the outcome of the merger. As explained in Section 7.5.5 on the merged entity's changed incentives and 7.5.6 on Vodafone's likely reaction after the merger, the Notifying Party expects the merger to lead to "*market repair*". As explained, this means a market with higher prices and higher margins.⁶⁰⁷
- (784) In recitals (786) to (810) the Commission addresses in detail the Notifying Party's evidence on how fixed cost savings would benefit consumers, in particular:
- (a) the Notifying Party's arguments that increased cash flow would lead to increased investments to the benefit of consumers; and
 - (b) the Notifying Party's price concentration study which, according to the Notifying Party, shows that in small countries scale efficiencies of a four to three merger between MNOs outweigh any possible competitive harm.
- (785) The Notifying Party also submitted an economic model on customer inertia which it claims supports its price concentration study and its claims that Three would reduce investment in the absence of the merger. That model is assessed in section 7.5.7.3 and Annex II. Likewise the Notifying Party's study on quality competition and repositioning upon which the Notifying Party bases its claims in relation to post-merger investments in quality and associated consumer benefits is assessed in section 7.5.7.3 and Annex II. The Commission considers the customer inertia study and the study on quality competition and repositioning to be uninformative, among other reasons, because of the abstract nature of the models, which are not suitable for the mobile industry, and to the questionable nature of the assumptions used to produce the results.

Assessment of the Notifying Party's cash flow arguments

- (786) The Notifying Party submits that fixed cost savings will be passed on to consumers in the form of additional investments. It argues that Three is [...]*. In its Response to the Article 6(1)(c) Decision, the Notifying Party submitted two general studies

December to 2013 to Compass Lexecon and Freshfields and in the SO, paragraph 452 and footnote 384). This matter was also discussed in the economist meeting on 9 December 2013. The Commission has not received any submission in this respect.

⁶⁰⁶ Horizontal Merger Guidelines, paragraph 80.

⁶⁰⁷ See recitals [...]*, (577) to (579).

(which are not specific to Three or the situation in Ireland) on the empirical relevance of cash flow for investment decisions.⁶⁰⁸ The Notifying Party also argues that free cash flow is a primary performance indicator for rating agencies which makes it a key consideration driving management decisions.

- (787) In the SO, the Commission disagreed with the Notifying Party's statement that fixed cost savings would benefit consumers in the form of higher investments due to the removal of [...]*.⁶⁰⁹ In the Response to the SO, the Notifying Party argues that the Commission's reasons for rejecting the Notifying Party's arguments were wrong, based on a highly selective reading of the evidence provided, or simply irrelevant. The Notifying Party argues that the merger would [...]*.⁶¹⁰ Furthermore, the Notifying Party claims in several parts of the Response to the SO that, in the absence of the merger, Three's position [...]*.⁶¹¹ Three's position in the absence of the merger is assessed in Section 7.5.4.2.
- (788) In the Response to the SO the Notifying Party argues the following:
- (a) The Notifying Party's economic studies on cash flow constraints show that internal and external capital markets are imperfect. Furthermore, the mere fact that Hutchison is a soundly financed group does not mean that Hutchison will not make Three abide by Hutchison's internal cash flow rules;
 - (b) The fact that Hutchison has authorised the purchase of O2 does not relate to the question about how the cash-flow of Three influences the budget that Hutchison allocated to Three for its ongoing operations, investments and pricing decisions;
 - (c) The Notifying Party has provided evidence which shows the importance of free cash flow in Hutchison's budgeting [...]*;
 - (d) Moody's credit opinion emphasises the role of cash flow;
 - (e) Three's investment decisions are very substantially influenced by [...]*;
 - (f) The Notifying Party interprets the SO as suggesting that that Vodafone is [...]* than Three which it considers "absurd".
- (789) The Commission does not agree with these arguments for the reasons set out in recitals (790) to (799).
- (790) The Commission notes that the Notifying Party's empirical studies on cash flow constraints, prepared for the merger investigation, are not specific to the mobile telecommunications industry at the country level or to the effect of cash flow constraints on MNOs. The general review by the Notifying Party of the empirical economic literature on cash flow constraints is not specific to telecommunications. The empirical analysis prepared by the Notifying Party relies on company data at the group level rather than at the country level subsidiaries and includes a large variety

⁶⁰⁸ Compass Lexecon, Influence of Cash Flow on Investment: Literature review, 19 November 2013, [Ref: 131119], [ID 1285], and Compass Lexecon, Influence of Cash Flow on Investment: Econometric Analysis on Telecoms Firms, 25 November 2013, [Ref: 131125], [ID 1487].

⁶⁰⁹ SO, paragraphs 457, 458 and 459.

⁶¹⁰ Response to the SO, paragraphs 815-832.

⁶¹¹ Response to the SO, paragraphs 387 and 388, 397-419.

of telecommunications companies from fixed line telecommunications incumbents to MVNO's and resellers of other firm's tariff plans.⁶¹² Neither of these studies examines the impact of mergers on investments. Therefore, the Commission does not consider that the economic literature on cash flow constraints in general or the empirical analysis prepared by the Parties allow inferences on the effect of fixed cost savings resulting from the merger on investment. Moreover, the Commission notes that there is also economic literature indicating that financially more successful divisions of groups are supporting unsuccessful divisions.⁶¹³

- (791) The Notifying Party has also failed to show in what way the internal capital market within Hutchison is malfunctioning.⁶¹⁴ Three is the most recent MNO entrant in the Irish mobile market. Entry into the mobile market requires significant sunk investments in infrastructure and in building a customer base before delivering returns. Hutchison is a group with significant experience in the mobile market and is familiar with the dynamics of these markets and has been funding Three's investments via its internal capital market to date. Moreover, sunk past investments are not relevant for a rational investor when considering whether additional investments are profitable. In this respect, the Commission notes that Three became EBITDA positive for the first time in 2013⁶¹⁵ and is expected to become EBIT positive by [...]*,⁶¹⁶ despite the fact that the Irish economy has gone through a period of economic downturn which has had an impact across all sectors in the economy. In the light of Three's current financial prospects, the Commission considers it unlikely that a company like Hutchison, which has largely sufficient financial capacities to

⁶¹² Regarding the econometric techniques used in the Notifying Party's study, the Notifying Party argues, rightly, that current cash flow will be correlated with market value which may bias their estimates. To solve this "endogeneity problem" it proposes to use an instrumental variable approach using lagged values of Tobin's Q as instruments for current values of Tobin's Q (that is for the ratio of a firm's market value to its book value). The Commission notes that using the lagged Tobin's Q does not solve the endogeneity problem. A firm's market value depends on expected future cash flow. Market value in the previous period (and hence lagged Tobin's Q) will therefore also be correlated with current cash flow.

⁶¹³ The economic literature on the coinsurance effect of groups shows that cash flow from a successful division can support an unsuccessful division. Therefore it can be expected that if Three is cash flow constrained it will be subsidized by successful subsidiaries. See for instance Lewellen, W. (1971): "A Pure Financial Rationale for the Conglomerate Merger" *The Journal of Finance*, Vol. 26, No. 2, Papers and Proceedings of the Twenty-Ninth Annual Meeting of the American Finance Association Detroit, Michigan December 28-30, pp. 521-537, Leland, H (2007): "Financial Synergies and the Optimal Scope of the Firm: Implications for Mergers, Spinoffs, and Structured Finance" *The Journal of Finance*, Vol. 62, No. 2, pp. 765-807. Diamond, D. (1984): "Financial Intermediation and Delegated Monitoring" *The Review of Economic Studies*, Vol. 51, No. 3, pp. 393-414, Tirole, J. (2006) *The Theory of Corporate Finance* Princeton University Press, Inderst, R. and Müller, H. (2003): "Internal versus External Financing: An Optimal Contracting Approach" *The Journal of Finance*, Vol. 58, No. 3, pp. 1033-1062, and Cestone, G. and Fumagalli, C. (2005): "The Strategic Impact of Resource Flexibility in Business Groups," *RAND Journal of Economics*, The RAND Corporation, vol. 36(1), pages 193-214, Spring, among others.

⁶¹⁴ In recital (792), the Commission provides additional evidence showing that internal capital markets have actually worked within Hutchison.

⁶¹⁵ Three press release, Increase in Active Customer Base Drives Three Ireland To EBITDA Break Even For The First Time (1 August 2013), http://press.three.ie/press_releases/18-increase-in-active-customer-base-drives-three-ireland-to-ebitda-break-even-for-the-first-time/, available on 7 April 2014, [ID 3992].

⁶¹⁶ H3G 5 Year Plan 2013-2017 and Annex 6.4.1.4 (3) to the Form CO, slide 95.

continue funding the pursuit of profitable opportunities by its subsidiaries,⁶¹⁷ will decide to stop financing investment opportunities by Three that would deliver positive returns.

- (792) The acquisition of O2 by Hutchison further illustrates that [...] are not a significant barrier for Hutchison to pursue profitable investment opportunities. In particular, the Commission notes that Hutchison is prepared to invest EUR 850 million in cash in the purchase of O2. This is a considerable investment when compared to the EUR 1.1 billion invested in Three since entry occurred in 2005. Furthermore, in 2012 Hutchison already approved a EUR [...] offer to the Eircom mobile business. The Notifying Party has argued that the cash flow considerations should be different for acquisitions than for other types of ongoing investments. The Notifying Party has further argued that as a result of this merger Three will become cash flow positive and would generate larger surpluses than if the merger did not take place.⁶¹⁸ The Commission disagrees with the first of these arguments and considers that the Notifying Party's second argument supports the Commission's view that mergers, as other types of investment decisions are made on the basis of the expected returns they generate. Therefore, there is no reason to believe that different considerations should apply to acquisitions than to investments in other business opportunities. In any case the Notifying Party has not provided the Commission with evidence in this respect.
- (793) Moreover, the Notifying Party has not substantiated why Hutchison would allow the merged entity to retain free cash flow benefits from the merger. In the Response to the SO the Notifying Party argues that the documentary evidence provided in the Response to the Article 6(1)(c) Decision shows that [...].⁶¹⁹ While the Commission acknowledges that cash flow may be one of several important financial indicators, the Notifying Party's evidence that it would be the [...] by Three does not withstand scrutiny.
- (a) First, the financial analyst and credit agency reports referred to by the Notifying Party concern Hutchison, and within those reports references are made to the group of companies included within Hutchison. In this respect, the analysts also refer to the Three group of companies and their activities in the telecommunications market. There is no specific reference to Three Ireland and the focus is on how Hutchison's business portfolio affects its rating and its financial evolution. There is hence no indication in these reports that cash flow benefits arising in Ireland would actually be retained by Three for investment purposes rather than just improve overall cash flow for the benefit of the Three group of companies.

⁶¹⁷ According to Hutchison's annual report for 2013 - <http://www.hutchison-whampoa.com/en/ir/annual.php> available on 15 April 2014, page 88 [ID 4062] - Hutchison reported in 2013 an EBITDA of EUR 9.2 billion (HKD 98 billion) and a consolidated funds from operations ("FFO") before cash profits from disposals, capital expenditures, investments and changes in working capital amounts to EUR 4.6 billion (HKD 49 billion).

⁶¹⁸ Form CO, paragraphs 941-958.

⁶¹⁹ See paragraph 407 of the Response to the SO making reference to paragraphs 71 and following of the of the Response to the Article 6(1)(c) Decision.

- (b) Second, the examples of investment and pricing decisions provided by the Notifying Party do not appear to be linked to cash-flow constraints or to be [...]*.⁶²⁰ Other considerations also play a significant role in these decisions.
- (c) Third, Hutchison is approving the acquisition of O2 and supplying the cash for this investment. It is therefore unclear why it would not re-appropriate the additional cash flow generated in Ireland and redistribute within Hutchison, or to investments or acquisitions elsewhere which it considers it to be more appropriate.
- (d) Fourth, even if the cash flow were to stay within Three, the Notifying Party has not provided evidence of customer benefit. The Notifying Party has been vague regarding what additional investments the merged entity would undertake as a result of the alleged cash flow benefits, what sums would be invested and what the consumer benefit from these investments would be.
- (794) As for the claims made by the Notifying Party pertaining to Moody's credit rating, the same critique applies as described in recital (793). The credit rating not only by Moody, but also by Standard & Poor's and Fitch relate to Hutchison and by no means are specific to Three. Furthermore, Moody's credit rating depends on the performance of the whole of Hutchison. While it is true that cash flow is a relevant element for the credit rating, the Notifying Party's claim regarding Moody's credit ratings does not seem to be factually reflected in Moody's analysis. Moody's issued two credit rating opinions on Hutchison on 5 November 2012⁶²¹ and on 16 April 2013.⁶²² In its first opinion, Moody's underlined Hutchison's sound position. Notably it stated that *"The A3 rating reflects HWL's broad degree of business and geographical diversification, and the fact that most of its established businesses command strong competitive positions in their markets and generate stable cash flow," says Acres, also Moody's Lead Analyst for HWL, adding, "HWL also maintains a strong liquidity profile"*. Similar considerations are stressed by Fitch and Standard & Poor's.⁶²³ Moody's concerns in its first opinion hence related to other financial metrics such as the adjusted funds from operations (FFO) as compared to its net debt. In its second opinion, Moody's changed its opinion from negative to stable following Hutchison's 2012 financial publications because it considered that Hutchison showed *"a modest, but sustained improvement in financial performance and the maintenance of an extremely strong liquidity profile"*. Likewise, it states *"FFO improved appreciably driven by Retail, CKI and 3 Group Europe, as such adjusted FFO/net debt increased to 16.6%, up from 14.6% for FY 2011. Despite such improvement, the metric remains modestly positioned for HWL's rating," adds Acres, also Moody's Lead Analyst for HWL. Notwithstanding this, the general trend is one of improvement, particularly at 3 Group Europe which has over the past few years*

⁶²⁰ See Section 7.5.4.2 describing the examples listed in Section 2.2.1 of the Response to the SO (paragraphs 387-388). The claimed price increases do not appear to be linked to cash flow considerations. Likewise, in relation to the examples reported in paragraph 957 of the Form CO the Notifying Party has not provided any evidence that these examples were discarded because of [...]*

⁶²¹ Source: https://www.moodys.com/research/Moodys-assigns-an-A3-rating-to-Hutchisons-proposed-notes-outlook--PR_259023, available on 7 April 2014, [ID 3986].

⁶²² Source: https://www.moodys.com/research/Moodys-changes-outlook-on-Hutchison-Whampoa-to-stable--PR_270422, available on 7 April 2014, [ID 3987].

⁶²³ See for instance Annex 15.5, 15.6 and 15.10 to the Response to the Article 6(1)(c) Decision.

been a drain on HWL's overall credit profile. The business has made a sustained move into profitability and has now recorded three clear years of improving reported EBITDA and in 2012 saw a doubling of reported EBIT to HK\$3.1 billion, despite an adverse currency impact." This also does not reflect particular issues in relation to free cash flow. Likewise Standard & Poor's in its rating of April 2013 refers to Hutchison and states that Hutchison has an excellent position in relation to business risk and has an intermediate position in relation to financial risks.⁶²⁴ In particular, in the rationale of its credit rating it states:

Business Risk: Strong	Financial Risk: Intermediate
<i>Strong business and geographic diversity</i>	<i>Good cash flow from a diverse and competitive business</i>
<i>Good-to-strong market share of operating companies</i>	<i>Good liability management</i>
<i>Good record of divesting assets to supplement internal cash generation</i>	<i>Strong financial flexibility and liquidity</i>
	<i>Modest financial ratios for the rating</i>
	<i>Increased investment and acquisition appetite</i>

- (795) This does not reflect the Notifying Party's argument that [...]*.⁶²⁴
- (796) As stated in the SO, the Commission reiterates that the Notifying Party's internal documents suggest that Three is more likely to continue investing in profitable opportunities [...]*.⁶²⁵
- (a) In the 2008 decision to bid for the NBS area, [...]*.⁶²⁵ Contrary to the Notifying Party's claim, and bearing in mind that the NBS bid was made, that decision shows that [...]*.⁶²⁵ which play a role in assessing potential investments. Furthermore, it shows that Three is prepared to take a decision with [...]*.⁶²⁵
- (b) In the 2012 decision to make an offer for the Eircom business, Hutchison decided to engage EUR [...]*, if the offer was accepted, and [...]*. On the contrary, the key considerations are summarised as follows: [...]*.⁶²⁶
- (c) Before the 2012 frequency auction, a high level discussion between Three and Hutchison⁶²⁷ shows that previous budgets have not been respected by Three. In this discussion, [...]*. A [...]*. is mentioned but it does neither seem to [...]*. than other profitability indicators such as EBIT.
- (d) All these investment decisions were assessed according to the expected return that could be obtained by Hutchison.

⁶²⁴ Annex 15.5 to the Response to the Article 6(1)(c) Decision.

⁶²⁵ Three, Email from [...]* to [...]*, 27 February 2013, [Ref: 001116815], [ID 1300-24155].

⁶²⁶ Three, Email from [...]* to [...]*, 13 April 2012 [Ref: 001231929], [ID 1300-21303].

⁶²⁷ H3G Ireland, 2012 - 2016 Budget Review, Notes of Budget Meeting on 22 November 2011 [Ref: 000903038], [ID 1302-23815].

(797) Finally, financial publications of the Irish MNOs indicate that Three invests much more in relation to its turnover or subscribers than its larger competitors. This is shown in Table 41.

Table 41: CAPEX compared to turnover and the number of subscribers per MNO

	Turnover (in EUR million)	CAPEX (in EUR million)	Subscribers (in millions)	CAPEX/turnover	CAPEX/subscriber
Vodafone	695.3	93.7	2.16	13%	43
O2	444.8	65	1.54	15%	42
Eircom (Meteor)	279.2	60.7	1.09	22%	56
Three	129.7	63.1	0.49	49%	129

Source: 2012 financial publications of the four MNOs

(798) Contrary to the claims made by the Notifying Party in the Response to the SO, the Commission does not consider that these figures indicate that Vodafone is more cash constrained than Three. The Commission considers, however, that the observation that Three invests a higher percentage relative to its turnover or subscriber numbers than its main rivals further undermines the Notifying Party's argument that [...]*. It also undermines the Notifying Party's claim that its empirical study would allow reliable inferences on the effect of increased cash flow arising from claimed fixed costs savings on the merged entity's investments. This is because the study which links investments to cash flow (both variable being expressed relative to a measure of firm size such as turnover) would indeed imply that the Parties' rivals such as Vodafone are more cash flow constrained than Three, an implication which the Notifying Party considers "absurd".

(799) In the light of the above, the Commission concludes that the Notifying Party has not demonstrated that scale efficiencies would benefit consumers by means of increased investments due to a relaxation of cash flow constraints. Furthermore, the Notifying Party has not given any indication of what specific investments it envisages undertaking post-merger that it would not be able to pursue due to [...]* or the value of such investments. Moreover, the Notifying Party has not demonstrated or quantified the consumer benefit from such additional investments. The Commission therefore concludes that the Notifying Party has not met the requirements for establishing efficiencies as set out in the Horizontal Merger Guidelines.

Assessment of the Notifying Party's price concentration study

(800) The Notifying Party argues that whether competitive harm from a merger is outweighed by consumer benefits from economies of scale is an empirical question. The Notifying Party presented an econometric price concentration analysis using ARPU data for 25 Member States (also including Switzerland and excluding

Cyprus).⁶²⁸ According to that study ARPUs in “small” countries with four or fewer MNOs are higher than in small countries with three or less MNOs.⁶²⁹ The Notifying Party argues that this is consistent with the view that the benefit of increased economies of scale resulting from a 4-to-3 merger would outweigh the effect of a decrease in the intensity of competition in a small country such as Ireland.⁶³⁰

- (801) Based on its price concentration study, the Notifying Party estimates that the price effect of a four-to-three merger in Ireland is likely to reduce ARPU by 9-10%. In reply to detailed comments by the Commission on data and methodological issues prior to the SO, the Notifying Party submitted additional analyses and updated data, claiming that implementing the Commission's comments would not materially affect the results.⁶³¹
- (802) In the SO, the Commission reached the preliminary conclusion that the price concentration analysis did not provide a reliable empirical basis to conclude that a four-to-three merger between MNOs in a small Member State such as Ireland would be unproblematic as claimed by Notifying Party. The Commission's revisions to the Notifying Party's analysis indicated that the results were not robust and that when the Commission's main comments on methodology were incorporated in the Notifying Party's analysis cumulatively rather than individually, the Notifying Party's results were reversed, indicating that, all other things being equal, small markets with three MNOs tend to have higher prices than markets with four MNOs.⁶³²
- (803) In the Response to the SO, the Notifying Party argues that the Commission's assessment in the SO of the price concentration analysis is misleading and incorrect and that the Commission's findings are not robust.⁶³³ The Notifying Party considers that the conclusions from its initial price concentration analysis are further confirmed by its additional analysis. Furthermore, the Notifying Party states that the price concentration analysis is a standard type of analysis that has been employed by the Commission in the past.⁶³⁴

⁶²⁸ Compass Lexecon "Price Concentration Study," 11 November 2013, [Ref: 131111], [ID 1244].

⁶²⁹ The Notifying Party defines small countries as countries with less than 20 million subscribers.

⁶³⁰ The Notifying Party argues that in "large" countries (with more than 40 million) the number of MNOs has a negative impact on ARPU suggesting that the competition effect outweighs the effect of economies of scale.

⁶³¹ Compass Lexecon, "Response to CET Queries on CL's Price-Concentration Study", 20 December 2013, [Ref: 131220], [ID 1935].

⁶³² In particular, the Commission found that running the analysis on ARPU of the largest MNO only rather than additionally including an inconsistent time series for the second largest MNO, running the analysis removing CDMA 2000 operators in the 450 MHz band, including the GDP per capita instead of GDP, and focusing the analysis in 3 and 4 country MNOs inversed the Notifying Party's results.

⁶³³ The Notifying Party claims that its original findings are confirmed: (i) when the econometric models use the average ARPU of the two largest MNOs in each country instead of focusing on the ARPU of the market leader; (ii) when the change in the identity of the market leader over time is taken into account; (iii) when the analysis is re-run using all the available data for both the largest and second largest operator. Moreover, the Notifying Party argues that (iv) there is no reason to exclude the CDMA operators; and (v) removing the countries with 2 and 5 MNOs does not change the results when the data for the two largest operators in each country is used.

⁶³⁴ The Notifying Party refers to the following Commission decisions: Commission Decision of 27 June 2007 in Case No COMP/M.4439 – *Ryanair / Aer Lingus*, Commission Decision of 27 February 2013 in

- (804) In the Commission's assessment, the Notifying Party's additional analysis included in the Response to the SO does not withstand reasonable robustness checks as explained in detail in Annex II.⁶³⁵ When such checks are implemented the econometric model proposed by the Notifying Party cannot identify any statistically significant result to support the claim that ARPU is lower in small countries with three operators compared to small countries with four operators.
- (805) In addition, the Commission notes that the Notifying Party's lack of control for differences across countries in the quality of mobile services, demand usage and the decline in costs in the mobile industry, among other factors, further undermine the cross-country comparison conducted in the Notifying Party's price concentration analysis. As stated in the SO these limitations are such that the results from the econometric model may indicate only correlation, and not necessarily causation, between prices and market structure. Therefore the analysis is of limited value to derive conclusions on the effects of the merger.
- (806) Moreover, the Commission disagrees with the Notifying Party's comment in the Response to the SO that the Commission's evaluation of the Notifying Party's economic evidence is prejudiced by prior beliefs.⁶³⁶ In its assessment the Commission takes into account both the qualitative and quantitative evidence as a whole set of evidence.⁶³⁷ The price concentration analysis put forward by the Notifying Party is in contradiction with the remaining qualitative and quantitative analysis gathered by the Commission. In combination with the shortcomings and the lack of robustness of the Notifying Party's analysis this raises further doubts about the reliability of the Notifying Party's price concentration analysis.

Case No COMP/M.6663 – Ryanair / Aer Lingus III; Commission Decision of 30 January 2013 in Case No COMP/M.6570 – UPS / TNT.

⁶³⁵ In this respect the Commission includes GDP per capita to control for some heterogeneity across markets; adds a dummy variable for Norway from 2000-2007, to control for outliers; drops countries with 2 and 5 operators and limits the comparison to just four and three country operators which is the relevant comparison for the case at hand; controls for CDMA 2000 operators in 450 MHz since they do not provide comparable services to those operating with other technologies and other spectrum bands. Finally, the Commission notes that the dataset employed by the Notifying Party includes data series with missing information. This lack of information has to be controlled for as it otherwise includes artificial variation in the dataset and biases the results.

⁶³⁶ Response to the SO, paragraphs 592 to 595 where the Notifying Party claims that the Commission's critic in paragraph 463 of the SO to their analysis evidences that "*the economic evidence does not have any evidential value of its own. It is only relevant if it confirms the evidence from the qualitative sources*" (paragraph 594).

⁶³⁷ As stated in paragraph 4 of the Best Practices for the Submission of Economic Evidence and Data Collection in Cases Concerning the Application of Articles 101 and 102 TFEU and in Merger Cases "*one must assess the congruence and consistency of the economic analysis with other pieces of quantitative and qualitative evidence (such as customer responses, or documentary evidence)*" and in footnote 2 it states "*Economic models or econometric analysis, as is the case with other types of evidence will rarely, if ever, prove conclusive by themselves. The Commission can always take into account different items of evidence. The General Court has held that "It is the Commission's task to make an overall assessment of what is shown by the set of indicative factors used to evaluate the competitive situation It is possible, in that regard, for certain items of evidence to be prioritised and other evidence to be discounted. That examination and the associated reasoning are subject to a review of legality which the Court carries out in relation to Commission decisions on concentrations". See Case T-342/07, Ryanair v Commission, [2010] paragraph 136 "*

- (807) Furthermore, the Notifying Party's analysis also fails to take into account costs, different usage patterns and differences in quality in the mobile sector. These are relevant factors in the mobile industry that can explain differences across countries. Failing to control for such factors undermines further the Notifying Party's analysis in this case.
- (808) As regards the use of price concentration analyses in past cases, the Commission notes that, contrary to the analysis presented in the case at hand, in the cases cited by the Notifying Party, the Commission analysed the effect of the presence of one or both Parties on prices. This is different from the Notifying Party's analysis in this case, because the Notifying Party's analysis compares outcomes of different markets with different competitors. Therefore, the conclusions drawn from the Notifying Party's analysis are less reliable compared to previous analyses conducted in other cases.
- (809) Overall, the Commission concludes that the price concentration analysis presented by the Notifying Party cannot be relied upon for the purposes of assessing the competitive impact of the merger or of any potential efficiencies stemming from it.
- (810) In the light of the foregoing the Commission's overall conclusion on the Notifying Party's arguments on scale efficiencies is the following:
- (a) the amount of verifiable scale efficiencies is lower than submitted by the Notifying Party;
 - (b) scale efficiencies related to the network are not likely to be merger-specific since MNOs were about to implement the Mosaic and the Netshare agreement and realise similar cost savings;
 - (c) the scale efficiencies are related to fixed costs and are not likely to be passed on to consumers.

7.10.2. *LTE deployment efficiencies*

7.10.2.1. Notifying Party's view

- (811) The Notifying Party submits that gaining access to O2's 800 MHz spectrum would enable the merged entity (i) to roll out LTE faster than on a standalone basis and (ii) to achieve a higher population coverage with LTE than in the absence of the merger. According to the Notifying Party, the merged entity would aim to cover [...] % of Irish population by 2016 compared to an expected population coverage in 2016 of [...] % for Three and [...] % for O2 in the absence of the merger.
- (812) Furthermore, in the standalone scenario, Three's LTE coverage would reach a peak at 75% according to the Notifying Party. The Notifying Party argues that without access to the 800 MHz band, which has superior propagation properties, full coverage of rural areas of Ireland would be prohibitively costly. O2 would roll out LTE to reach a [...] % population coverage by 2017.
- (813) While O2 has access to 800 MHz spectrum, O2's network deployment plans are, according to the Notifying Party, limited by funding restrictions imposed by its shareholder the Telefónica group. In particular, in April 2013, [...] %.

Figure 21: population coverage and CAPEX of the Parties over the period 2013-2017

[...]*

Source: Slide 50 of the Notifying Party's presentation to the Commission on 16 September 2013

- (814) The Notifying Party argues that the Telefónica group has [...]*. It claims that that decision has been taken independently of the preliminary merger discussions and that internal documents show that Telefónica has decided to [...]*.
- (815) The Notifying Party also submits that the Commission misinterpreted O2's press releases of November 2012, in which it announces its "plans to invest a further EUR 200 million over the next three years to upgrade its network to 4G capability". The Notifying Party states that that investment did not only relate to the 4G technology but more generally to the investment in all network technologies.
- (816) In support of its claims, the Notifying Party submitted a quantification of the benefit to consumers of increased LTE coverage. That quantification is based on an estimate of the LTE penetration rate by 2017.⁶³⁸ According to that estimate based on historical data on 3G adoption, the penetration of LTE services in Ireland should be of [...]%% by the end of 2017.⁶³⁹ The Notifying Party also provided a study estimating the value of LTE services for consumers compared to 3G services according to which the presence of an LTE offer would provide interested customers with an additional EUR 10 per month of value.⁶⁴⁰
- (817) The combination of the quantifications set out in the two studies leads to a benefit of EUR 27 million to consumers, as shown in Table 42.

Table 42: Notifying Party's view of the customer surplus from accelerated LTE roll-out

Number of LTE subscribers in Ireland	2015	2016	2017	Total
<i>Absent the merger</i>	[...]*	[...]*	[...]*	[...]*
<i>Post-merger</i>	[...]*	[...]*	[...]*	[...]*
Incremental annual benefit per subscriber	€ 120	€ 120	€ 120	
Incremental benefits of LTE roll-out	[...]*	[...]*	[...]*	[...]*

Source: Notifying Party's submission of 8 January 2014

- (818) In the Response to the SO the Notifying Party argues that Telefónica decided to [...]* irrespective of the merger and "before Telefónica ever decided to sell the business".⁶⁴¹ In support of this argument, [...]*. The Notifying Party further argues that O2's Ireland performance in Ireland had already started to decline from 2008 and was accompanied with a [...]*.⁶⁴² Furthermore, it claims that O2's network has

⁶³⁸ Compass Lexecon, "Estimating the rate of 4G adoption in Ireland", 28 November 2013, [ID 1604], and Compass Lexecon, "Estimating the rate of 4G adoption in Ireland (updated version)", 23 December 2013, [ID 2033].

⁶³⁹ The Notifying Party estimates that [...]%% of the Irish population will have adopted LTE services by the end of 2017.

⁶⁴⁰ Compass Lexecon, "Estimation of customer welfare from access to LTE", 29 November 2013, [ID 1628-96].

⁶⁴¹ Response to the SO, paragraph 322.

⁶⁴² Response to the SO, paragraph 840.

already been underperforming compared to its competitors and given that it has a [...] of 2G customers it has less incentive [...]. Finally, the Notifying Party argues that the Commission is wrong to defend that the 900MHz band can be used to deploy LTE.⁶⁴³

7.10.2.2. Commission's assessment

- (819) The Commission disagrees with the Notifying Party's view on two aspects:
- (a) In the absence of the merger, O2 would have deployed a competitive 4G network comparable to the merged entity's planned network. Hence the merger is not a prerequisite for a choice between several providers of LTE services;
 - (b) With respect to benefit to consumers, users interested in 4G services could also purchase them from competing MNOs, in particular from Vodafone which plans to deploy an extensive LTE network comparable to the merged entity's and from Eircom, which was the first operator in Ireland to start offering LTE. Accordingly, the merger is not a pre-requisite for the widespread availability of LTE services to consumers. The Commission also disagrees with the Notifying Party's quantification of the benefit to consumers.

Verifiability and merger specificity

- (820) The Commission does not consider it plausible, as already discussed in Section 7.5.4.3, that, in the absence of the merger, O2 would undermine its business in Ireland by not investing in an LTE rollout that would keep O2 competitive in the market.⁶⁴⁴ First, O2 acquired the most valuable 800 MHz band in the 2012 frequency auction and it would make little sense to stop the investment plan half way through without reaping the full benefits of it. Second, O2's own press release of 15 November 2012⁶⁴⁵ announced that O2 had successfully secured the maximum allocation of the most valuable LTE spectrum in the recent spectrum auction and that it planned to "*commence the rollout of its 4G network in the first half of 2013. [...] Telefónica Ireland plans to invest a further €200m over the next three years to upgrade its network to 4G capability*". The Notifying Party argues that the Commission has misinterpreted that press release which was "*designed to reassure actual or potential customers*" and it was no "*form of binding legal obligation or a statement of great precision such as a stock exchange announcement*".⁶⁴⁶ The Commission acknowledges that the statement is not a binding legal obligation on O2. However the press release is quite clear about O2's plans as it goes on to quote Telefónica Ireland's CEO Tony Hanway stating the following: "*Telefónica is committing significant investment to the introduction and roll-out of next generation 4G technology in Ireland. 4G will significantly change the way consumers use their mobile devices and will transform our ability to meet customer demand for new products and services as they move to adopt smartphones, mobile modems and tablets in ever greater numbers. Our plans for 4G will ensure Ireland remains at the*

⁶⁴³ Response to the SO, paragraphs 841-845.

⁶⁴⁴ The Commission has shown in Section 7.5.4.3 that O2 has the ability and incentive to continue being a viable competitor absence the transaction.

⁶⁴⁵ Source: <http://www.o2online.ie/o2/uploads/pdfs/press/Telefonica-Ireland-to-commence-rollout-of-4G-network-in-first-half-of-2013.pdf>, available on 7 April 2014, [ID 3991].

⁶⁴⁶ Response to the SO, paragraph 339

leading edge of communications, providing customers with significantly faster data transfer speeds and much faster connections to the internet."⁶⁴⁷ (emphasis added). In conjunction with the evidence presented below and with that discussed in Section 7.5.4.3 that statement supports the Commission's view that in the absence of the merger O2 would have invested in developing a competitive LTE network in Ireland.⁶⁴⁸

- (821) The Commission has reviewed internal documents in order to evaluate why [...]*, contrary to its announcement and in spite of the fact that it had already [...]*. That review leads to significantly different results from those which the Notifying Party submits.
- (822) First, [...]*. This is supported by various internal documents which show that the Mosaic agreement's planned budget for [...]* was as high as EUR [...]* of which O2 would support EUR [...]*. Such an amount would have led O2, through the Mosaic agreement, to [...]*.
- (823) This planned envelope of EUR [...]* is shown by numerous internal documents. In particular an internal document states that, in March 2011, O2's project approval committee approved an envelope of EUR [...]* over five years.⁶⁴⁹
- (824) O2's strategic review of March 2013 shows that the selected scenario for [...]* was [...]*.⁶⁵⁰ [...]*.⁶⁵¹
- (825) This scenario corresponds to [...]*.⁶⁵² for O2. [...]*.
- (826) A later internal document shows Eircom's ambitious [...]* with an estimate of [...]* sites [...]* by the end of 2013 to be compared with Vodafone's [...]* sites and Three's [...]* sites. That deployment would have been done together with O2 without the merger.
- (827) [...]*.⁶⁵³ [...]*:

Figure 22: O2's planned LTE deployment

[...]*

Source: Page 3 of "Spectrum case"⁶⁵⁴

- (828) The Notifying Party argues that the document was merely a discussion document and that this is indicated on the first slide. The document states that it is "[...]*".⁶⁵⁵ The document then sets out the next steps that are required.

⁶⁴⁷ Source: <http://www.o2online.ie/o2/uploads/pdfs/press/Telefonica-Ireland-to-commence-rollout-of-4G-network-in-first-half-of-2013.pdf>, available on 7 April 2014, [ID 3991].

⁶⁴⁸ The Commission notes that there are different types of LTE deployments, depending on the spectrum used, the cell sizes and backhaul.

⁶⁴⁹ Telefónica, presentation, 8 April 2013, page 8, [Ref: TEL00249844], [ID 1065-35971].

⁶⁵⁰ Telefónica, presentation, 8 April 2013, page 10 and 19, [Ref: TEL00249844], [ID 1065-35971]. [...]*

⁶⁵¹ Telefónica, Business plan 2014-2016 – key strategic choices, 22 March 2013, page 20, [Ref: TEL00243764], [ID 1065-34659].

⁶⁵² Telefónica, Business plan 2014-2016 – key strategic choices, 22 March 2013, page 22, [Ref: TEL00243764], [ID 1065-34659].

⁶⁵³ Telefónica, Spectrum case, 17 May 2010, page 3, [Ref: TEL00000889], [ID 1061-16073].

⁶⁵⁴ Telefónica, Spectrum case, 17 May 2010, page 3, [Ref: TEL00000889], [ID 1061-16073].

- (829) As pointed out by the Notifying Party the document cannot be taken as a firm commitment by O2. However, the document reflects the working assumptions that were being discussed within O2 and should be read in conjunction with the remaining evidence.
- (830) Second, on the basis of its review of internal documents, the Commission considers that the reason why the investment plan did not materialise is that the Telefónica group had already decided to sell its Irish business. Hence, O2 was not prepared to undertake CAPEX for the deployment of the LTE network before the integration with the buyer's network, which risks making the CAPEX redundant. Early 2013 was therefore a unique window of opportunity for the Telefónica group to sell its Irish business before starting a new investment cycle. This is shown by various internal documents: [...]*.⁶⁵⁶[...]*.⁶⁵⁷ [...]*.⁶⁵⁸ [...]*.⁶⁵⁹ [...]*.⁶⁶⁰ [...]*.⁶⁶¹ [...]*.⁶⁶²
- (831) Third, the Commission does not agree with the Notifying Party's argument that Telefónica decided to reduce its LTE roll-out irrespective of the merger and "*before Telefónica ever decided to sell the business*" and the claim that [...]*.⁶⁶³[...]*.⁶⁶⁴[...]*.⁶⁶⁵
- (832) [...]*.⁶⁶⁶
- (833) The Commission also notes that, [...]*.⁶⁶⁷ [...]*.⁶⁶⁸
- (834) Finally, the Commission points out that the burden of showing that efficiencies are verifiable rests with the Notifying Party. The Notifying Party has not submitted any document pre-dating the merger discussions in 2012 that evidences [...]*. A graph in the Form CO purports to show that O2 will [...]*. roll out LTE to [...]*.% of the population⁶⁶⁶ but no documents, such as board minutes, have been provided that indicate that O2 or its shareholder had decided on such a [...]*. If O2 really had such [...]*. even before merger discussion started in 2012, one would expect this to be reflected in internal documents.
- (835) Fourth, as discussed in Section 7.6.2., the merger would likely frustrate the Mosaic agreement's implementation and impact on Eircom's deployment of LTE.

⁶⁵⁵ Telefónica, Spectrum case, 17 May 2010, slide 1, [Ref: TEL00000889], [ID 1061-16073].

⁶⁵⁶ Three, Email from [...]*. to [...]*. , 10 July 2012, [Ref: 001198807], [ID 1300-17830].

⁶⁵⁷ Three, Email from [...]*. to [...]*. , 18 February 2013, [Ref: 001119479], [ID 1300-24628].

⁶⁵⁸ Three, Email from [...]*. to [...]*. , 20 February 2013, [Ref: TEL00103979], [ID 1063-10402].

⁶⁵⁹ Three, Email from [...]*. to [...]*. , 25 February 2013, [Ref: 001119166], [ID 1300-24504].

⁶⁶⁰ H3G, memorandum from [...]*. to [...]*. on Project Ozone, 21 March 2013, [Ref: 001159926], [ID 1300-29880].

⁶⁶¹ [...]*.⁶⁶²

⁶⁶² Telefónica, CFO PAC – Mosaic H2 tactical programme request for approval, 2 July 2013, [Ref: TEL00274934], [ID 1065-40508].

⁶⁶³ Response to the SO, paragraph 322.

⁶⁶⁴ Three, Email from [...]*. to [...]*. , 10 July 2012, [Ref: 001198807], [ID 1300-17830].

⁶⁶⁵ Response to the SO, paragraph 316.

⁶⁶⁶ Form CO, page 295 (figure 12).

- (836) O2's strategic review of March 2013 contains the following analysis of Eircom's network deployment strategy: "[...]*".⁶⁶⁷
- (837) In the same document, O2 considers that [...]*.⁶⁶⁸
- (838) [...]*⁶⁶⁹[...]*:
- (839) This indicates that the pre-merger discussions have already led to the frustration of the Mosaic agreement and severely slowed down Eircom's LTE deployment. Any assessment of the impact of the merger on LTE deployment should take into account the fact that consumers' welfare would possibly be reduced by the related delay in Eircom's LTE deployment.
- (840) Furthermore, Three could also, in the absence of the merger, use its 900 MHz band in order to deploy a LTE network. The suitability of the 900 MHz band for LTE has been described in recital (479). The 900 MHz band has propagation characteristics and costs which are largely comparable to those of the 800 MHz band. Accordingly, Three could deploy an LTE network that covers far more than 75% of the population even without having access to O2's 800 MHz band.
- (841) Moreover, as regards network speed, for the reasons described in recital (553), the Commission considers that the combination of the Parties' spectrum in the merged entity is not likely to lead to an increase in the merged entity's speed compared to the Parties' speed in the absence of the transaction.⁶⁷⁰ Increases in network speed therefore cannot be considered merger specific.
- (842) In conclusion, the Commission considers that in the absence of the merger O2 would have deployed a competitive 4G network comparable to that which the merged entity plans to deploy. As a consequence, the Commission considers that the claim that the merger would result in faster and further reaching LTE coverage by the merged entity cannot be considered as verifiable and/or merger specific.

Benefit to consumers

- (843) To quantify consumer benefit, the Notifying Party estimates the number of additional LTE customers the merged entity would serve due to greater LTE coverage and then multiplies this by an estimate of the benefit that each consumer would derive from having LTE instead of 3G.
- (844) In the Response to the SO the Notifying Party argues that Vodafone's roll-out would not mitigate the customer benefit of the LTE efficiency and claims that the quantification of the LTE premium is accurate.⁶⁷¹
- (845) The Commission has three concerns regarding the Notifying Party's approach. First, the Notifying Party's calculation of the number of additional LTE customers of the

⁶⁶⁷ Telefónica, Business plan 2014-2016 – key strategic choices, 22 March 2013, page 15, [Ref: TEL00243764], [ID 1065-34659].

⁶⁶⁸ Telefónica, Business plan 2014-2016 – key strategic choices, 22 March 2013, page 15, [Ref: TEL00243764], [ID 1065-34659].

⁶⁶⁹ Eircom's response to Questionnaire Q18 of 13 December 2013 on network plans, [ID 1909].

⁶⁷⁰ Furthermore, the Commission notes that similar network speeds could be achieved by pooling spectrum in the absence of the merger.

⁶⁷¹ Response to the SO, paragraphs 846-857.

merged entity is based on the Notifying Party's argument that the LTE coverage of the merged entity would be greater than that of the Parties in the absence of the merger. As discussed, the Commission does not consider this to be verifiable and/or merger specific. Second, the quantification of the benefit of increased LTE coverage by the merged entity on the basis of the consumer value of LTE over 3G overstates the benefit to consumers because it assumes that these consumers would not have any other LTE provider without the merger. In fact, these customers could also have subscribed to Vodafone's (or Eircom's) LTE services. A wide availability of LTE services by Vodafone, for example, would mitigate the benefit of increased LTE coverage by the merged entity.⁶⁷² Third, the Commission also has concerns regarding the Notifying Party's quantification of the value of LTE over 3G for consumers choosing LTE.

- (846) As regards the availability of LTE from the merged entity's competitors, the Commission considers that while at the beginning of the LTE roll-out none of the competitors will have a nationwide network, in the coming years Vodafone is likely to reach a very substantial LTE coverage. According to Vodafone's response to the Commission request for information⁶⁷³ and to the Notifying Party's submission on the merged entity's deployment plan, the LTE deployment plans would have been of a similar magnitude.
- (847) Furthermore, contrary to Vodafone and Eircom which have released LTE commercial offers, the merged entity's deployment plan has not materialized. Therefore, it has not been able to cover the [...] *% of population with LTE services at the end of 2013 as planned by the Notifying Party.⁶⁷⁴ Therefore, it can be expected that those plans would be postponed until the completion of the merger. In the meantime Eircom and Vodafone would proceed with their LTE deployment plans and continue to increase the LTE services offered to consumers and therefore will limit the incremental benefit to consumers resulting from the LTE network that would be rolled out by the merged entity.
- (848) Furthermore, the merged entity's LTE deployment is likely to have been overstated in comparison to Vodafone's deployment plan. Vodafone is the Irish market leader in terms of network quality and network deployment. It has already released its LTE commercial offer in October 2013 and its level of investment in the network, in terms of CAPEX, is twice as high as any other competitor:

[...] *

- (849) According to the Notifying Party's submission on scale efficiencies,⁶⁷⁵ the amount of CAPEX that the merged entity will invest in its LTE network is identical to what Three has planned to invest in LTE during the period 2014-2016, that is to say EUR [...] * million per year. By comparison, Vodafone has announced that it will invest

⁶⁷² As noted above, the merger would likely compromise Eircom's LTE deployment.

⁶⁷³ Vodafone's response to the Commission's request for information Q19 of 17 December 2013, [ID 2056].

⁶⁷⁴ See Figure 22.

⁶⁷⁵ Notifying Party's submission of 21 November 2013, paragraph 12 – Calculation of merger synergies, [ID 1353].

EUR 500 million in its network over the next five years⁶⁷⁶ (which corresponds to an average investment of EUR 100 million per year).

- (850) Considering the Notifying Party's claim that a mobile network is essentially a fixed cost with a limited correlation to the number of customers,⁶⁷⁷ the Commission considers that the merged entity would be unlikely to surpass Vodafone's LTE deployment [...]*.
- (851) Moreover, in its calculations of consumer benefit, the Notifying Party does not take into account the availability of Vodafone's LTE services. Instead, the Notifying Party compares only the merged entity's LTE deployment plan to its views on Three's and O2's LTE deployment plan in the absence of the merger and then calculates the benefit of additional LTE customers it expects to serve using an estimate of the value that each customer derives from having access to LTE services compared to having no LTE whatsoever. This assumes that in the absence of the merger these incremental customers have no access to LTE services from Vodafone, Eircom or indeed O2 as the Commission considers. Accordingly, the benefits stemming from the availability of LTE services and specifically related to the merger are likely to be significantly overstated.
- (852) While customers who would chose Three as an LTE provider rather than, for example, Vodafone would likely derive some benefit from being able to choose their first preference post-merger, this benefit (which the Notifying Party has not estimated) is likely to be significantly lower than the consumer benefit of LTE over 3G estimated by the Parties. Therefore, the Commission considers that the Notifying Party's estimate of the net benefit per user of having LTE rather than 3G cannot be applied to consumers that have alternative LTE providers in the absence of the merger.
- (853) The application of the figure for the net benefit per consumer of LTE over 3G to all LTE consumers which the merged entity expects to serve as a result of greater LTE coverage (regardless of whether these consumers would have an alternative LTE provider) has a substantial impact on the Notifying Party's calculation of the total benefit. To illustrate, if one assumes, for example, that consumers who could likely obtain LTE from Vodafone derive no benefit from obtaining LTE from Three rather than from Vodafone, then the Notifying Party's estimate of the value to consumers from the merged entity's greater LTE coverage would be significantly reduced to a net present value of EUR 1.9 million.⁶⁷⁸ This approach still abstracts from the issues on verifiability and merger specificity.
- (854) In the Response to the SO, the Notifying Party concedes that its quantitative exercise introduces a bias by neglecting the possibility to enjoy LTE services from Vodafone.⁶⁷⁹ On the other hand, the Notifying Party argues that as neither of the Parties would be able to offer full population coverage, and because Eircom would be impaired as a consequence of the deficiencies of the existing Mosaic Agreement

⁶⁷⁶ Source: <http://www.vodafone.ie/network/expansion-plans>, available on 7 April 2014, [ID 3989].

⁶⁷⁷ Form CO, paragraph 914.

⁶⁷⁸ Calculated on the basis of Vodafone's response to the Commission request for information Q19 of 17 December 2013. The calculation includes a discount factor of 9.5% and a monthly value of LTE services of EUR [...]*.

⁶⁷⁹ Response to the SO, paragraph 852.

with O2, Vodafone would be unchallenged in its position. As a result Vodafone would have substantial market power and would consequently charge higher prices than it would do without the competition from the merged entity.

- (855) The Commission agrees that in the event of having one single MNO rolling out LTE this operator would benefit from some additional degree of market power for the part of the population which is only covered by one MNO. However, the Commission considers that in the absence of the merger, Eircom and O2 would likely also roll-out LTE to a significant extent. According to the Notifying Party, Three would also roll out LTE to 75% of the population in the absence of the merger. Given national pricing by MNOs, competition from MNOs that will not reach the whole Irish population will still impose an important competitive constraint on for the whole of the country. Therefore, even if in the absence of the merger Vodafone were the only LTE provider in some geographic areas in the absence of the merger it would have to balance its increased market power in the uncontested regions with facing more competition in the rest of the country for the purposes of setting its national prices. The Notifying Party has not demonstrated that in the absence of the transaction the former effect would outweigh the latter. The Notifying Party should therefore have estimated the incremental benefit from having LTE services from the merged entity rather than from Vodafone or the other MNOs. Put simply, the consumer benefit is not the difference between having LTE or not having LTE, but the additional benefit generated by having the choice to buy LTE services from the merged entity.
- (856) The Commission has also expressed a number of concerns regarding the Notifying Party's estimate of the net benefit of LTE over 3G, both with respect to the Notifying Party's econometric estimates of the price premia of 4G over 3G tariffs and with respect to the Notifying Party's view that the estimated price premia also provide a conservative estimate of the net incremental benefit of LTE over 3G for consumers.
- (857) As regards econometrics, the Notifying Party estimates the price premium of LTE over 3G based on a sample of four countries where LTE services are available (Austria, Denmark, Germany and the United Kingdom).⁶⁸⁰ It estimates that the price premium of LTE plans over 3G plans for the different countries ranges between EUR 18.51 and EUR 3.71 for data only plans (with an average of EUR 10.53) and EUR 20.72 and EUR 0.12⁶⁸¹ for voice and data plans (with an average of EUR 8.95).⁶⁸²
- (858) However, to calculate the price premia for voice tariffs, the Notifying Party has, in some cases, excluded one of the coefficients relevant to estimate the premium of 4G voice plans over 3G plans on the basis that the difference between the coefficient for the 4G premium for data only plans and that for voice plans is statistically

⁶⁸⁰ The Commission notes that other countries which charge no premium have been left out. For instance this is the case in Sweden, Norway, Denmark and Greece. Similarly in France this premium is fading away after Free's LTE offers at no additional cost. Likewise, in Germany, Belgium and the Netherlands LTE is included within the medium to more expensive plans. (See <http://www.ft.com/cms/s/0/d9d81a7c-cc6a-11e2-9cf7-00144feab7de.html> available on 7 April 2014, [ID 3981] and <http://www.zdnet.com/a-free-reign-over-4g-how-the-upstarts-lte-gambit-upended-the-mobile-market-in-france-7000024407/> available on 7 April 2014, [ID 3982]).

⁶⁸¹ The Commission has corrected a mistake on the net incremental benefit for the Voice and data plans in the UK. The correct figure is 0.12.

⁶⁸² Compass Lexecon, "Estimation of customer welfare from access to LTE", 29 November 2013, [ID 1628-96].

insignificant.⁶⁸³ The Commission notes that this line of argument is driven by the way in which the indicator variables in the econometric regressions are constructed. While it appears correct that the estimated premium for 4G voice plans over 3G plans in the Notifying Party's regressions is not statistically different from the estimated premium for 4G data plans in these cases, the implied estimate for the premia for 4G voice plans over 3G⁶⁸⁴ are also not statistically different from zero. In the light of this, the Commission does not consider it appropriate to simply assume in these cases that the premium for voice plans is the same as that for data plans. Instead it would appear more appropriate to use the implied point estimate for the 4G premium for voice plans subject to the caveat that this premium is estimated very imprecisely.⁶⁸⁵ This approach would lead to substantially lower estimated 4G premia for voice plans.

- (859) When this approach is followed, the figures for the premium of 4G over 3G for voice and data plans range between EUR 6.64 and EUR -0.07 with an average of EUR 3.91. The average figure for data only plans is EUR 10.40. The corrected average premia for voice plans are therefore significantly lower than estimated by the Notifying Party (see Table 43). In the Response to the SO the Notifying Party acknowledges that this methodology "*is also valid*".⁶⁸⁶

Table 43: Corrected estimates for net incremental benefit of 4G

	Austria	Denmark	Germany	UK	Average
Data only	20.16	8.21	10.15	3.09	10.40
Voice and Data	6.64	5.37	3.71	-0.07	3.91

Source: Commission computations based on Notifying Party figures included in Compass Lexecon "Estimation of customer welfare from access to LTE" 29 November 2013

- (860) The estimated price premia on the value of LTE over 3G to Irish consumers as submitted by the Notifying Party assumed uniformity of customers across countries. The Commission raised doubts as to whether customers in Austria, the United Kingdom, Denmark or Germany are comparable to Irish customers in terms of LTE valuation. The Notifying Party argues that in the absence of specific information for Ireland it is perfectly reasonable to assume that the LTE premium in Ireland will be equivalent to the average premium in other Member States.⁶⁸⁷
- (861) In the Commission's view, the Notifying Party's claim that the net benefit of LTE over 3G per consumer can be conservatively estimated as being equal to the observed price premium cannot be accepted.⁶⁸⁸ The Notifying Party's reasoning is based on the assumption of the behaviour of a single product monopolist. The Commission

⁶⁸³ The coefficients excluded are those of the voice and data tariffs for Austria and one of the coefficients for Denmark and for Germany.

⁶⁸⁴ This is obtained by the sum of the coefficients for "4G premium" and "4G premium (VD v. D)" in the Notifying Party's regressions.

⁶⁸⁵ Moreover, the Commission considers that the regression specifications with operator dummies are likely more reliable for an assessment of the premium of LTE over 3G on an otherwise like-for-like basis.

⁶⁸⁶ Response to the SO, paragraph 855.

⁶⁸⁷ Response to the SO, paragraph 856.

⁶⁸⁸ SO, paragraph 512.

acknowledges that this approach is conservative in that competition between firms would likely reduce the observed price premium implying that the net consumer benefit would be higher than the observed premium. However, if LTE is also associated with higher incremental cost, then the net consumer benefit in the monopolist scenario would be lower. The Commission therefore observes that the only reliable conclusion that can be drawn from the observation of the premium is that consumers which choose LTE tariffs over 3G tariffs are better off by choosing LTE, which implies that they have a positive net benefit.

- (862) In the Response to the SO, the Notifying Party argued that LTE is unlikely to have higher incremental costs than 3G. The Notifying Party argues that the Swedish MNO's do not charge an LTE premium because they face capacity constraints on their 3G networks and want to incentivise customers to migrate to the unconstrained LTE networks. The Notifying Party argues that the fact that countries such as Norway, Denmark and Greece do not charge a premium may be due to similar capacity considerations in 3G networks.⁶⁸⁹ The Notifying Party then concludes that if 3G networks are more congested than LTE networks this implies that 3G services have higher incremental costs than LTE services and thus the assumption that the incremental costs of 3G and LTE are the same leads to an underestimation of the net consumer benefit.
- (863) The Commission notes that these claims by the Notifying Party are unsubstantiated and it is not clear whether the 3G networks in those countries face capacity constraints. Furthermore, all mobile operators in Ireland are likely to have spare capacity.⁶⁹⁰ Moreover, the incremental costs of a network, such as LTE which is only started to be rolled out are most likely to be higher than those of an existing 3G network.
- (864) The Commission concludes that the Notifying Party has not shown to the evidential standard described in the Horizontal Merger Guidelines that the LTE deployment efficiencies are verifiable, merger specific and will benefit consumers.

7.10.3. *Efficiencies related to the coverage of sparsely populated areas*

7.10.3.1. Notifying Party's view

- (865) In 2008, the Irish Government launched the NBS in order to cover the most remote areas of Ireland with broadband services. Three was appointed following a competitive tender process to cover the NBS area with broadband services at a minimum speed (2 Mbit/s) and at a maximum price (EUR 20 per month). Three covered the NBS area with a mix of mobile and satellite broadband services. As part of the NBS program, Three's retail prices in the area were capped and the equipment of households with satellite receiver of broadband services or home repeaters was subsidised. The NBS program will terminate in August 2014.
- (866) The Notifying Party submits that, in the absence of the merger, Three will have to (i) significantly increase its prices and/or (ii) reduce the service level in the NBS by stopping the supply of home repeater/satellite solutions and/or dismantling particularly unprofitable mobile sites.

⁶⁸⁹ See footnote 680. These countries have not been included in the econometric analysis conducted by the Notifying Party.

⁶⁹⁰ Form CO, paragraph 709.

- (867) With the merger, the Notifying Party would (i) obtain access to O2's 800 MHz spectrum which would enable Three to reduce or eliminate its reliance on repeaters and satellite services. This would make the provision of mobile broadband services in the NBS area more profitable; (ii) the Notifying Party would be able to cross sell its mobile broadband services to O2's customers in the NBS area. As a result, the merged entity would maintain its current level of service without any significant price increase and even roll-out LTE services in the area.
- (868) The Notifying Party considers it unlikely that any other MNO would undertake a substantial roll-out of 3G or LTE in the NBS area beyond their respective current scope of network infrastructure.
- (869) The Notifying Party submits that there is no reason to consider that [...]*
- (870) Under the NBS program, Three has the obligation to give access to its network to interested third parties. However, at this stage access has not been requested by any third parties and the Notifying Party considers that it cannot be realistically expected given the limited economic importance of the NBS area.
- (871) The Notifying Party also submits that, in the event that the Irish Government launches a new NBS after 2014, there is no reason to consider that it would lead to the selection of Three again.
- (872) Finally, the Notifying Party estimates the benefit to consumers in the following manner:
- (a) in November 2013, Three had [...] active subscribers in the NBS area;
 - (b) [...] % of NBS customers ([...] customers), covered by [...] particularly unprofitable mobile sites, would no longer benefit from mobile services as Three would dismantle these sites without the merger;
 - (c) for [...] % of NBS customers covered only by satellite solutions, the service would continue but Three would stop providing new equipment;
 - (d) for [...] % of NBS customers covered by home repeaters of the 3G network, the service would continue but no new equipment would be provided;
 - (e) for the remaining [...] % of NBS customers covered by Three's 3G network, the service would continue with or without the merger.
- (873) In the short run, only [...] % of customers would be affected by the dismantling of the [...] particularly unprofitable sites. This leads to a reduction in consumer surplus of EUR 0.28 million. In the longer run, the Notifying Party considers that [...] % of NBS customers would no longer have access to broadband services, which represents EUR 1.3 million in lost customer welfare.
- (874) In the Response to the SO, the Notifying Party argues that the alternative satellite services offered in the NBS area are substantially more expensive than the services provided by the Notifying Party.⁶⁹¹ Second, the Notifying Party argues that the 900 MHz spectrum it currently owns is meant to be used for voice services and if it were to be used for data, it would be able to offer a more limited data service than with the

⁶⁹¹ Response to the SO, paragraph 861.

spectrum acquired through the merger.⁶⁹² Finally, Vodafone would not be in a position to offer services in the NBS area in the near future.⁶⁹³

7.10.3.2. Commission's assessment

Verifiability and merger specificity

- (875) The objective of the NBS is to deliver broadband to certain target areas in Ireland in which broadband services were deemed to be insufficient.⁶⁹⁴ The NBS area and the whole of Ireland are covered with various commercial broadband offers based on satellite services from providers other than Three.⁶⁹⁵ Accordingly, the entire NBS area is already covered with basic broadband services.
- (876) While the satellite broadband services currently offered by Three are cheaper than those offered by other satellite broadband providers, this is simply the result of the price caps imposed under the NBS scheme. After the expiry of the NBS scheme, Three will not have an incentive to maintain satellite services or home repeater solutions at lower prices, with or without the merger. The merger therefore has no impact on customers who will continue to rely on satellite or home repeater solutions after the merger.
- (877) The Commission acknowledges that mobile broadband is, however, not substitutable to fixed or satellite broadband services. Accordingly, the continued availability of 3G services in some parts of the NBS area would still bring additional value to consumers who can use these services for mobile broadband access.
- (878) Regarding access to O2's spectrum and the coverage of the NBS area with 3G services, Three has the possibility, since the 2012 frequency auction, to use its 900 MHz frequency band in order to cover the NBS area with 3G services. Hence, this is not merger specific to the extent that the access to O2's frequency holdings would not further improve the business case for 3G deployment by the merged entity. Furthermore, the fact that the Notifying Party would have additional spectrum as a result of the merger does not imply that the Notifying Party would activate this spectrum in the NBS area. The Notifying Party has not provided evidence that this would be the case.
- (879) In relation to the coverage of the NBS area with LTE services, the Commission considers it unlikely, for the reasons explained in Section 7.10.2.2, that the merged entity would deploy a more extensive LTE network than Vodafone. Furthermore, Vodafone already has a significant number of mobile masts in the NBS area to the extent that its 2G network already covers the vast majority of the NBS area (and Three does rely on a roaming agreement in order to access Vodafone's 2G network and complete its coverage).⁶⁹⁶ According to Vodafone's response to the

⁶⁹² Response to the SO, paragraph 863.

⁶⁹³ Response to the SO, paragraphs 864-872.

⁶⁹⁴ Source:

<http://www.dcenr.gov.ie/communications/communications+development/national+broadband+scheme.htm>, available on 7 April 2014, [ID 3988].

⁶⁹⁵ See notably this comparison of available broadband offers: <http://www.uswitch.ie/broadband/compare/satellite-broadband/> available on 7 April 2014, [ID 3990].

⁶⁹⁶ Vodafone's response to question 2 of the Commission request for information Q19 of 17 December 2013, [ID 2026].

Commission's request for information about its rollout plans,⁶⁹⁷ it will virtually cover the whole population of the NBS area with UMTS and LTE services within the next two to three years.

- (880) In the light of this, while consumers could benefit from enhanced services from the Notifying Party throughout that period, it would also take some time before the Notifying Party could cover the area with LTE and it is questionable that this would be a priority for Three. Moreover, the Notifying Party has not shown how the services in this area would improve as a result of the merger. The [...] % of customers who employ home repeater service would, in the absence of the merger, only lose the service from Three the event of a breakdown of equipment which Three would not replace.⁶⁹⁸ In this respect it is unclear to what extent there will be a need for the equipment to be replaced until Vodafone achieves its subsequent coverage targets. It is unlikely that there will be a need to replace much equipment at the beginning of the period and the demand for new equipment will increase together with the increase in coverage by Vodafone.
- (881) In relation to the [...] sites which could be decommissioned without the merger, the Commission considers that these sites could be classified in two different categories. Some sites are likely to be so remote that no other MNO has any infrastructure in the area. In this case, there is no possibility for the merged entity to cross-sell Three's 3G services to O2's 2G customers and the merger would not change anything to its profitability. Other sites may also be covered by O2's 2G network in which case there could be a possibility to cross-sell services and to improve the profitability of the sites. The Commission considers that, without any precise map of respective coverage areas of Three and O2, the submitted amount is likely to overstate the actual benefit to consumers.
- (882) Overall and considering the above, the benefits of the merger related to the coverage of the NBS area are likely to be limited to the effect on consumers stemming from the dismantling of Three's [...] particularly unprofitable mobile sites, that is to say, the effect which the Notifying Party claims would arise in the short run. Accordingly, the benefit to consumers is not likely to be higher than EUR [...] per year.

7.10.4. *Conclusion on efficiencies*

- (883) Based on the above, the Commission considers that network scale efficiencies are not likely to be merger specific to the extent that similar savings were to be implemented through the existing network sharing agreements. The other scale efficiencies essentially relate to fixed costs which are unlikely to be passed on to consumers.
- (884) The Commission considers that the merger would be unlikely to lead to an overall acceleration of the LTE deployment for two main reasons: (i) without the merger, O2 would have also deployed an extensive LTE network together with Eircom through the Mosaic agreement. This did not materialise because Telefónica had decided to sell its Irish business before starting its LTE deployment. On the contrary, the consequence of the merger discussions is a significant deceleration of Eircom's LTE deployment. (ii) The merged entity would be unlikely to deploy a LTE network

⁶⁹⁷ Vodafone's response to question 2 of the Commission request for information Q19 of 17 December 2013, [ID 2026].

⁶⁹⁸ Compass Lexecon "Merger Benefits from NBS Customers" of 28 November 2013 Table 1 [ID1628-104]

which is more extensive than Vodafone's. Accordingly, consumers could purchase LTE services from Vodafone and would not depend on the merger for their access to 4G services and in the absence of the merger from Eircom and O2.

- (885) In relation to the coverage of the NBS area with mobile broadband services, the Commission considers that the additional customer welfare due to the merger would be unlikely to be higher than EUR [...] per year.
- (886) In conclusion, the Commission considers that scale efficiencies and efficiencies related to LTE deployment do not fulfil the criteria defined in the Horizontal Merger Guidelines. Hence, the benefit to consumers from efficiencies is unlikely to exceed EUR [...] per year. In the Commission's view, this is insufficient to outweigh the anticompetitive effects of the merger.

7.11. Other markets

7.11.1. Wholesale market for international roaming

- (887) Three has a [0–5]*% market share on the Irish wholesale market for international roaming and O2 has a market share of [40–50]*%.⁶⁹⁹ In spite of the high combined market share of O2 and Three, the merger is unlikely to cause any significant impediment to effective competition on this market. The Irish market for international roaming is subject to sector-specific regulation at Union level. Regulation (EU) No 531/2012 (the "Roaming Regulation")⁷⁰⁰ caps retail prices for EU customers when making and receiving calls, sending SMS and obtaining data services with their mobile phones abroad. At the wholesale level, the regulation caps prices for operators from Member States for voice roaming charges, SMS and data. In addition, Article 3 of the Roaming Regulation requires MNOs to 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 this market. In the light of this, the horizontal overlap between Three and O2 on the Irish wholesale market for international roaming is unlikely to lead to a significant impediment to effective competition.
- (888) The wholesale market for international roaming in Ireland is also vertically linked to the retail mobile telecommunications services markets in Austria, Denmark, Italy, Sweden and the United Kingdom. Conversely, the wholesale markets for international roaming in Austria, Denmark, Italy, Sweden and the United Kingdom are vertically linked to the Irish retail market.
- (889) It is unlikely that the merger would significantly impede effective competition on the retail mobile telecommunications services markets in Austria, Denmark, Italy, Sweden and the United Kingdom, or the wholesale markets for international roaming in Austria, Denmark, Italy, Sweden and the United Kingdom. As described in recital (887), the wholesale market for international roaming is subject to sector-specific Union regulation which prevents mobile operators from refusing access to their network and from charging excessive termination fees. Moreover, the respondents to

⁶⁹⁹ Form CO, paragraph 633, table 43.

⁷⁰⁰ 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, 30/06/2012, p. 10–35).

the Commission's market investigation questionnaires have not raised any specific concerns regarding these markets.

7.11.2. Wholesale market for mobile call termination

(890) The Commission considers that it is unlikely that the merger would significantly impede effective competition on the affected wholesale markets for mobile call termination. Rates for mobile voice call termination services are subject to *ex ante* regulation by national telecommunications regulators such as ComReg in Ireland. Moreover, the respondents to the Commission's market investigation questionnaires have not raised any specific concerns regarding this market.

8. CONCLUSION

(891) The Commission considers that 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 effects in the Irish retail mobile telecommunications services market and the Irish wholesale market for access and call origination on public mobile telephone networks.

9. COMMITMENTS

9.1. Analytical Framework

(892) When a concentration raises competition concerns because it could significantly impede effective competition, the parties may seek to modify the concentration in order to resolve those competition concerns and thereby obtain clearance for the merger.

(893) The commitments have to eliminate the competition concerns entirely and have to be comprehensive and effective in all respects. The commitments should also be proportionate to the competition concerns identified.⁷⁰¹ 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.⁷⁰²

(894) 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 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

⁷⁰¹ Merger Regulation, recital 30. 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)).

⁷⁰² 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), paragraph 9.

effective competition in all relevant markets in which competition concerns were identified

9.2. Procedure

- (895) In order to address the competition concerns identified in the SO, the Notifying Party submitted a first set of commitments on 3 March 2014. Following its assessment described in Section 9.3.2., the Commission considered that those proposed commitments were insufficient to eliminate the significant impediment to effective competition arising from the merger. Therefore, the Commission decided not to market test the commitments of 3 March 2014. The Commission informed the Notifying Party accordingly at a meeting on 6 March 2014.
- (896) Taking account of the Commission's views, the Notifying Party submitted a second set of commitments on 17 March 2014. On 19 March, the Notifying Party submitted revised commitments that included minor variations to the commitments of 17 March. The Commission launched a market test of the latter commitments on 19 March 2014 (the "first market test") and addressed questionnaires to MNOs, actual and potential MVNOs, as well as national telecom regulators. The Commission communicated the results of the first market test to the Notifying Party on 1 April 2014.
- (897) Following the results of the first market test, the Notifying Party submitted one revised element of the commitments, the MVNO entry commitment, on 8 April 2014. On the same date, the Commission launched a second market test of the revised MVNO entry commitment with the respondents to the first market test (the "second market test"). The results of the second market test for the MVNO entry commitment were communicated to the Notifying Party during a meeting on 16 April 2014.
- (898) On 6 May 2014, the Notifying Party submitted the final commitments consisting of a final MVNO entry commitment, a final MNO commitment and a final commitment in relation to Eircom (the "Final Commitments").⁷⁰³

9.3. Commitments of 3 March 2014

9.3.1. Description of the proposed commitments

- (899) The commitments submitted by the Notifying Party on 3 March 2014 consisted of two main parts: the Eircom commitment and the MVNO access commitment.
- 9.3.1.1. The Eircom commitment
- (900) The Notifying Party proposed to bolster the competitive constraint that Eircom could exercise post-merger by amending the existing network sharing agreement between Eircom and O2 and by transferring certain spectrum to Eircom. The aim of those commitments was to enhance Eircom's ability and incentives to compete on the Irish retail mobile telecommunications services market and the Irish wholesale market for call origination and network access.
- (901) The Notifying Party proposed to make the following amendments to the existing Mosaic network sharing agreement between Eircom and O2: [...]*

⁷⁰³ These commitments were subsequently re-submitted by the Notifying Party on 22 May 2014 signed by an additional company within the Hutchison group (see footnote 722).

- (902) The Notifying Party also proposed to transfer [...] to Eircom. The transferred spectrum would be contiguous to the blocks held by Eircom in the relevant bands.
- (903) Based on the terms mentioned in recitals (211) and (212), the Notifying Party and Eircom agreed on a Memorandum of Understanding which was submitted to the Commission in a draft form as part of the commitments of 3 March 2014.

9.3.1.2. The MVNO access commitment

- (904) In addition to the Eircom commitment, the Notifying Party proposed to offer wholesale access for MVNOs to the Three network for a period of up to 10 years.
- (905) The details of the proposed access terms would be published on the Three website in the form of a reference offer. Three would enter into good faith negotiations with MVNOs to conclude MVNO agreements on the basis of the principles set out in the reference offer.
- (906) Wholesale access would be made available to up to seven MVNOs or such lower number for which the aggregate forecasted traffic at any point in time during the term of the commitments would be no more than 30% of the capacity of the Three network. The aggregated forecast traffic would include existing MVNOs on the Three network (Tesco Mobile, Lycamobile and Blueface) as well as that of UPC. Three would not be obliged to carry out the technical implementation of more than two MVNOs at the same time. However, if a technical implementation would continue for more than 12 months it would not be included in calculating whether that limit has been reached.
- (907) The reference offer would be available to MVNOs wishing to provide mobile telecommunications services to end customers under their own brand name provided that they would not be controlled by an MNO active in Ireland. If an MVNO would not have its own core network, it could obtain core network services from a third party MVNE or from Three directly on terms that would be agreed separately. An MVNO would be eligible only if it did not hold spectrum frequency licences in respect of which it had achieved, or was obliged to achieve under the terms of the licence, outdoor coverage obligation exceeding 5% of the Irish population.
- (908) With respect to wholesale rates, the reference offer specified a base rate per unit (voice, SMS, data) and a discount rate per unit (15% lower than the base rates). The discount rates would be applicable to all units purchased after reaching an annual discount threshold and up to a specified discount ceiling.
- (909) For data transactions, the MVNO would also have a choice of unit pricing – either a single unit rate or a tiered unit rate.⁷⁰⁴ Data services would be made available at the base (and discount) rates up to 30 Mbits/second on all available technologies (including LTE). MVNOs could access services at available faster speeds under separate terms and pricing. To the extent that faster speeds would be provided by Three at a retail premium, an equivalent premium would be applied to the wholesale rates.

⁷⁰⁴ If an MVNO were to opt for tiered pricing, it would benefit from volume discounts in relation to those users which would have a high data usage.

- (910) In addition, under the reference offer the MVNO could elect a retail tariff which would be offered by Three to which retail minus pricing (at [...]*) on flat rates would be applied.
- (911) The reference offer provided for an indexation mechanism to reflect the changes of the overall price level in the Irish telecoms industry or in Three's prices.⁷⁰⁵
- (912) The reference offer included an offer to make access available to LTE technology. Future evolutions of mobile technologies would also be made available under certain conditions.
- (913) None of the rates in the reference offer would be subject to any minimum volume or minimum revenue commitments.
- (914) In addition, Three would consider reasonable requests for additional services (beyond wholesale access) or additional products if required by the MVNO, subject to separate agreement of the terms. Three would also provide each MVNO with one copy of the Three number portability database at no cost.
- (915) Finally, the Notifying Party offered to procure that Three would enter into an MVNO agreement based on the reference offer with one MVNO to be approved in advance by the Commission ("the upfront MVNO"). The Notifying Party would not close the acquisition of O2 before the signing of the MVNO Agreement between Three and the upfront MVNO and the prior approval of the Commission of the upfront MVNO and the terms of sale offered to it.

9.3.2. *Commission's analysis*

- (916) As a preliminary observation, the Commission recalls that the overall result of any commitments accepted in this case must be that the likely negative effects of the elimination of Three as an important competitive force and the likely weakening of Eircom are removed. As regards the first proposed commitments, their overall effect must therefore be to allow existing or new competitors to replace the constraint that Three has been exerting on the market, whilst also preserving the remainder of the pre-merger state of competition on the Irish market.
- (917) A key aim of the commitment package of 3 March 2014 would have been to strengthen Eircom through: (1) the amendment of the Mosaic network sharing agreement and (2) a transfer of spectrum to Eircom.
- (918) The Notifying Party argued that, as a result of the proposed commitments, Eircom would be able and incentivised to exercise a competitive constraint that is at least equivalent to that of Three.⁷⁰⁶
- (919) To verify these claims, the Commission analysed the likely effects of the Eircom commitment on Eircom's ability and incentive to compete post-merger. The Commission did so by means of further requests for information to Eircom, and a comprehensive analysis of internal business and strategy documents that Eircom

⁷⁰⁵ In particular, Three would negotiate in good faith to agree a reasonable price indexation mechanism taking account of the ability of the MVNO to offer competitive products and services to end users. A reasonable price indexation mechanism could include an index based on the evolution of, amongst others, the overall retail mobile telecommunications revenues in the Irish market, as regularly published in the ComReg Quarterly Key Data Reports

⁷⁰⁶ Form RM of 3 March 2014, paragraph 51 [ID 3050].

provided to the Commission. The Commission supplemented that analysis with further requests for information to the Notifying Party, as well as the evidence that it had gathered on Eircom during its investigations in this case.

9.3.2.1. Assessment of the Eircom commitment of 3 March 2014

Impact on Eircom's ability to compete

- (920) On the basis of the body of evidence mentioned in recital (919), the Commission considered that Eircom's ability to compete was likely to be strengthened by the proposed Eircom commitment.
- (921) In particular, the revised network sharing agreement would improve Eircom's network coverage. Currently Eircom does not have nation-wide network coverage. Eircom has to rely on a national roaming agreement with Vodafone for [...] services. This costs Eircom a considerable amount of money each year. As part of the revised network sharing agreement, [...] .
- (922) [...] , the faster site consolidation under the revised network sharing agreement would enable Eircom to realise those coverage targets quicker.⁷⁰⁷ Also, the revised network sharing agreement was likely to bring some incremental coverage gains due to [...] .⁷⁰⁸
- (923) Importantly, under the revised network sharing agreement Eircom would have greater certainty of achieving the consolidation targets than under its existing network sharing agreement with O2. [...] .⁷⁰⁹ [...] .
- (924) Therefore, the Commission considered that the revised network sharing agreement was likely to increase Eircom's ability to compete.

Impact on Eircom's incentives to compete

- (925) Next, the Commission examined whether the Eircom commitment sufficiently increased Eircom's incentives to compete.
- (926) The Commission made this assessment on the basis of the same factors that it used in its assessment of the likely competitive effects of the proposed concentration. Within this framework of analysis, incentives of an MNO to compete for new customers are, to a large extent, determined by two factors: the available network capacity and the size of the MNO's customer base.
- (927) As regards network capacity, when an MNO has spare capacity, the cost of serving additional subscribers is minimal. Therefore, spare network capacity may incentivise an MNO to compete aggressively to attract new customers, who would contribute to covering the MNO's network costs. However, when spare capacity is already large enough to allow for realistic growth even under an aggressive scenario, a further increase in spare capacity is unlikely to significantly affect the costs of serving additional customers and hence the incentives to grow.
- (928) In this case, Eircom already has spare capacity. In particular, Eircom has the same amount of 800 MHz, 900 MHz and 2100 MHz spectrum as Vodafone and O2 (and

⁷⁰⁷ Eircom's response to Questionnaire Q35, question 8 [ID 2371].

⁷⁰⁸ Eircom's response to Questionnaire Q35, question 8 [ID 2371].

⁷⁰⁹ [...] .

considerably more than Three) but has a significantly smaller total customer base. Despite its spare capacity, Eircom has not been as aggressive on the market as Three at least with respect to data offers. For example, Eircom has not made "all-you-can-eat" data offers. Furthermore, [...] (see Figure 3).

- (929) This spare capacity would have been increased by the proposed commitments. The Commission obtained no clear evidence that Eircom would face material capacity constraints in the near future in the absence of such an increase. Even if it were to take account of any constraints, for instance in urban areas with high traffic, Eircom had existing plans to [...].⁷¹⁰ Also in this sense, the likely impact of the proposed commitments on removing real and significant capacity constraints for Eircom would be limited.
- (930) Under these circumstances, the Commission considered it unlikely that the addition of even greater capacity through the transferred spectrum would alter the incentives of Eircom to compete to any material extent as compared to the situation in the absence of the proposed remedy.
- (931) Moreover, the assessment of Eircom's likely strategy would have to take account of the fact that Three has also been exerting an important competitive constraint on Eircom. The Commission concludes that the removal of Three as an important competitive force would have made it likely that Eircom would have increased its retail prices for customers in Ireland. These likely effects could have been counterbalanced if there was sufficient evidence that the commitments would have significantly altered Eircom's incentives to compete aggressively on the Irish market. The wide body of evidence that the Commission assessed, however, did not support this conclusion.

Conclusion

- (932) In sum, the Commission concluded that the Eircom commitment of 3 March 2014 would allow for the preservation of the competitive constraint exerted by Eircom pre-merger by ensuring that Eircom's ability to compete is not reduced. However, the Eircom commitment was insufficient to address the concern regarding the elimination of Three as an important competitive force in the market which was one of the key aims of that commitment, according to the Notifying Party.⁷¹¹ Hence, the Eircom commitment was capable of addressing only one of two concerns identified by the Commission.

9.3.2.2. Assessment of the MVNO access commitment of 3 March 2014

- (933) The Commission assessed whether the MVNO part of the proposed commitments (that is, the MVNO access commitment) would eliminate the significant impediment to effective competition that would arise from Three's removal as an important competitive force in Ireland.
- (934) The MVNO reference offer as contained in the first remedy package was for a typical pay-as-you-go model for an MVNO operation in Ireland. The Commission found that the make-up of the MVNO commitment, effectively opening up 30% of the network capacity of the merged entity to up to seven MVNO entrants, carried a

⁷¹⁰ Eircom's response to Questionnaire Q25, question 24 [ID 1910].

⁷¹¹ See recital (918).

significant risk that MVNOs would sign up for this pay-as-you-go model for a limited capacity only. Other elements of the proposed commitments confirmed the existence of this risk. There were no provisions obliging MVNOs to purchase a minimum capacity from Three. The commitments also provided that an MVNO would be excluded from its access agreement with Three, if it were to obtain spectrum with a population coverage exceeding 5% in Ireland. This would create a disincentive for any MVNO to acquire such spectrum and population coverage, thus restricting it to a limited MVNO presence on the Irish retail mobile telecommunications services market in the near future. Also, the proposed pay-as-you-go MVNO model did not replicate for the new entrant incentives that an MNO would have, due to higher marginal costs accruing with the acquisition of each additional customer. Finally, it would be difficult to devise a mechanism to adjust the rates set out in the reference offer depending on changes in market conditions (the so-called "future-proofing" mechanism).

- (935) For these reasons, the Commission considered that in this case MVNOs that operate under a typical pay-as-you-go model and use a limited part of the network capacity of their host MNO, are unlikely to replace the full constraint of Three as an MNO and important competitive force on the market.

9.3.2.3. Conclusion on the commitments of 3 March 2014

- (936) Consequently, the Commission considered that the commitment package of 3 March 2014 was incapable of preventing a significant impediment to effective competition. Therefore, the Commission decided not to market test the proposed commitments. The Commission communicated its conclusion to the Notifying Party during a meeting on 6 March 2014.

9.4. Commitments of 19 March 2014

9.4.1. *Description of the proposed commitments*

- (937) Following the feedback received from the Commission regarding the first set of commitments, the Notifying Party submitted a second set of commitments on 17 March 2014, revising it on 19 March 2014.
- (938) The commitments of 19 March 2014 were intended to address the Commission's main concern that the MVNOs that would obtain access to Three's network under the previously proposed reference offer would be unable to replace the important constraint that Three is exerting in Ireland. The commitments of 19 March 2014 also contained the Eircom commitment to ensure that Eircom has a sufficient ability to compete post-merger.
- (939) The main change to the commitments was to insert an MVNO commitment that would allow for one MVNO entrant having clear incentives to become a fourth MNO in Ireland in the short term ("the new entrant commitment").
- (940) Hence, the commitment package of 19 March 2014 did not contain the MVNO reference offer to multiple MVNOs. Instead, the new entrant commitment was geared towards one entrant which would begin its operations as an MVNO and within 3 years would have the clear incentives to become an independent fourth MNO in Ireland. To enable such growth trajectory, the new entrant commitment consisted of the following:
- (a) An MVNO agreement: A commitment by Three to conclude an agreement with one MVNO before it would be able to implement its own proposed

concentration with O2. The upfront MVNO would benefit from the MVNO offer for a period of five years from the date of the Commission's final Decision in this case. The access it would obtain to Three's network would be based on per usage voice, SMS and data rates as specified in the commitments.

- (b) Active customer base: An option for the upfront MVNO to acquire the customers under the “48” brand (an O2 sub-brand) when it entered into the MVNO agreement. The “48” brand comprised approximately [...] * customers representing a market share by subscribers of over [0–5] *%.
 - (c) MNO entrant package: An option for the upfront MVNO to become an MNO with a nationwide presence in Ireland within three years. For these purposes, the MNO would obtain (i) its own spectrum (ii) an active network sharing agreement with Three in the urban centres of Ireland and (iii) a national roaming on Three’s network in rural areas.
- (941) The new entrant could take up the MNO entrant package at any point until the end of the three year period commencing from the date that it commercially launches its MVNO offer. It would then be able to obtain the following assets from Three:
- (a) Spectrum: Three would offer to divest 2x10 MHz of 1800 MHz spectrum and 2x10 MHz of 2100 MHz spectrum to the new entrant at [...] *.
 - (b) Spectrum pooling: In order to reduce the costs of the new entrant and increase the capacity available to it, the new entrant would have the option to pool this spectrum with that of Three.
 - (c) Active netshare in urban centres and national roaming: The MNO entrant package was based upon two infrastructure pillars which aimed at giving the new entrant immediate national coverage:
 - (i) An active shared radio network (or active netshare): active network sharing on Three sites in urban centres with the new entrant having 30% of the capacity of the active shared radio network. The active netshare would consist of [...] * sites in the wider Dublin area, which could be extended to an additional [...] * sites in Cork, Limerick, Galway and Waterford urban areas (Dublin, Cork, Limerick, Galway, Waterford). In consideration for using up to 30% of capacity of the shared network, the new entrant would have to pay [...] *; and
 - (ii) National roaming: national roaming on the Three network in rural areas based on the same rates as the MVNO rates.
- (942) Although the components of the MNO package were optional for the new entrant, the entirety of the package was structured with a view to creating a clear economic incentive for the entrant to move from an MVNO model to an MNO model within three years. The cost associated with the asset package was structured such that this would occur as soon as that MVNO reached a certain share of subscribers in Ireland. Three estimated that this threshold would be reached at a subscriber share of approximately [0–5] *%. Above this threshold, the network operating costs under the MNO option would be lower than the fees that would have to be paid under the MVNO model. According to the Notifying Party, this would give the MVNO the clear incentives to become an MNO and give the Commission a sufficient degree of certainty that entry of a fourth MNO in Ireland was likely.

(943) The second set of commitments again contained the Eircom commitment. As this set of commitments foresaw a transfer of spectrum to an MVNO that would transition into an MNO in Ireland, it no longer provided for a spectrum transfer to Eircom. Otherwise, the Eircom commitment remained the same as described in Section 9.3.1.1.

9.4.2. *Commission's analysis*

(944) The Commission launched a market test of the commitments of 19 March 2014.

(945) The market test revealed limited credible interest in entry as an MNO based on the proposed commitments. In particular, none of the respondents indicated interest in entering as an MNO from the beginning.⁷¹² A few respondents stated that they were interested in entering first as an MVNO with an option to become an MNO within three years.⁷¹³ These statements however lacked a firm commitment to use this option and contained no detailed substantiation why this result would be likely. The follow-up calls with these respondents confirmed that, while not excluding MNO entry in theory, they had no concrete plans to become an MNO in Ireland. In short, the market test revealed at most an uncommitted interest from certain operators to exercise an MNO option at some point in the future. This was insufficient to conclude that the commitments were sufficient to make the emergence of a new MNO in the near term likely, which was the stated aim of the Notifying Party when proposing the commitments.

(946) As concerns the reasons for the uncommitted interest, the market test revealed concerns regarding the scale necessary to become an MNO in Ireland. The Notifying Party estimated that a tipping point at which it would become more cost-effective for an MVNO to convert into an MNO would be when that MVNO reaches around [0–5]*% subscriber share, or 112 000 customers. This estimate was based only on the network operating costs that the new MNO would share and did not include other costs to be incurred by the new entrant. 75% of respondents stated that the tipping point was likely to be higher than [0–5]*%, when all costs, including CAPEX and spectrum fees, were included.⁷¹⁴ For example, Liberty Global estimated the tipping point to be closer to 3.8% subscriber share or around 200 000 subscribers.⁷¹⁵

(947) A number of respondents also noted that the proposed timeframe of three years within which a new entrant could exercise the option to become an MNO was too short. Coupled with their view that the necessary subscriber share was likely to be greater than [0–5]*%, these operators considered it unlikely that a new MVNO entrant would be able to acquire sufficient customers to justify its development into an MNO within three years and such time span would have to be significantly longer.

(948) To support their claims, respondents pointed out that the growth of MVNOs that have operated under traditional pay-as-you-models in Ireland had generally been quite slow. The respondents mentioned the example of Tesco Mobile which had been able to achieve a subscriber share of only 3.8% in six years. It must be borne in mind that Tesco Mobile is in a joint venture with O2, so that it is likely to benefit from more advantageous access terms than its MVNO competitors that operate under a

⁷¹² Responses to questionnaire Q41, question 29.3.

⁷¹³ Responses to questionnaire Q41, question 29.2.

⁷¹⁴ Responses to questionnaire Q41, question 22.

⁷¹⁵ Response of Liberty Global to questionnaire Q41, question 22.1 [ID 3532].

pay-as-you-go-model. Hence, the latter operators would be likely to face even more constraints in achieving a significant subscriber share quickly.

- (949) In any event, respondents to the market test considered that it would be necessary to include valuable sub-1 GHz spectrum in the MNO commitment. This spectrum has better propagation characteristics and this would allow the MNO to deploy its own network in a more cost-effective way.
- (950) The response rate on the possibility of becoming an MVNO in Ireland on the basis of the proposed commitments was more positive. The majority of the relevant respondents stated that they would be interested in entry as an MVNO on the basis of the proposed commitments.⁷¹⁶ These respondents were generally positive regarding the proposed per usage rates, which were considered to be quite competitive. However, they expressed concerns regarding the level of data rates. They indicated that the data rates in the MVNO commitment in particular were not "future-proof" enough. This increased the risk that MVNO entrants would not be able to make competitive offerings in the future as data consumption grows.⁷¹⁷
- (951) A number of respondents suggested that the proposed commitments should be open for entry of more than one MVNO.⁷¹⁸ The limitation of the MVNO offer to a single entrant was viewed as inadequate given the considerable uncertainty whether that single chosen entrant would take up the MNO option.
- (952) It must be borne in mind that the MVNOs that made those submissions were mainly interested in the traditional pay-as-you-go model that was included in the MVNO part of the proposed commitments. That model suffered from the same deficiencies that the Commission identified in relation to the proposed commitments that it did not put the market test (see recital (934)). Hence, these submissions did not confirm that the MVNO commitment was sufficient to eliminate the likely significant impediment to effective competition in this case.
- (953) Overall, close to two thirds of the respondents considered that the proposed commitments were insufficient to eliminate competition concerns on the Irish retail mobile telecommunications services market.⁷¹⁹
- (954) In contrast, the majority of respondents considered that the Eircom commitment comprised of the revised network sharing agreement with Eircom was sufficient to eliminate the second concern that Eircom would be weakened as one of the competitors that would remain in Ireland. The Eircom commitment was not, however, suitable to eliminate the first concern, that is the elimination of Three as an important competitive force.
- (955) Based on the above-mentioned results of the market test, the Commission considered that the commitment package of 19 March 2014 was also unlikely to eliminate entirely the significant impediment to effective competition to which the proposed

⁷¹⁶ Responses to questionnaire Q41, question 29.1.

⁷¹⁷ Response of Imagine to Questionnaire Q41, questions 1.1, 2, 2.1 [ID 3380]; response of Digiweb to Questionnaire Q41, questions 1.1, 2, 2.1 [ID 3412].

⁷¹⁸ Response of Digiweb to Questionnaire Q41, question 28.1 [ID 3412]; response of EAFM to Questionnaire Q41, question 38.1.1 [ID 3522].

⁷¹⁹ Responses to questionnaire Q41, question 38.1.

concentration would give rise. This conclusion was in particular based on the lack of credible interest from market participants in MNO entry which was the main aim of the proposed commitments of 19 March 2014.

- (956) The Commission informed the Notifying Party of the results of the first market test and the Commission's conclusion during a meeting on 1 April 2014.

9.5. The MVNO entry commitment of 8 April 2014

9.5.1. Description of the proposed commitments

- (957) To address the shortcomings in the commitments of 19 March 2014 identified by the Commission on the basis of the results of the first market test, the Notifying Party offered a revised MVNO entry commitment on 8 April 2014.⁷²⁰
- (958) The revised MVNO entry commitment of 8 April 2014 fundamentally changed the cost structure of any potential MVNO entrant. Under the commitment, Three would sell a fixed amount of the merged entity's network capacity for a fixed price to two MVNO entrants. Hence, each of those entrants would pay a fixed annual fee for access to fixed capacity on the consolidated Three/O2's network, as opposed to paying wholesale access fees per subscriber or per usage ("pay-as-you-go" MVNO model). The main rationale for introducing the fixed price/fixed capacity model was to create a strong incentive for the MVNO entrant to fill its purchased network capacity by aggressively acquiring customers. This is the case as with a fixed committed capacity for the MVNO entrant, its network cost of serving each additional customer would be minimal.
- (959) Under the commitment of 8 April 2014, each of the two MVNO entrants would have to commit to purchasing a minimum of [...] *% of the merged entity's network capacity. Capacity in that commitment was measured in terms of bandwidth (that is, gigabits per second or Gbps for packet switched data traffic and Erlangs for circuit switched voice and SMS traffic) rather than in terms of total data transported (that is, gigabytes or Gb), total voice minutes or total SMSs, as normally the case for pay-as-you-go MVNO model. This would allow the MVNO itself to determine important characteristics of service, such as download speed, similarly to an MNO. The minimum period for which the capacity would have to be purchased was five years. The MVNO entrant would have the right to extend that period for another five years.
- (960) Another change based on the feedback from the first market test was the increase in the number of potential MVNO entrants benefiting from the MVNO commitment from one to two. The Notifying Party continued to commit that it would conclude a capacity agreement with one MVNO upfront, that is to say before it could conclude its merger with O2.
- (961) The price terms and other conditions of the agreements between the upfront MVNO and the second MVNO would largely be left to commercial negotiations between Three and the interested entrants. However, some parameters for these negotiations would apply. In particular, a discounted payment glide path would apply for the first four years. This means that the full annual cost to use the minimum capacity of the merged entity's network capacity would only be payable after year 4. This would

⁷²⁰ The other elements of the commitments, that is the MNO commitment and the Eircom commitment, continued to be part of the package but were not formally submitted by the Notifying Party at that point.

reflect the lower customer base of the MVNO entrant in the first years of operations, and hence reduce some of the commercial risk that the MVNO would face in concluding a capacity agreement with Three.

- (962) The revised MVNO entry commitment of 8 April 2014 also set out the services which would be included in the fixed annual fee paid by an MVNO entrant for its capacity allocation. These services included location data for emergency call delivery services, location data and real-time call detail records for legal interception services, and wholesale access that allows the MVNO to offer value-added services to its customers. The commitment also specified additional services, which would not be included in the fixed annual fee and which would be subject to separate negotiations with Three. These services included emergency call delivery and legal intercept services proper, numbering by the MVNO and assistance with the integration of the MVNO in the Irish number portability database. An agreement for these services would follow market standard terms for wholesale access.
- (963) The option for either of the two MVNO entrants to transition into becoming a fourth MNO in Ireland on the basis of spectrum and other assets was retained in the commitments of 8 April 2014. However, the feedback that the Commission had received on the suitability of those assets was already sufficient for its assessment and for the improvements that were needed. The MNO option was therefore not put to the second market test.
- (964) The same applied for the Eircom commitment, in respect of which the responses to the first market test were also sufficiently clear to allow the Commission to make a final assessment of its suitability and sufficiency.
- (965) For these reasons, only the revised MVNO commitment was market tested with MVNOs, MNOs and national telecom regulators. The market test was launched on 8 April 2014.

9.5.2. *Commission's analysis*

- (966) The results of the second market test of 8 April 2014 were more positive than the results of the first market test.
- (967) A majority of respondents gave positive feedback on the new fixed capacity-based model that would be offered to MVNOs in Ireland. These respondents confirmed that the model gives a strong incentive for the MVNO to acquire customers aggressively. They confirmed that this was due to the fact that they would have to purchase a fixed capacity with limited to no marginal network cost for acquiring new customers. A majority of respondents also confirmed that the proposed capacity model was a viable business model for MVNOs to pursue in Ireland. The market test thus confirmed that the proposed capacity model as such was suitable to attract strong MVNO competitors with economic incentives that are similar to those of MNOs, and that it was realistic and viable for operators to pursue in Ireland.
- (968) This being said, the results of the market test did not provide the Commission with sufficient certainty that the total capacity that the two MVNOs would commit to purchase from Three would be sufficient to allow those two MVNOs to replace the important competitive constraint that Three currently exerts in Ireland. Three estimated that a [...] *% capacity share would amount to an approximately [5–10] *% share of subscribers in Ireland, depending on usage. Taking that metric, the Commission assessed whether there was sufficient certainty that the total capacity that the two MVNOs would commit to would be sufficiently comparable to that of

Three. The Commission assessed this in a dynamic manner, taking account of the growth that the two MVNOs could achieve in the next years.

- (969) Based on the results of the market test, the Commission did not consider that the total capacity to which the two MVNOs would be prepared to commit would be sufficient in this sense. Respondents to the market test indicated that the minimum capacity to which they would have to commit, was not the main issue in their commercial considerations. For them, the key consideration related to the price they would have to pay for the committed capacity. These respondents explained that the commitment to purchase a fixed amount of capacity still represented a considerable investment risk for the MVNO that would be borne by the MVNO. The discounted glide path for the payments that Three introduced in the MVNO commitment was not considered sufficient to alleviate those concerns. Hence, the Commission identified a significant risk that the proposed commitment would not lead to the emergence of two MVNOs taking up the offered capacity, especially since the second MVNO was not a condition for the merger.
- (970) The respondents to the second market test also stressed the need for further improvements to the content of the MVNO commitment.
- (971) A majority of respondents indicated that it should be clear in the commitments that the capacity that is available for the MVNOs is "future-proof" in that it evolves dynamically with any changes to the capacity of the merged entity. This was considered important as the consumption of data, which uses more capacity than that of voice calls and SMS, is likely to grow significantly in Ireland in the future.
- (972) Some respondents, including those that expressed a clear interest in the MVNO commitment, also stressed the need to ensure that the MVNOs that would enter on this basis can obtain access to the additional services⁷²¹ that they need to operate as an MVNO in Ireland. These services include legal intercept, emergency call forwarding and other services. Number portability was also identified as a key issue. Respondents explained that ensuring that an MVNO can comply with the number portability obligations in Ireland, can take considerable time. They indicated that the commitments should be clear as to the assistance that Three should provide to facilitate this process. In general, there is a need for a commitment from Three to provide all technical assistance that an MVNO may reasonably require to commercially launch and operate as MVNO in Ireland.
- (973) The Commission agreed with these comments. The Commission communicated these results of the market test and its assessment to the Notifying Party during a meeting held on 16 April 2014. In particular, the Commission informed the Notifying Party that:
- (a) The market test revealed a genuine and credible interest from operators to offer MVNO services under the proposed fixed capacity model in Ireland.
 - (b) The structure of the commitments needed to be such that there would be sufficient certainty that the capacity to which these MVNOs would commit would allow them to replace the important competitive constraint that Three has been exerting in Ireland.

⁷²¹ That is, services related to wholesale access to the merged entity's network and not specifically included in the fixed annual fee.

- (c) The commitments needed to ensure that interested MVNOs would have sufficient access to additional services they may reasonably require to operate as an MVNO in Ireland, and to any technical assistance they may need from Three to make their commercial launch and operations in Ireland effective.

9.6. Final Commitments

9.6.1. Description of the proposed commitments

(974) The Notifying Party submitted the Final Commitments on 6 May 2014.⁷²²

(975) The Final Commitments comprise the following three elements:

- (a) The final MVNO entry commitment that reflects the results of both market tests in this case, and the Commission's assessment of those results;
- (b) The final MNO commitment consisting of spectrum divestment that is consistent with the revised MVNO commitment, and contains further improvements made after the first and second market tests;
- (c) The final Eircom commitment that reflects the Commission's assessment of the first commitments (recitals (916)-(932)), as well as the results of the first market test (recital (954)).

9.6.1.1. Description of the final MVNO entry commitment

(976) The final MVNO entry commitment consists of the following:

- (a) The Notifying Party commits to conclude a capacity agreement with one MVNO that is approved by the Commission before the Notifying Party can implement its proposed concentration with O2 ("Upfront MVNO"). That capacity agreement will be concluded for a minimum capacity of [...] *% of the merged entity's network in consideration for a fixed price.
- (b) At the time of entry into the capacity agreement, the Notifying Party commits to give the Upfront MVNO the option to acquire the "48" brand (a sub-brand of O2) and/ or the "48" customer base at [...] *. Three/ O2 will use its reasonable efforts to achieve an effective transfer of such customers.
- (c) The Notifying Party commits to conclude a second capacity agreement with a second MVNO ("Second MVNO") for a minimum capacity of [...] *% of the merged entity's network capacity.
- (d) The Notifying Party commits to enter into good faith negotiations for a capacity agreement with undertakings interested in becoming a Second MVNO during a period of [...] * ("the MVNO Entry Period"). If no capacity agreement with the Second MVNO is reached within the MVNO Entry Period, during a period of [...] * a divestiture trustee will offer a minimum capacity allocation of [...] *% to potential MVNO entrants, on behalf of Three, at a (capacity unit) price which is not less than [...] *% of the pro rata price payable under the terms of the capacity agreement with the Upfront MVNO in years 1-5. Should

⁷²² The Commitments of 6 May 2014 were signed by Hutchison 3G UK Holdings Limited. On 22 May 2014, following the restructuring, as set out in recital (1) and footnote 5, the Notifying Party submitted revised Commitments that are substantially the same as the Commitments of 6 May 2014, but that were also signed by the newly-created holding company for the Irish business, Hutchison 3G Ireland Holdings Limited.

no Second MVNO emerge after those two stages, during an additional period of [...] the divestiture trustee will offer that capacity at [...] to potential candidates, including the Upfront MVNO.

- (e) The conclusion of the capacity agreement with the Second MVNO, and the approval of the Commission of the Second MVNO and the capacity agreement, is a condition for the Notifying Party's merger with O2.
- (f) In order to attract entry by the Upfront MVNO and the Second MVNO, the capacity and the price that the Upfront MVNO pays for the capacity can be set in accordance with a reasonable glide path for the first five years of the capacity agreement.
- (g) The duration of the two capacity agreements is five years, with an option for each of the Upfront MVNO and the Second MVNO to extend the term of the agreement for another five years, under a capacity-based MVNO model.
- (h) The Upfront MVNO and the Second MVNO may increase their initial capacity allocation up to a maximum cap of 15% of the merged entity's network capacity each (that is, a total 30% cap for two MVNOs) during the initial or the second five year term. This increase will be subject to payment of a proportionately increased fixed annual fee. This increase of the initial capacity allocation will be available after the merged entity's network reaches its total envisaged capacity⁷²³ which is forecast to be achieved in 2018.
- (i) The capacity that is available for both the Upfront MVNO and the Second MVNO is calculated as a proportion of the merged entity's total network capacity. The merged entity's expected network capacity in 2018 is taken as the reference. If this reference level is exceeded (that is, the merged entity's network capacity grows), each of the two MVNO entrants will have an option to increase its available capacity accordingly, in consideration for paying a proportionately increased fixed annual fee (during the initial five year term) or an incremental fee calculated by reference to any increase in network operating costs (during the second five year term).
- (j) Capacity is expressed in terms of bandwidth, that is Gbps for packet switched traffic (data) and Erlangs for circuit switched traffic (voice and SMS).
- (k) The final MVNO entry commitment specifies the services which will be included in the fixed annual fee paid by the Upfront MVNO and the Second MVNO to Three, as well as additional services which will be subject to separate payment and negotiations upon reasonable requests of these MVNOs.

9.6.1.2. Description of the final MNO commitment

(977) The final MNO commitment consists of the following:

- (a) In order to enable either the Upfront MVNO or the Second MVNO (but not both) to develop into an MNO, the Notifying Party commits to divest the following spectrum ("the Divestment Spectrum") to one of these two MVNOs:
 - (i) Two blocks of 1800 MHz spectrum and two blocks of 2100 MHz spectrum. The Notifying Party offers to divest this spectrum at [...].

⁷²³ That is, [...] Gbps for data traffic and [...] Erlangs for voice and SMS traffic.

- (ii) One block of 900 MHz spectrum. The Notifying Party offers to divest this spectrum at [...]*
- (b) The Upfront MVNO or the Second MVNO can obtain this spectrum if it demonstrates to the Monitoring Trustee that it has a concrete business plan to use the Divestment Spectrum to become an MNO within a reasonable period of time following the exercise of the spectrum option.
- (c) The option to acquire the Divestment Spectrum is valid for a full period of 10 years commencing on 1 January 2016.
- (d) Should one of the MVNOs purchase the Divestment Spectrum, it is free to roll-out a network according to its own commercial objectives.
- (e) After exercising the spectrum option and before becoming an MNO, the Upfront MVNO or the Second MVNO can continue to benefit from its respective capacity agreement with the merged entity for a reasonable transitional period agreed between the merged entity and the purchasing MVNO by reference to its business plan to become an MNO.
- (f) If the spectrum option is exercised, the Notifying Party shall clear and transfer the Divestment Spectrum within six months from the date of the exercise of the spectrum option.
- (g) If the purchasing MVNO seeks to transfer the rights of use to the Divestment Spectrum to a third party, Three shall have the right to re-acquire it at the same price as the purchasing MVNO has paid to Three.

9.6.1.3. Description of the final Eircom commitment

- (978) The final Eircom commitment consists of an offer by the Notifying Party to Eircom to amend the existing Mosaic network sharing agreement as described in recital (901). The amendments offered are set out in a Memorandum of Understanding attached to the Final Commitments. The Final Commitments do not provide for a spectrum transfer to Eircom.

9.6.2. *Commission's analysis of the Final Commitments*

- (979) The Commission recalls that it has found that without remedies, the merger between Three and O2 would significantly impede effective competition in a substantial part of the internal market within the meaning of Article 2 of the Merger Regulation on the retail mobile telecommunications services market for the following reasons:
 - (a) The proposed concentration would remove Three as an important competitive force (Section 7.5).
 - (b) The proposed concentration would reduce Eircom's ability to compete due to termination or frustration of the Mosaic network sharing agreement (Section 7.6).
- (980) In addition, the Commission found indications of potential anti-competitive effects on the wholesale market for call origination and network access (but left the conclusion open) for the following reasons:
 - (a) The proposed concentration would have reduced the number of network hosts for MVNOs in Ireland, thus potentially resulting in less attractive network access terms for those MVNOs (Section 7.7).

- (b) The proposed concentration would have weakened Eircom as network host for MVNOs in Ireland due to termination or frustration of the Mosaic network sharing agreement (Section 7.7).

(981) In the following sections (Sections 9.6.2.1 to 9.6.2.3), 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 likely 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 markets and market players in Ireland, including the prominence of network sharing agreements between MNOs in Ireland as a means to achieve national coverage in the face of a high proportion of rural population and low population density, and also the specific information obtained from the responses to the two market tests and through follow-up contacts with possible market entrants in Ireland as to the effectiveness of various business models in the context of the Irish markets.

9.6.2.1. The removal of Three as an important competitive force on the Irish retail mobile telecommunications services market

The final MVNO entry commitment

(982) The effect of the Final Commitments is that they allow for the entry of two MVNOs that operate under a capacity-model and purchase a significant minimum of capacity from Three.

(983) The Commission agrees with the Notifying Party and the respondents to the market tests that this model significantly changes the competitive strength and incentives of any potential MVNO entrant. With this model, Three will sell a fixed amount of the merged entity's network capacity for a fixed price to two MVNO entrants. Each entrant will pay a fixed annual fee for access to fixed capacity on the consolidated merger entity's network, as opposed to paying wholesale access fees per subscriber or per usage ("pay-as-you-go" MVNO model). The main effect of introducing the fixed price/fixed capacity model is that it will create a strong incentive for the MVNO entrant to fill its purchased network capacity by aggressively acquiring customers. This is the case since with a fixed committed capacity and payment, the MVNO entrant's network cost of serving each additional customer will be minimal. In this manner, the incentives of the two MVNO entrants will become very similar to those of traditional MNOs.

(984) Another benefit of the proposed fixed capacity/price model, where capacity is measured in terms of bandwidth, is that it allows MVNO entrants full flexibility to devise their retail offerings to subscribers. Hence, each of the two MVNO entrants will obtain a dedicated "pipe" on the merged entity's network for each of voice and data traffic.⁷²⁴ The MVNO entrants will be free to use this allocated bandwidth to offer packages with any combination of mobile services that is most profitable to fill this pre-committed capacity.

⁷²⁴ For example, the minimum capacity allocation of [...] % will provide the Upfront MVNO with dedicated bandwidth "pipes" of [...] Gbps for data traffic and [...] Erlangs for voice and SMS traffic (that is, [...] % of the merged entity's reference network capacity of [...] Gbps and [...] Erlangs).

- (985) The Commission also considers that the final MVNO entry commitment is suitable and sufficient to enable the MVNOs to replace the important competitive constraint that Three currently exerts on the Irish retail mobile telecommunications services market. Together, the MVNOs will commit to purchasing a minimum of [...] % of the merged entity's network capacity. Calculations from the Notifying Party demonstrate that this will allow those MVNOs together to achieve an approximately 8% subscriber share on the Irish retail mobile telecommunications services market. This comes very close to the 10% subscriber share that Three currently has on the market. The availability to the MVNO entrants of a reasonable capacity glide path reflects the gradual growth in the number of customers that an MVNO entrant is likely to have. Given the incentives for the MVNO entrants to increase their subscriber base with attractive offers, the Commission considers that the two MVNOs will be able to sufficiently replicate the competition that Three has brought to the Irish market.
- (986) Calculations from the Notifying Party demonstrate that the capacity that will be made available to the MVNO entrants will be sufficient to replace the usage patterns of the current Three subscribers. This means that the MVNO entrants have the possibility to replicate Three's AYCE data offers and other attractive tariff plans.
- (987) If the Upfront MVNO or the Second MVNO requires additional capacity during the initial or the subsequent five year term, it may increase its initial capacity allocation up to a maximum cap of 15% of the merged entity's network capacity. This increase will be subject to payment of a proportionately increased fixed annual fee. Hence, the two MVNO entrants will have the possibility of acquiring in total up to 30% of the merged entity's network capacity. Based on the Notifying Party's calculations, this will be sufficient to serve approximately 15% of subscribers in Ireland, which is 1.5 times larger than the current subscriber share of Three.
- (988) As concerns future adjustments of the proposed capacity agreements depending on market conditions (the so-called "future-proofing"), the Final Commitments make clear that the network capacity that will be made available to the Upfront MVNO and the Second MVNO will be calculated as a proportion of the merged entity's total network capacity as it evolves over time. The MVNO entrants will thus have the option to increase their capacity allocation in proportion to any increase in the size of the merged entity's capacity by paying a proportionately increased fixed annual fee (in the initial five year term) or an incremental fee calculated based on the increase in network operating costs (in the second five year term). The Commission considers that this adequately addresses the submissions from respondents to the market test that the capacity agreements should be flexible enough to allow the Upfront and Second MVNOs to operate in an environment, where data consumption is likely to increase in the future.
- (989) Furthermore, the Upfront MVNO will have the option to acquire the customer base of the "48" brand (a sub-brand of O2), which currently comprises approximately [50,000–75,000]* customers representing a market share of over [0–5]* %. Such a customer transfer will enable an Upfront MVNO to enhance viability of its operations and to achieve scale quicker.
- (990) Finally, the market tests that the Commission conducted have revealed sufficient interest from operators in concluding a capacity agreement with Three. The interested parties are prepared to commit to the significant capacity volumes included in the Final Commitments over a five-year period.

- (991) The Commission concludes that the structure of the Final Commitments is such, that there is sufficient certainty that the Final Commitments can be implemented effectively.
- (992) In particular, a commitment to offer MVNO entry upfront, that is to say before Three is able to close its acquisition of O2, gives Three clear incentives to agree on a price and other key terms that are sufficient for the Upfront MVNO to commit to the minimum of [...] *% of the merged entity's network capacity that is reserved for it.
- (993) Offering to conclude a capacity agreement with a Second MVNO as a condition for the proposed concentration between Three and O2 also brings sufficient certainty that this part of the Final Commitments will be implemented. If this condition is not fulfilled, the merger will have to be un-wound. This also gives Three incentives to agree on a price and other key terms that are attractive enough to result in a timely and sufficient MVNO entry under a second capacity agreement.
- (994) The Final Commitments provide for effective safeguards that Three will negotiate in good faith with a Second MVNO with a view to entering into a capacity agreement. Three has an explicit obligation to do so over a time period of [...] * which the Commission considers to be sufficiently long for Three to conclude such a capacity agreement, and short enough to provide the Commission with sufficient certainty that a Second MVNO can enter the Irish retail mobile telecommunications services market in the short term. If Three fails to find a Second MVNO in that period, a Divestiture Trustee will have the exclusive mandate to negotiate and conclude a capacity agreement with a Second MVNO on Three's behalf, and on attractive terms and conditions.⁷²⁵ Even if those terms and conditions cannot attract a Second MVNO, a final offering process at [...] * will start which can include, in addition to other candidates, the Upfront MVNO that has already pre-committed to a [...] *% minimum network capacity. There is therefore sufficient certainty that the second lot of minimum capacity of [...] *% of the merged entity's network will also be sold to an MVNO.
- (995) The Final Commitments adequately address the submissions made during the market test that the Upfront MVNO and the Second MVNO require access to additional services and technical assistance from Three to commercially launch and operate as an MVNO in Ireland.
- (996) The upfront nature of the first MVNO agreement, which precludes the Notifying Party from concluding its merger with O2 until an agreement is concluded with an Upfront MVNO, should provide the Notifying Party with strong incentives to ensure that the Upfront MVNO has access to all additional services and technical assistance that it may reasonably require to ensure that its commercial launch as an MVNO in Ireland is timely and effective.
- (997) As regards the Second MVNO, the Final Commitments make clear that Three must enter into good faith negotiations for all the additional services that the Second MVNO may reasonably require to operate as an MVNO in Ireland, as well as for any technical assistance that it may reasonably require to ensure its timely and effective entry in Ireland. All of these negotiations will be overseen by the Commission, with

⁷²⁵ That is, at a (capacity unit) price which is not less than [...] *% of the pro rata price payable under the terms of the capacity agreement with the Upfront MVNO in years 1-5.

the assistance of a Monitoring Trustee. In any subsequent phase of the divestiture process, the Divestiture Trustee has the clear mandate to offer these additional services and technical assistance on behalf of the Notifying Party, and at attractive terms and conditions.⁷²⁶

- (998) Overall, the Commission considers that the proposed capacity agreements with the Upfront and Second MVNOs are suitable and sufficient to remove the likely significant impediment to effective competition that the Commission considers would arise from the removal of Three as an important competitive force on the Irish retail mobile telecommunications services market. The Commission can also conclude with the requisite degree of certainty that the final MVNO entry commitment is likely to be implemented effectively.

The final MNO commitment

- (999) The final MNO commitment allows either the Upfront MVNO or the Second MVNO to purchase five blocks of different spectrum and to become a fourth MNO in Ireland. Either of these MVNOs will have ten years to decide whether or not to make use of this option. The effect of this final MNO commitment is two-fold.
- (1000) First, it significantly lowers the barriers to entry for a fourth MNO in Ireland in the longer term. Spectrum is one of the key barriers to entry on the Irish retail and wholesale markets for mobile telecommunications services. The Final Commitments provide that the MVNO that makes use of the MVNO entry commitment can obtain five blocks of spectrum: four blocks in the 1800 MHz and 2100 MHz bands, and one block in the highly valuable 900 MHz band.
- (1001) The Commission notes that the composition of the Divestment Spectrum is attractive. In particular, it includes spectrum both in the sub-1 GHz and supra-1 GHz bands, which are important for network coverage and capacity, respectively. Moreover, the Divestment Spectrum includes, in total, five blocks of spectrum (2x25 MHz). In comparison, Three was able to achieve its current market position with a lower amount of spectrum pre-MBSA spectrum allocation (2x15 MHz) and only a slightly higher amount of spectrum post-MBSA spectrum allocation (2x30 MHz until July 2015).
- (1002) Second, the option for either the Upfront MVNO or the Second MVNO to acquire this Divestment Spectrum bolsters the effectiveness of the final MVNO entry commitment. In particular, this option allows these MVNOs to have a credible exit strategy should they wish to opt out from their respective capacity agreements. This can become particularly relevant if their capacity agreements reach the end of the 10-year term to which the Notifying Party has committed.
- (1003) By the time that the MVNO decides to use the spectrum option, which may be at any point within ten years for both the Upfront MVNO and the Second MVNO, that MVNO will have had all the means to build a sizeable subscriber base and commercial operations in Ireland. At that point in time, the MVNO that holds both such a subscriber base and potentially five blocks of spectrum, should be a credible and attractive network sharing and spectrum pooling partner for any of the three MNOs that are active in Ireland. The MVNO that purchases the Divestment

⁷²⁶ As mentioned in recital (976), the divestiture trustee may ultimately offer the minimum capacity allocation of [...] *% at [...] *.

Spectrum is free to pick its network sharing or spectrum pooling partner⁷²⁷ and to roll-out a network according to its own commercial objectives.

- (1004) After exercising the spectrum option and before becoming an MNO, the operator could still benefit from its capacity agreement with Three for a reasonable transitional period. This transitional period will be determined by reference to the operator's business plan to become an MNO in Ireland.
- (1005) Finally, the Commission notes that the MNO commitment and this decision are without prejudice to ComReg's statutory powers, notably those in relation to effective use of spectrum.
- (1006) On this basis, the Commission concludes that the final MNO commitment bolsters the effectiveness of the final MVNO entry commitment and allows for the possible entry of a fourth MNO in Ireland in the longer term.
- 9.6.2.2. The weakening of Eircom as a competitor on the Irish retail mobile telecommunications services market
- (1007) The Commission recalls that it has identified concerns regarding Eircom's reduced ability to compete post-merger due to the likely termination or frustration of the Mosaic agreement. This concern would be addressed by restoring and potentially enhancing Eircom's ability to compete compared to the situation without the merger.
- (1008) The Eircom commitment in the Final Commitments consists of an offer by the Notifying Party to conclude a strengthened network sharing agreement with Eircom, as described in recital (901). A draft Memorandum of Understanding that Three and Eircom can sign to this effect is attached to the Final Commitments.
- (1009) The Commission notes that Vodafone⁷²⁸ has stated that it is very keen to have a network sharing relationship with another MNO in Ireland. This was also confirmed by Vodafone's internal documents. The Commission considers that the offer to conclude a strengthened network sharing agreement with Eircom ensures that Eircom continues to have options to network share as it did pre-merger. Pre-merger Eircom had the option to share with one of the two operators in the market which have national coverage, that is Vodafone or O2. The commitment of the Notifying Party to offer Eircom the possibility of having a network sharing agreement ensures that Eircom will continue to have two options, Vodafone or the merged entity. Eircom is free to contract with its preferred network sharing partner.
- (1010) On this basis, the Eircom commitment will give Eircom sufficient options to sustain its competitive position with an attractive network sharing deal with either Three on the basis of the network sharing offer or with Vodafone on a fully commercial basis.
- (1011) The Final Commitments, including the draft Memorandum of Understanding attached to them, ensure that, as an option available to Eircom, the revised network sharing agreement with Three will allow Eircom to preserve and potentially increase its current competitive strength in the Irish retail mobile telecommunications services market. In particular, this agreement will allow Eircom to reach the targets that it has

⁷²⁷ The Final Commitments explicitly state that the MVNO entrants are allowed to enter into network sharing, spectrum pooling or roaming agreements (Clause 16 of the Final Commitments).

⁷²⁸ Vodafone Response (II) to the SO, 3 March 2014 [ID 3090].

set for the network coverage and quality that it requires to remain an effective competitor on the Irish retail mobile telecommunications services market.

- (1012) The revised network sharing agreement also envisages several improvements to the existing Mosaic network sharing agreement. In particular: [...]*
- (1013) The revised network sharing agreement would involve a change [...]*
- (1014) With respect to network sharing, the Memorandum of Understanding proposed by the Notifying Party in the Final Commitments is essentially the same as the document negotiated between Three and Eircom at the end of 2013 and beginning of 2014.⁷²⁹ The fact that Eircom was prepared to sign that document in January 2014 provides strong evidence that the revised network sharing agreement is workable and is likely to give Eircom with sufficient ability to compete post-merger.
- (1015) The offer for a network sharing agreement stands until 1 September 2014. The Commission considers this period to be sufficient for Eircom to decide whether to conclude a network sharing agreement with either the merged entity or with Vodafone.
- (1016) The offer of a revised network agreement also contains a number of safeguards to address the concerns that were expressed by some suppliers of fibre that the network sharing agreement would allow Eircom to strengthen its position as a fibre supplier by exclusively serving the shared Three/O2/Eircom network. These concerns related to foreclosure of competing suppliers in the related market for the provision of wholesale leased lines in Ireland. The following safeguard provisions have been included: [...]*
- (1017) The Commission considers that these elements of the Eircom commitment are suitable and sufficient to address the concerns that the network sharing agreement could create anticompetitive effects in the related market for the provision of wholesale leased lines in Ireland.
- (1018) The Final Commitments do not provide for an offer to transfer spectrum to Eircom. This is in line with the fact that, as explained in Section 7.6.2.2, the Commission no longer has concerns that the post-merger spectrum imbalance is likely to result in anticompetitive effects in this case. Eircom is likely to remain a viable competitor in Ireland with the spectrum it has available. In particular, as explained in Section 7.6.2.2 and recitals (928)-(929), Eircom has sufficient spectrum to provide competitive services and already has spare capacity today.
- (1019) The Commission also notes that Eircom has other strengths which give it a sufficient ability to compete in the retail mobile telecommunications services market. Eircom is the fixed incumbent operator, the market leader in fixed telecommunications in Ireland, with a valuable fibre network which gives it a competitive advantage in the provision of backhaul services for its mobile activities. In addition, Eircom is favourably placed in being able to leverage its position in the fixed market to cross-sell triple and quadruple play bundles to Vodafone customers. The Commission understands that triple and quadruple play bundles will be an important part of the market in the future in Ireland. Finally, Eircom has 20% of the mobile telecommunications market and was the first operator to launch LTE in Ireland.

⁷²⁹ The only key differences between the two documents are the exclusion of spectrum transfer to Eircom (recital (1018)) and the addition of new safeguards regarding procurement of fibre (recital (1016)).

- (1020) Under these circumstances, the Commission concludes that a transfer of spectrum to Eircom would not be necessary to preserve Eircom's current competitive incentives and its strength as a competitor on the Irish retail mobile telecommunications services market.
- (1021) The Commission concludes that the final Eircom commitment is suitable and sufficient to eliminate its concerns on the potential weakening of Eircom as an effective competitor on the Irish retail mobile telecommunications services market.

9.6.2.3. The Irish wholesale market for call origination and network access

- (1022) The potential negative effects of the merger on the Irish wholesale market for call origination and network access arise both from the reduction in the number of hosts for MVNOs and the likely weakening of Eircom post-merger. The Final Commitments address these concerns in the following ways.
- (1023) First, the Final Commitments provide conditions for two new MVNOs to enter in Ireland. The market test confirmed that the terms of the wholesale access under the MVNO entry commitment are attractive and considerably better than those offered by Three pre-merger. While the Final Commitments do not fix all of the main commercial parameters of wholesale access, notably price, they provide for one entrant being upfront and the other being a condition for the merger. This is likely to incentivise the Notifying Party to offer sufficiently attractive terms to entice MVNO entry. Such terms would contribute to the viability of the MVNO entrants.
- (1024) Furthermore, the Final Commitments ensure that Eircom has means to develop into a viable third MVNO host. Currently Eircom is impaired in its provision of MVNO hosting services due to its lack of nation-wide network coverage. The Eircom commitment will address this disadvantage. [...]*
- (1025) In addition, the Final Commitments ensure that Eircom has greater certainty of becoming a credible MVNO host and within a shorter timeframe than would be the case under the current Mosaic agreement. [...]*
- (1026) Therefore, the Commission considers that by ensuring attractive wholesale access to two new MVNOs and by enabling Eircom to become a credible MVNO host the Final Commitments address any potential concerns on the Irish wholesale market for call origination and network access.

9.6.3. *Conclusion on the Final Commitments*

- (1027) The Commission concludes that the aggregate effect of all the elements of the Final Commitments will be to remove the identified competition concerns on the retail mobile telecommunications services market, as well as any potential concerns on the wholesale market for call origination and network access in Ireland.

9.7. Conclusion

(1028) In the light of all the preceding considerations the Commission concludes that, subject to full compliance with the Final Commitments given by the Notifying Party, the merger will not significantly impede effective competition in the internal market or a substantial part thereof. The merger 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 Annex III to this Decision.

10. CONDITIONS AND OBLIGATIONS

(1029) 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.

(1030) The fulfilment of the measures that give 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.

(1031) In accordance with the basic distinction described in recital (1030) as regards conditions and obligations, this Decision should be made conditional on the full compliance by the Notifying Party with Sections B, C (with the exception of paragraph 7), D (with the exception of paragraph 12) and E, as well as Annex 1, of the commitments submitted by the Notifying Party on 22 May 2014. All other Sections of the commitments should be obligations within the meaning of Article 8(2) of the Merger Regulation. The full text of the commitments is attached as Annex III to this Decision and forms an integral part thereof.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby Hutchison 3G Ireland Holdings Limited acquires sole control of Telefónica Ireland Limited within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004 is hereby declared compatible with the internal market and the EEA Agreement.

Article 2

Article 1 is subject to compliance by Hutchison 3G UK Holdings Limited and Hutchison 3G Ireland Holdings Limited with the conditions set out in Sections B, C (with the exception of paragraph 7), D (with the exception of paragraph 12), E and Annex 1 to Annex III.

Article 3

Hutchison 3G UK Holdings Limited and Hutchison 3G Ireland Holdings Limited shall comply with the obligations set out in Sections A, C paragraph 7, D paragraph 12, F, G, H and Annex 2 to Annex III.

Article 4

This Decision is addressed to:

Hutchison 3G UK Holdings Limited
Star House
20 Grenfell Road
Maidenhead
Berkshire
SL6 1EH
United Kingdom

and

Hutchison 3G Ireland Holdings Limited
Hutchison House
5 Hester Road
Battersea
London SW11 4AN
United Kingdom

Done at Brussels, 28.5.2014

For the Commission

(Signed)

Joaquín ALMUNIA

Vice-President

11. ANNEXES

ANNEX I: THE COMMISSION'S QUANTITATIVE ANALYSIS

ANNEX II: EVALUATION OF NOTIFYING PARTY'S STUDIES

ANNEX III: COMMITMENTS TO THE EUROPEAN UNION

ANNEX I: THE COMMISSION'S QUANTITATIVE ANALYSIS

Contents

- 1. NON-TECHNICAL SUMMARY..... 4**

- 2. FRAMEWORK FOR THE QUANTITATIVE ASSESSMENT: BERTRAND-NASH COMPETITION IN DIFFERENTIATED PRODUCTS..... 5**
 - 2.1. The model of Bertrand-Nash competition in differentiated products 5
 - 2.2. Measures of merger effects 7
 - 2.2.1. Gross Upward Pricing Pressure Index (GUPPI) 7
 - 2.2.2. Compensating Marginal Cost Reduction (CMCR) 7
 - 2.2.3. Indicative price rises and merger simulation 8
 - 2.3. Efficiencies..... 9
 - 2.4. Calibration of demand parameters from diversion ratios 9

- 3. DATA INPUTS AND CONSTRUCTION OF DIVERSION RATIOS..... 9**
 - 3.1. Construction of diversion ratios..... 10
 - 3.2. Margins 11
 - 3.3. Pre-merger demand measure: new and retained subscribers 12
 - 3.4. ARPU as price measure 13

- 4. THE PRELIMINARY RESULTS IN THE SO 13**
 - 4.1. Multi-segment UPP analysis (ignoring rival reactions) 13
 - 4.2. Merger simulation accounting for rival reactions 15

- 5. THE NOTIFYING PARTY’S ARGUMENTS AND THEIR ASSESSMENT 17**
 - 5.1. The use of MNP data to derive diversion ratios 18
 - 5.2. Aggregate demand elasticity 19
 - 5.3. Measure for contestable pre-paid customers 20
 - 5.4. Arguments about factors that might reduce price effects 21

6. THE COMMISSION’S RESULTS FROM THE DIVERSION RATIO BASED APPROACH
24

6.1. UPP analysis 25

6.2. Merger simulation accounting for rival reactions 27

7. CONCLUSIONS..... 30

REFERENCES..... 31

1. NON-TECHNICAL SUMMARY

- (1) The Commission has carried out a quantitative assessment of the likely price effects resulting from the elimination of horizontal competition between Three and O2. This assessment is described in Section 7.5.7 of the Decision and is presented in more detail in the present Annex I.
- (2) The Notifying Party has also submitted a number of economic studies. On the basis of these studies the Notifying Party claims that the Commission's quantitative assessment is inappropriate and unreliable and that anti-competitive effects from the elimination of competition between the Parties are offset by consumer benefits arising from efficiencies. These studies are addressed in Section 7.5.7.3 of the Decision and Annex II. The Commission does not consider that these studies establish that its quantitative analysis is inappropriate and unreliable as it considers these studies to be uninformative for the assessment of the case.
- (3) In the following, the Commission first sets out in Section 2 the analytical framework to model competition on which it relies for its quantitative assessment. This framework is the so-called Bertrand-Nash competition where firms set prices in a differentiated products market to maximise their own profits.
- (4) The rest of the Annex turns to the implementation of the Commission's quantitative approach for this Decision. The quantitative analysis is based 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 an upward pricing pressure ("UPP") analysis 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. The analysis is performed at the segment level, treating each segment-firm combination (for example Three pre-paid) as one product. Two scenarios are considered: a baseline scenario, which is based on contribution margins, and a sensitivity scenario, which uses conservative estimate of the incremental margin.
- (5) The Commission first explains the data inputs and the construction of diversion ratios from MNP data used for the approach (Section 3).
- (6) Section 4 summarises the preliminary results in the SO. The overall segment wide effects presented in the SO were, depending on the assumptions on margins used, around 9-12% in pre-paid, 7-11% in post-paid and 3-5% in business. The market wide predicted price effect in the SO was 7-10%.
- (7) Section 5 presents the Notifying Party's arguments in the Response to the SO regarding the diversion ratio based approach and the Commission's assessment of these arguments. Arguments by the Notifying Party regarding quality competition and customer inertia as well as the Notifying Party's price concentration analysis are discussed in Sections 7.5.7.3 and 7.10.1 of the Decision and Annex II.
- (8) Section 6 presents the Commission's quantitative assessment after taking account of certain arguments in the Notifying Party's Response to the SO (in relation to cross-segment switching, contestable pre-paid subscribers and aggregate demand reductions in response to price changes). The Commission's quantitative approach based on diversion ratios and margins predicts average price increases across all

MNOs in the post-paid private segment of 6% and market wide average price increases across all voice segments of 4% in the baseline case. The corresponding predicted average price effects are 4% in the post-paid private segment and 3% across all voice segments. This indicates that the merger would lead to significant price increases in voice segments.

(9) Finally, section 7 concludes.

2. FRAMEWORK FOR THE QUANTITATIVE ASSESSMENT: BERTRAND-NASH COMPETITION IN DIFFERENTIATED PRODUCTS

(10) The Commission's quantitative assessment relies 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.

(11) The Notifying Party's argues that this framework is inappropriate and unreliable for the assessment of the present case as it ignores the quality competition and repositioning, and the existence of customer inertia. The Commission disagrees with these arguments for the reasons explained in Section 7.5.7.3 and Annex II. The Notifying Party also argues that the framework is inappropriate and unreliable because it ignores the disappearance of the O2 brand post-merger. The Commission also disagrees with this argument as explained in Section 5.4. of this Annex.

(12) In the following, the Commission therefore sets out the standard framework of Bertrand-Nash competition in differentiated products used in its quantitative analysis. 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 Nash Equilibrium. As a result of the merger, Three and O2's products are brought under common ownership. This eliminates competition between these products and generates incentive for the merged entity to raise price. Post-merger, Three 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 Three increases the price of one of its tariffs it would lose subscribers. A number of these lost subscribers would go to the O2 tariffs. After the merger, when Three controls the O2 tariffs, these subscribers would no longer be lost. The more there is substitution between Three and O2 tariffs, 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 Parties and on the degree of competition from rivals.

(13) 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 shown to the required standard).

2.1. The model of Bertrand-Nash competition in differentiated products

(14) 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:

$$\Pi_f(p) = \sum_{j \in J^f} (p_j - mc_j) q_j(p).$$

(15) 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.

(16) 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 $f_j(p_j, p_{-j})$):

$$f_j(p_j, p_{-j}) = q_j(p) + \sum_{j' \in J^f} (p_{j'} - mc_{j'}) \frac{\partial q_{j'}(p)}{\partial p_j},$$

(17) 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.

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.

(18) If the first-order conditions hold simultaneously for each product j (across all firms) then the price vector p defines the Nash-Bertrand equilibrium of the overall market. In matrix notation, the first order conditions for the equilibrium can be expressed as:

$$q(p) + \left(\Theta \bullet \nabla(p)' \right) (p - mc) = 0,$$

(19) where $q(p)$ is a $J \times 1$ vector with the demand for each product, demand vector, $\nabla(p) \equiv \partial q(p) / \partial p'$ 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. 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 other products but not that on rival products.

(20) Inverting this equation yields an expression of the Bertrand-Nash equilibrium price vector:

$$p = mc - \left(\Theta \bullet \nabla(p)' \right)^{-1} q(p).$$

(21) The first element is the marginal cost component of the equilibrium price, while the second is the mark-up. The mark-up 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

- (22) As the merger brings together the products of the Parties, it changes the ownership matrix. The post-merger ownership matrix Θ^{post} reflects the fact that post-merger all Three and O2 tariffs are controlled by the merged entity. Elements of this matrix which refer to the interaction between Three and O2 tariffs and which took the value 0 pre-merger are changed to 1.
- (23) This change in ownership implies that the first order conditions for a Nash equilibrium no longer hold for the merged entity's products at the pre-merger price.

2.2.1. Gross Upward Pricing Pressure Index (GUPPI)

- (24) 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.
- (25) 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 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.

- (26) To compute the GUPPI one therefore only requires information on the diversion ratios between the Parties products, and the 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.
- (27) 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)

- (28) 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 Nash equilibrium post-merger.¹ This required level of compensating marginal cost can be computed as:

¹ See also Werden (1996).

$$mc^{comp} = p^{pre} + \left(\Theta^{post} \bullet \nabla(p^{pre})' \right)^{-1} q(p^{pre}).$$

(29) The compensating marginal cost reduction for product j is then

$$CMCR_j = mc_j - mc_j^{comp} \text{ per subscriber.}$$

(30) As 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 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.

(31) Although GUPPIs are sometimes used to approximate required marginal cost efficiencies, CMCRs provide a better indication for the required marginal cost reductions, because they take account of the fact that a marginal cost reduction of product j will, via an increase in the margin of product j , also have a feedback effect on the first order conditions for other products. This effect is ignored in approximations based on GUPPI. As the informational requirements for both approaches are the same, CMCRs are to be preferred as a benchmark for required marginal cost efficiencies.

2.2.3. Indicative price rises and merger simulation

(32) Within this framework one can also compute predicted post-merger prices. To do this one needs to find the post-merger prices at which the post-merger first order conditions (which take account of the post-merger ownership matrix) are satisfied, that means one needs to find a price vector p^{post} that solves the following post-merger first order equations.

$$q(p^{post}) + \left(\Theta^{post} \bullet \nabla(p^{post})' \right) (p^{post} - mc) = 0 \quad (1)$$

(33) With linear demand, these 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.

2.2.3.1. Indicative price rise

(34) 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

(35) 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 Nash Equilibrium for all firms, that is the price which satisfies the above equation (1) for all products of all firms simultaneously.

- (36) 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*

- (37) The effect of quantified marginal cost efficiencies can be accounted for within this framework. To do so, one needs to replace the marginal cost estimate in the equation (1) with the marginal cost after efficiencies.
- (38) Quality improvements may also be accounted for. 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.²

2.4. **Calibration of demand parameters from diversion ratios**

- (39) In order to use this framework to derive quantitative measures of the effect of the merger, one needs to obtain the relevant parameters of the model and, in particular, the relevant parameters of demand.
- (40) If one has empirical measures of diversion ratios, the demand parameters can be calibrated from based on these diversion ratios in combination with observed margins and quantities.
- (41) The diversion ratio from product j to i is defined as:

$$DR_{ji} = -\frac{\partial q_i}{\partial p_j} \bigg/ \frac{\partial q_j}{\partial p_j}.$$

- (42) With this definition, the pre-merger first-order condition for product j can be rewritten as:

$$q_j \bigg/ \frac{\partial q_j}{\partial p_j} - \sum_{i \in J^j} (p_i - mc_i) DR_{ji} = 0.$$

- (43) 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.
- (44) 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. **DATA INPUTS AND CONSTRUCTION OF DIVERSION RATIOS**

- (45) The quantitative 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; and (ii) MNP data which is collected when customers port their mobile number from one operator to another. The Commission has obtained further data from MNOs on the extent of within firm switching between segments and the

² Willig (2011).

Parties' estimates on avoidable CAPEX and OPEX expenditure when the subscriber base in the hypothetical case of a substantial reduction of subscribers.

3.1. Construction of diversion ratios

- (46) 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 are the number of number 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.
- (47) For the Parties, these diversion ratios were reported in the Form CO. However, they do not allow one to identify the destination segment of the port (that is 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 each MNO's MNP database on "port in" requests. Port in requests related to requests initiated by the new MNO for customers who sign up with the new MNO and request that their number is ported from the old MNO. In such cases, the new MNO asks the customer about his account type (pre- or post-paid) at his old MNO as this information facilitates the porting process. Information on such port in requests of the new MNO is used to split the port out diversion ratio from a given segment of firm j to firm i by destination segment. The split is performed in proportion to the number of port in requests as reported by the new MNO.³
- (48) This approach results in "port out" diversion ratios from each segment of each firm to each segment of each other firm. The Commission has then rescaled these diversion ratios to account for estimated "within firm" diversion ratios. The latter are based on information obtained from the Parties regarding within firm switching between segments. This results in an estimated full port out diversion ratio matrix which accounts for switching across segments (both within the same firm and between firms).⁴
- (49) The Commission could also construct a corresponding port in diversion matrix from the MNP data and from information on within firm switching. However, the Commission considers that diversion ratios based on port in information are likely to understate the competitive importance of Three. Port in diversion ratios from operator A to B are constructed as the number of subscribers porting their number from A to B as a percentage of all subscribers porting their number to B from other

³ In theory, the number of port in request of the new MNO should equal the number of corresponding port out request of the old MNO (that is the number of transitions should be the same), so that one should be able to compute port out diversion ratios entirely from detailed port in MNP data. However, in practice the total figures can differ. This would imply inconsistencies in the denominator used for computing port out diversion ratios. The described approach of splitting port out diversion ratios by destination segment (based on port in information) avoids such inconsistencies.

⁴ Throughout the approach the Commission assumed that there was no switching between consumer and business segments. This approach was taken because changes in the type of customer are likely to be driven by changes in personal circumstances (for example, employment contract) rather than by prices offered. For this reason the Commission has also deleted observations from the port in MNP data information on "multi-line" accounts which likely related to business customers.

MNOs. As Three's customer base is small, a low port in diversion ratio from Three to O2 will reflect Three's current low market share. However, as Three's customer base has been continuously growing, this understates the competitive constraint it exerts on O2 and other MNOs. The longer run competitive constraint exerted by Three would be better proxied by its long run market share which is not reflected in the port in diversion ratios. On the other hand, port out diversion ratios do not suffer from the same problem because the number of customers switching from Three to O2 as a percentage of customers leaving Three provides a correct measure of the extent to which Three exerts a constraint on O2 relative to the constraint Three exerts on other MNOs. For this reason, the Commission uses port out diversion ratios as primary measure to proxy the degree of substitution between firms and segments.

- (50) 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. 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

3.2. Margins

- (51) The Commission has computed two margin measures.⁶ For the baseline specifications it computes 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.
- (52) The Notifying Party argues that the contribution margins overstate the true incremental margins as they do not include additional network and other costs that would be affected following substantial variations in subscriber numbers. The Commission has therefore also examined the sensitivity of its conclusions when a conservative estimate of incremental margins is constructed along the lines proposed by the Notifying Party in the spreadsheet underlying its Response to the Article

⁵ The analysis in the SO considered that diversion ratios both within segment and across segment can proxy consumer reactions to price changes. Following comments by the Notifying Party in the Response to the SO, 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 that price based switching within segment is well approximated by within segment diversion ratios from the MNP data (see Section 3.4 below).

⁶ In the response to the Article 6(1)(c) Decision, the Notifying Party argued that the use of average margins overstates the margins of contestable customers which are likely to be more "fickle" than the average. This would imply that the results are either overstated or unreliable. The Commission invited the Notifying Party to substantiate this claim (See, for example, the Commission's email to the Notifying Party of 10 December 2013 [ID1789]. The issue had been previously discussed with the Notifying Party's representatives in a meeting on 22 November 2013). However, the Notifying Party has not done so. The Commission therefore regards average margins to be the appropriate basis for its assessment.

⁷ Termination revenues from incoming calls are not paid for by an MNO's own subscriber. They can therefore be interpreted as a negative marginal cost.

6(1)(c) Decision.⁸ The estimated incremental margin takes the Parties estimates of additional avoidable costs resulting from a significant change in subscriber numbers (absent the transaction). For Three, the Commission has used the Notifying Party's estimate for a 50% reduction in subscribers (which roughly amounts to five percentage points subscriber share). The resulting estimates of Three's incremental costs per subscriber is conservatively high, as the corresponding figure for a 10% variation in subscribers (which would still correspond to a variation in subscriber share around one percentage point) would imply much lower additional incremental costs.

- (53) For O2, the Commission used the corresponding figure for a 10% reduction (roughly corresponding to a variation of three percentage points of subscriber share). The estimate of additional incremental costs based on a variation of 50% of O2's subscribers would be similar but would imply an implausibly large change in subscriber share.
- (54) To allocate additional incremental costs across segments, the Commission has used revenues following the Notifying Party's approach in the spreadsheet underlying its Response to the Article 6(1)(c) Decision. As at least some incremental cost positions are likely driven by traffic rather than revenues this likely leads to an overstatement of incremental costs in voice segments, which are the segments for which the quantitative analysis (and hence an understatement of results) is performed.
- (55) For other MNOs the Commission has assumed that additional incremental costs are equal to the average of the Parties.
- (56) The conservative estimate of incremental margins for the sensitivity analysis is then obtained by subtracting the additional incremental costs per subscriber from the contribution margin per subscriber for each MNO and segment.⁹

3.3. Pre-merger demand measure: new and retained subscribers

- (57) The Commission's approach captures 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 subscriber. To proxy for these customers, the Commission requested segment level information on new subscribers as well as retained subscribers from MNOs.
- (58) For the post-paid private and for the business segment, MNOs were able to provide data on retained subscribers. The measure for the level of demand at pre-merger prices used for these segments is hence the reported number of new and retained subscribers.
- (59) For the pre-paid private segment, the Parties did not provide such data. In the SO, the Commission therefore used the number of new subscribers as measure of the level of demand at pre-merger prices. The Notifying Party criticised this approach in the response to the SO (see Section 5 below). The assessment for this Decision therefore

⁸ Response to Article 6(1)(c) Decision: Parties' UPP computation [ID1412] attached to Email by Thomas Wesseley of 25 November 2013 [ID1411].

⁹ Vodafone considers in its Response to the SO, that the Commission's quantitative approach should take account of (i) lifetime costs of a customer (including handset subsidies) and (ii) network optimisation and incremental capacity costs. The former are included in both margin measures used by the Commission. Estimates of the latter are included in the incremental margins which the Commission uses as a sensitivity scenario.

assumes that in addition to new customers, a fraction of pre-paid customers is retained every month (see Section 5 below).

3.4. ARPU as price measure

- (60) 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.
- (61) This measure provides an estimate of the total revenues paid to an MNO by its own subscribers (either via invoices or as pre-paid top up amounts). It is hence the correct basis to compute percentage increases of the prices paid by consumers.
- (62) 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 by the following considerations. 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.

4. THE PRELIMINARY RESULTS IN THE SO

- (63) The results in this section were presented in the SO. The Notifying Party's arguments in its Response to the SO are presented and assessed in Section 5 then contains the Commission's final results which incorporate some of the points raised by the Notifying Party in its response.
- (64) As MNP data is only available for voice segments, the quantitative analysis is limited to such segments. 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. Results are very similar when data for the first half of 2013 is used instead.

4.1. Multi-segment UPP analysis (ignoring rival reactions)

- (65) Table 1 presents the results of the multi-segment UPP analysis based on "port out" diversion ratios (as a proxy for price bases switching between MNO within and across segment). The analysis uses the calculated diversion ratio matrix to infer price based switching both within segment and across segments.
- (66) For the purpose of the multi-segment UPP analysis, the Commission has ignored that O2 holds a 50% share in the joint venture with Tesco Mobile in both the pre- and the post-merger scenario. If Tesco Mobile was fully or partially attributed to O2, the analysis would predict stronger merger effects.

Table 1. Multi-segment UPP Analysis including cross segment switching

Segment	MNO	Baseline scenario based on contribution margins			Sensitivity scenario based on incremental margins		
		IPR (%)	GUPPI (%)	CMCR (€)	IPR (%)	GUPPI (%)	CMCR (€)
Pre-paid	Three	23.5%	[...]*%	[...]*	16.5%	[...]*%	[...]*
	O2	13.5%	[...]*%	[...]*	9.4%	[...]*%	[...]*
Post-paid /private	Three	10.6%	[...]*%	[...]*	7.0%	[...]*%	[...]*
	O2	8.7%	[...]*%	[...]*	5.8%	[...]*%	[...]*
Business	Three	13.5%	[...]*%	[...]*	8.5%	[...]*%	[...]*
	O2	4.7%	[...]*%	[...]*	2.9%	[...]*%	[...]*

Source Commission calculations based on data provided by O2 and Three.

- (67) The results in the first two columns correspond to the baseline scenario using contribution margins as margin measure. 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 synergies) likely to lead to significant competitive harm. GUPPI measures range from [...]*% for Three in the post-paid private segment to [...]*% for Three in the pre-paid segment. Indicative price increases based on the additional assumption of linear demand are on the order of 9 to 11% in the private post-paid segment and 14 to 24% in private pre-paid. Three is also expected to raise prices very significantly in the business segment by 5 to 14%.
- (68) The compensating marginal cost reductions required to offset the incentives to raise price are in the order of EUR [...]* per subscriber per month in the pre-paid segment, EUR [...]* per subscriber per month in the private post-paid segment and EUR [...]* per subscriber per month in the business segment. In each case the required CMCRs represent a substantial percentage of ARPU and an even more substantial part of margins and implied costs.
- (69) To check the sensitivity of the above results against the use of the margin measure, the last two columns in the table report corresponding results when the conservative estimate of an incremental margin measure is used instead of contribution margins. Whilst price effects in this specification as expected are lower (as a direct consequence of the reduction in margins) the remain substantial with IPRs on the order of 9 to 17% in pre-paid, around 6 to 7% in private post-paid and 3 to 9% in the business segment. Required CMCRs also remain substantial and on the order of EUR [...]* in the pre-paid segment, EUR [...]* in the private post-paid segment and EUR [...]* in the business segment.
- (70) Overall, the Commission provisionally considered in the SO that the multi-segment UPP analysis indicates that the merger would likely lead to significant unilateral price increase by the merged entity (absent significant synergies).¹⁰

¹⁰ In the SO, the Commission also presented results based on port in diversion ratios and based on the average of port in and port out diversion ratios. These results indicated lower price increases for O2 products. However, as explained, port in diversion ratios understate Three's competitive importance as

4.2. Merger simulation accounting for rival reactions

- (71) 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. For the purpose of this exercise, O2's 50% share in the Tesco Mobile joint venture is taken into account and that this share would be transferred to the merged entity.¹¹
- (72) Table 2 reports the predicted equilibrium price increases for each MNO in each of the three voice segments pre-paid, post-paid private and business. The calibration is based on port out diversion ratios. The two main columns correspond to the baseline predictions based on contribution margins and to the sensitivity scenario using the conservative estimated of incremental margins respectively.¹²

they do not reflect the fact that Three is growing through aggressive pricing. For this reason, the Commission considers that the competitive constraint exercised by Three is better proxied by port out diversion ratios.

¹¹ It is assumed that the 50% joint venture share gives O2 50% of Tesco Mobile's profits and also 50% control over Tesco Mobile. As a result, all rows (respectively columns) in the ownership matrix relating to Tesco Mobile products take the value 0.5 in columns (respectively rows) relating to O2 or Tesco Mobile products. This corresponds to the proportional control scenario of a 50% interest in Salop-O'Brian (2000).

¹² In the SO, the Commission also reported results from a scenario in which firms were assumed to ignore that their pricing in one segment also affects demand in other segments. The Commission used these results in the SO to provide an indication of by how much estimated price increases would be understated if price based switching across segment occurs but is not reflected in the first order conditions.

Table 2. Predicted price increases from calibration based merger simulation

Segment	MNO	Contribution margins	Incremental margins
Pre-paid	H3G	33.9%	23.7%
	O2	19.3%	13.5%
	VF	10.1%	7.8%
	EIR	9.7%	7.2%
	TMI	7.9%	5.4%
Post-paid private	H3G	19.3%	12.8%
	O2	11.6%	7.6%
	VF	6.4%	4.2%
	EIR	11.5%	6.0%
	TMI	21.9%	14.8%
Business	H3G	16.8%	10.4%
	O2	6.1%	3.7%
	VF	3.4%	2.6%
	EIR	5.4%	1.2%
Segment averages	Pre-paid	11.7%	8.7%
	Post-paid private	10.6%	6.7%
	Business	4.9%	3.2%
Overall average		9.6%	6.6%

Source Commission calculations based on data provided by Eircom, O2, Tesco Mobile, Three and Vodafone.

- (73) As expected, accounting for rival reactions and for O2's share in the joint venture with Tesco leads to stronger price increases by the merged entity and also significant price increases by rivals. In the baseline scenario based on contribution margins, predicted price increases by the Parties are on the order of 19 to 34% in pre-paid, 12 to 19% in post-paid and 6 to 17% in the business segment. Rivals also react significantly by raising prices by around 10% in the pre-paid segment, 6 to 12% in the post-paid private segment and 3-5% in the business segment.
- (74) Weighted average price increases by segment and overall are reported at the bottom of Table 2. The figure is obtain by multiplying the absolute price increases by the number of subscribers for each segment and MNO and summing across MNOs and segments.
- (75) In the baseline scenario based on contribution margins, the overall average price increase is 12% in the pre-paid segment, 11% in the post-paid private segment and 5% in the business segment. The revenue weighted average across all voice segments is 10%.
- (76) In the sensitivity scenario which uses conservatively estimated incremental margins as margin figures, predicted price effects are, as expected, somewhat lower but remain very substantial (see the second column of Table 4 and Table 5). Predicted segment level percentage price increases are 9% for the pre-paid segment, 7% in the post-paid segment and 3% in the business segment with an overall weighted price increase across the three segments of 7%.

(77) The last column in Table 4 and Table 5 provides an indication of how price effects are underestimated if cross-segment effects are ignored in the sensitivity scenario based on incremental margins. In the post-paid segment and using incremental margins ignoring cross-segment effects leads to an understatement of the segment-wide effect on the order of three percentage points (6.7% vs. 3.9%).

5. THE NOTIFYING PARTY'S ARGUMENTS AND THEIR ASSESSMENT

(78) In the Response to the SO, the Notifying Party argues that the Commission's quantitative approaches are inappropriate for assessing price effects in the present case because they ignore the implications of quality repositioning and quality competition, the disappearance of the O2 brand, and the implications of customer inertia for pricing incentives. The Notifying Party also argues that the results from an empirical price concentration analysis prepared by its economic consultants are robust and more reliable than the results of the Commission's quantitative analyses.¹³

(79) The Commission's assessment of the effect of the disappearance of the O2 brand is discussed in more detail in this section. The Notifying Party's arguments on quality repositioning and competition and on customer inertia will be assessed in section 7.5.7.3 of the Decision and Annex II. The Notifying Party's price concentration analysis will be assessed in Section 7.10.1 of the Decision on claimed scale efficiencies below and in Annex II. As this is explained in these respective sections, the Commission disagrees with the Notifying Party's arguments in the Response to the SO regarding its quantitative analyses.

(80) In addition to these general points the Notifying Party also makes a number of specific points on the Commission's first approach in the Response to the SO. In particular, the Notifying Party argues that the Commission's diversion ratio based analysis has the following methodological flaws:

- (1) According to the Notifying Party, MNP data are not appropriate to calculate diversion ratios. As diversion ratios are a key input of this analysis, results are unreliable.¹⁴
- (2) The model predicts abnormal volume reactions which lead to implausible post-merger equilibria.¹⁵
- (3) The Commission's analysis relies on problematic assumptions about contestable customer basis and is not robust to changes in those assumptions.¹⁶
- (4) The predicted price effects from the approach are not conservative as the approach does not account for reductions in usage, the threat of MNVO entry, product repositioning by rivals, the disappearance of the O2 brand, and countervailing efficiencies.¹⁷

(81) In the following the Commission assesses each these points in detail. In the next section, the Commission then presents revised results which account for those of the

¹³ Response to the SO, Section 4.1.

¹⁴ Response to the SO, Section 4.2.1.

¹⁵ Response to the SO, Section 4.2.3.

¹⁶ Response to the SO, Section 4.2.4.

¹⁷ Response to the SO, Section 4.2.4 and with respect to the disappearance of the O2 brand, Section 4.1.2

Notifying Party's criticisms in the Response to the SO which the Commission considers to be reasonable.

5.1. The use of MNP data to derive diversion ratios

- (82) The Notifying Party's first argument that diversion ratios derived from MNP data are unreliable is as follows. The Notifying Party argues that diversion ratios for the Commission's approach need to reflect price based switching while switching as observed in MNP data in practice reflects many factors other than price. The Notifying Party considers, for example, that switching between segments has an important life-cycle element to it as young customers start with pre-paid and then move on to post-paid as they get older. Inter-segment switches would hence happen independently of price increases.¹⁸ The Notifying Party further notes that price based switching would be inconsistent with bi-directional switching between MNOs in any given period. The safest way to estimated price based diversion ratios would therefore be the use of econometric demand estimation. A comparison between the MNP diversion ratios and the implied diversion ratios from the Commission's logit demand estimation would show large differences between diversion ratios. This would imply that the MNP diversion ratios are unreliable.
- (83) The Commission agrees that it is likely that observed switching between MNOs in the MNP data is not exclusively price based. Nevertheless, the Commission considers that the MNP data which covers actual switching events from each MNO to each other MNO provides reliable information on customer preferences and hence on the relative closeness of substitution between different MNOs. In particular, if one observes a large number of customers porting their number from O2 to Three, then this provides a good indication that Three is a close alternative for O2 customers, even if some of the observed switches are not driven by price changes.¹⁹
- (84) In contrast, diversion ratios derived from econometric estimation of demand, in particular in the simple logit specification which the Notifying Party has chosen for its comparison, are not based on direct switching data and do not necessarily accurately reflect actual switching patterns. It is well known that the simple logit demand model has a very rigid structure which forces implied diversion ratios to be proportional to market shares.²⁰ As long as two products have a positive market share a simple logit demand model would always predict price based switching between the two products, even if the products were in fact very distant substitutes and even if direct data on switching between MNOs such as the MNP data showed that

¹⁸ Response to the SO, Paragraph 528.

¹⁹ Ideally, one would want to observe subscribers' first and second choice of MNO at the point in time when the subscribers decide whether or not to switch MNO. The observation that a customer switches from O2 to Three implies that, at that point in time, Three 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 O2, the fact that the customer is currently with O2 implies that O2 was the customer's first choice when he 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 O2.

²⁰ For example, Davis and Garcés (2010), page 501, explain that "[the simple logit model] *places unrealistic restrictions on substitution patterns. For this reason it is not a recommended model when we are trying to understand actual substitution patterns.*" Meanwhile "[the random coefficients model] *allows the model to predict a greater variety of substitution patterns [and] is an important step forward for many applications – at least compared with [simple logit] model.*"

consumers never switch between these two products.²¹ The Notifying Party's comparison of MNP based diversion ratios with the diversion ratios implied by the simple logit model therefore allow no conclusion on the reliability of diversion ratios derived from MNP data.

- (85) Nevertheless, the Commission agrees that switching across segments in the MNP data (that is switches from a pre-paid tariff to a post-paid private tariff) may be less likely to reflect consumer reactions to price changes than observed switching within segment. This may be because changes across segment may have a life cycle element or may reflect other changes in personal circumstances.²²
- (86) The Commission therefore considers that diversion ratios from MNP data within segment to provide reliable information to infer switching between MNOs within the same segment in response to price changes. As this is less clear for switching across segments, the Commission presents results below which assume that no price based switching from one segment to another occurs while within segment diversion ratios are derived from the MNP data.

5.2. Aggregate demand elasticity

- (87) The Notifying Party's second argument about abnormal volume reactions to price increases is that despite market-wide price increases, the overall level of demand remains unchanged, that is that the Commission's results assumes that market demand is nearly perfectly inelastic. Moreover, the demand for the post-paid private segment increases (because of net switches from the pre-paid to the post-paid segment). According to the Notifying Party, these volume predictions and, therefore, the post-merger equilibria, are implausible. As a result, predicted price increases should not be relied upon.
- (88) The Commission agrees that the results presented in the SO 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. The same approach to construct diversion ratios was taken in by the Notifying Party in the Form CO.²³ It was also the approach used 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 (or at least that the number of consumers that would stop using a mobile phone is negligible).
- (89) It is more plausible, however, that subscribers might change their usage patterns to some extent if the use of mobile phone becomes 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

²¹ The well know shortcoming that the simple logit demand model imposes and overly rigid structure on switching patterns between products is precisely the reason why the Commission does not consider the demand estimates based on the simple logit model as the preferred econometric specification.

²² Moreover, even if switching across segments is price based, the implicit assumption in the approach that the subscribers usage pattern would change from that of an average pre-paid customer to that of an average post-paid private customer (or vice versa) is not unproblematic.

²³ See, in particular Form CO, Tables 23 to 30 following paragraph 422. The fact that the diversion ratios add up to 100% in these tables implies that subscribers are not assumed to leave the market.

²⁴ Commission decision of 12 December 2012 in Case No COMP/M.6497 – *H3G / Orange Austria*

the respective price for such services increase. However, the Commission considers that the reduction in usage following market wide price increase is likely to be rather limited.^{25,26} Nevertheless, the Commission will examine below the effect on predicted price increases if it is assumed that usage will reduce to some extent in reaction to price changes.

5.3. Measure for contestable pre-paid customers

- (90) The Notifying Party's third argument concerns the robustness of the SO's results to changes in the number of contestable pre-paid customers. The Notifying Party considers the Commission's assumption that only new pre-paid customers are contestable in any given month to be problematic as some pre-paid customers will have made a conscious choice to stay with their current provider in any given month. The Notifying Party argues that as pre-paid customers regularly top-up their phones, it is plausible that they evaluate their options regularly, are more price sensitive, and are more willing to switch than post-paid customers.
- (91) The Notifying Party claims that the Commission should have checked the robustness of its analysis to alternative assumptions for retained pre-paid customers. If one were to assume that (in addition to new customers) a further 20% of the existing pre-paid customer base were contestable in each month but decided not to change MNO, then the Commission's approach would produce implausibly high price increases. If one were to assume that 30% or more of existing pre-paid customers were retained in every month, the approach predicts negative price effects. This sensitivity of the results to changes in the assumption regarding retained pre-paid customers lead to the conclusion that the price predictions generated by the approach are unreliable.
- (92) As explained in the SO, the Commission defined the number of contestable pre-paid customers for the UPP analysis as new pre-paid customers of each MNO because the Parties did not provide figures for the number of retained pre-paid customers. The Commission agrees with the Notifying Party that in any given month, some of the existing pre-paid customers of each MNO may have taken an active decision to stay with their current provider after having considered alternative options. Such existing customers who considered changing MNO but ultimately decided not to change should also be considered contestable.
- (93) However, for a number of reasons the Commission disagrees with the Notifying Party's argument that this would imply that the price predictions from the Commission's model are unreliable. First, the Notifying Party's argument that the Commission's results are unreliable relies on assumptions on the number of contestable but retained customers which are unlikely to be reasonable. The Notifying Party's claims are derived from assuming that at least [...] *% of existing pre-paid subscribers are retained every month (that is [...] *% of existing customers

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.

²⁶ An economic study by Lukasz Grybowski and Pedro Pereira based on data for Portugal for 2003/2004 found inelastic price elasticities of the demand for calls of -0.38 and of the demand for messages of -0.28 (Gryzbowski L, and P. Pereira (2008), "The complementarity between calls and messages in mobile telephony", *Information Economics and Policy* 20, 279-287).

are part of the pool of contestable customers in each month but subsequently decide not to change MNO). As new customers represent, on average, [...] % of the existing subscriber base in each month, the Notifying Party's assumption implies that at least [...] % of pre-paid subscribers are contestable in every month. In other words, in any given month at least [...] % of all pre-paid subscribers consider their available tariff options and then either decide to change MNO (in which case they would become new customers of that MNO) or stay with their current MNO. This figure implies that each pre-paid customer is contestable on average at least around once [...]*. The Parties have not provided figures on the number of retained pre-paid customers. However, the Commission considers that the proportion of pre-paid subscribers that actively consider changing in MNO in each month is likely significantly less than [...] %. The Notifying Party's scenario which assumes that [...] % of existing customers are retained and which implies that pre-paid customers consider changing MNO every [...] * generated price increases that are somewhat higher than the results in the SO.²⁷

- (94) Second, even if one accepted the assumption that each pre-paid subscriber is contestable at least once every [...] * months, the Commission notes that the Notifying Party's argument about implausibly high predicted price effects would be mitigated by the Notifying Party's other points of critique. If one accepts that the Notifying Party's argument that price increases will lead to reduced usage and if one accepts that cross-segment switching is unlikely to be related to price changes, then the issue does not arise.²⁸
- (95) Finally, the Notifying Party has not solved the model correctly in the scenarios which it claims generate negative price effects. In the results which the Notifying Party presents for these scenarios implied quantities for some MNO-segment combinations are negative. Deriving correct price predictions of the model for these scenarios would have required the Notifying Party to solve the model subject to the constraint that quantities remain greater or equal to zero. The results on predicted price increases presented by the Notifying Party for these scenarios therefore do not indicate a problem with the model itself. Rather the prediction of negative quantities indicate that the Notifying Party's analysis of the model in these scenarios is incorrect.²⁹

5.4. Arguments about factors that might reduce price effects

- (96) As regards the Notifying Party's argument that the Commission's price predictions are not conservative, the Commission agrees that some of the modifications proposed by the Notifying Party will lead to lower price effects. In particular, reasonable assumptions on the reduction of usage in response to price increase would lead to lower yet still significant predicted price increases as will be discussed below. Regarding entry, the Commission accepts that its quantitative analysis does not account for the effects of entry or of the threat of entry. However, the Commission has assessed entry in Section 7.4 of the Decision. The Commission's position

²⁷ This scenario corresponds to "Run 1" in Figures 21 and 22 of the Response to the SO.

²⁸ The Commission also notes that in the absence of price based switching across segments, the approach with respect to contestable pre-paid customers does not affect price predictions for the post-paid private and the business segment.

²⁹ The Commission notes that none of the results presented by the Commission imply negative post-merger quantities for any MNO-segment combination. Therefore, the predicted price increases reported by the Commission in its scenarios do not suffer from this technical problem.

regarding claimed is that the merger is not likely to lead to a quality improvement relative to the situation absent the merger. Moreover, to account for the Notifying Party's claimed quality improvements in the assessment, the claimed improvements would need to be appropriately quantified which the Notifying Party has not done. This is explained in section [XXX] of the Decision.

- (97) The Notifying Party argues further that the disappearance of the O2 brand implies that the diversion ratios used in the Commission's quantitative analysis would be manifestly incorrect, that the Commission has provided no evidence that the brand disappearance would harm consumers as noted in the SO, and that the Commission cannot simply claim that the consumers are made worse off than implied by the quantitative analysis as a result of the disappearance of the O2 brand. The Notifying Party further argues that competitor brand repositioning post-merger (which is not accounted for in the Commission's approach) would mitigate price effects.³⁰
- (98) In response to these arguments, the Commission notes that the combined entity has a two year transition period for the phase out of the O2 brand. During this period, the merged entity can migrate O2 customers to the Three brand or to a different brand if it chooses to. During this transition period the O2 brand hence does not disappear so the Notifying Party's criticism cannot apply during this period.
- (99) Moreover as explained in the SO, the Commission does not argue that its quantitative assessment in the SO models the price effects accounting for the disappearance of the O2 brand. Rather the Commission considers that the disappearance of the O2 brand, if it has the effects claimed by the Notifying Party of customer losses by Three to Vodafone and Eircom, would imply that consumers lose a valued brand. This would lead to a loss to consumers which would worsen the effect of the transaction relative to the effect predicted by the Commission's quantitative analysis which assumes that the O2 brand continues to exist post-merger. The Commission, therefore, does not commit an error in calculating diversion ratios as claimed by the Notifying Party. Instead the Commission considers that the predicted effects from a standard analysis which assumes that the brand continues to exist under the ownership of the merged entity therefore understate the negative impact of the transaction on consumers once the O2 brand disappears.
- (100) The Commission agrees that if the O2 brand were to disappear immediately following the closing of the transaction (which is not the case) some (potentially many) contestable O2 customers would chose Vodafone or Eircom instead of remaining with the merged entity (all else, and in particular prices, being equal). However, if this effect is as important as the Notifying Party implies³¹ this boost in demand for Vodafone and Eircom provides these rival companies with a unilateral incentives to raise their prices post-merger even in the absence of any price increase by the merged entity.³² In the Commission's view, the resulting price increases by Vodafone and Eircom would, in combination with post-merger price increases by

³⁰ Response to the SO, Section 4.1.2.

³¹ Response to the SO, Paragraph 493, second bullet.

³² In contrast, in the standard approach underlying the Commission's quantitative analysis price reactions by rivals are only a reaction to price increases by the merged entity.

Three, lead to more important segment wide price increases than those implied by Commission's quantitative analyses.³³

- (101) Last, the Commission does not agree with the Notifying Party's argument that price effects of the transaction would be mitigated by product repositioning of either the Parties or their rivals. The Commission considers that brand position 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.³⁴ Moreover, the paper from the economic literature cited by the Notifying Party (which assumes no costs or delays in brand repositioning) notes that the mitigating effect of brand repositioning arises when, following a merger between closest competitors, the merged entity may have an incentive to position its products further apart from one another to cover a broader spectrum of heterogeneous consumers.³⁵ As explained by the Commission, the Parties do not need to be one another's closest competitors for the merger to lead to a loss of an important competitive constraint and the Commission's analysis does not rely on the concept of closest competitors. However, the concept of "closest competitors" does seem to be a necessary (although not sufficient) condition in the economic paper cited by the Notifying Party for the merged entity to have an incentive to reposition its products. It is hence inconsistent with the Notifying Party's argument that the Parties are not one another's closest competitor. Finally, as to rival repositioning, it is not clear what "gap" in the market would be created by the merger that would trigger rivals to reposition their products or brands.
- (102) In light of the above, the Commission considers that predicted price effects from its quantitative analyses which do not explicitly model the phase out of the O2 brand will, all else being equal, understate the effect of the transaction on consumers.

³³ In the framework of the Commission's quantitative approach assuming linear demand, the disappearance of the O2 brand would be equivalent to the price of O2 tariffs being raised (without regard to profit considerations) to such an extent that all contestable customers would chose brands other than O2 so that the demand for O2 is exactly zero. At the predicted price increase for O2 tariffs in the results of the Commission's quantitative analysis the demand for O2 tariffs remains positive, which implies that the implicit price increase that would be equivalent to a disappearance of the O2 brand would be significantly higher. A further (implicit) price increase of the O2 brand would result in price increases by the merged entity's rivals, the Commission considers that the weighted average segment wide price effects accounting for the disappearance of the O2 brand would, in all likelihood, be higher than the price effects predicted by the Commission's analysis (where the segment wide average price effect is calculated using post-merger quantities as weights, that is giving the implicit price of O2 a weight of zero).

³⁴ The Notifying Party sites a single economic paper to support its claim post-merger product repositioning would mitigate price effects: Ghandi, A. Froeb, L. Tschantz, S and Werden, G. (2008): "Post-merger product repositioning" *The Journal of Industrial Economics*, Volume LVI. No.1 pp 49-67. 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. However, even Ghandi et al (page 66) note that if product repositioning is expensive and time consuming, even relatively low cost of doing so will likely prevent product repositioning; and that the significance of post-merger product repositioning must be judged on the facts of each case.

³⁵ Ghandi et al. (page 66).

Moreover, the Commission considers that product repositioning is unlikely to mitigate the effects of the merger predicted by its quantitative approach.³⁶

6. THE COMMISSION'S RESULTS FROM THE DIVERSION RATIO BASED APPROACH

- (103) The Commission has examined the implications for the results from its first quantitative approach of the following points of arguments by the Notifying Party: (i) the argument that a certain proportion of an MNO's existing pre-paid base is actively decides to stay with the MNO and therefore should be considered as contestable; (ii) the argument that customer switching from one segment to another is less likely to be price driven; and (iii) the argument that the analysis should account for a reduction in usage following market wide price increases.
- (104) Regarding the number of retained pre-paid customers, the Commission notes that the Parties have not provided figures on how frequently existing customers actively consider switching MNO but subsequently decide to stay with their current MNO. Absent such quantification, the Commission considers it reasonable to assume that, on average, an MNO's existing pre-paid customer base is actively retained [...]*, that is, [...]* (or around [...]*%) of the existing pre-paid customer base is retained every month. As new customers account, on average, to [...]*% of the existing pre-paid base each month, this implies that each pre-paid subscriber is contestable, on average, once [...]*,³⁷ while, on average, [...]* of contestable pre-paid customers actively decide to stay with their current MNO. The number of contestable that chose each MNO in a given month (that is the MNO's new and retained pre-paid customers) is hence computed as the MNO's new pre-paid customers in a month plus [...]* of the MNO's existing pre-paid subscriber base in the analysis below.
- (105) 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.³⁸ 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 on consumers' preferences over different MNOs and hence provide a good basis to infer consumer switching following price increases within segment.
- (106) To account for the possibility that segment or market wide price increases affect usage, the Commission has further assumed a diversion ratio of 20% to an outside good which implies that aggregate demand in the calibrations is no longer (near) 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.³⁹ While this is unlikely, the Commission considers this approach to proxy the effect of a reduction in usage to market wide price increases.

³⁶ The Commission's assessment of the Parties arguments in this respect are not specific to the quantitative approach used. Therefore, the conclusion applies for the interpretation of the results of both quantitative approaches by the Commission.

³⁷ This is computed as [...]*.

³⁸ Technically this amounts to setting cross-segment diversion ratios from the diversion ratio matrix used in the SO to zero and rescaling the within segment diversion ratios so that they add up to 100%.

³⁹ The (within segment) diversion ratios between Three and O2 in the resulting analysis (with zero cross segment diversions) range between [...]*% and [...]*% across the three segments. In the literal interpretation, a 20% of diversion ratio to an outside [...]*.

6.1. UPP analysis

- (107) Table 3 reports the results of introducing these modifications in the Commission's UPP analysis of diversion ratios and margins. The table gives IPRs by the Parties by segment predicted by a UPP analysis which assumes no reactions from other MNOs (and assumes linear demand). The table also provides compensating marginal cost reductions ("CMCRs"). The top panel 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, such as variations in subscriber numbers that do affect OPEX or CAPEX expenditure. The bottom panel gives results for the sensitivity scenario which accounts for additional incremental OPEX and CAPEX cost savings which the Parties would expect from a substantial reduction in subscriber numbers post-merger.
- (108) The different columns introduce the modifications discussed above. Column (1) corresponds to the results in the SO.⁴⁰ Column (2) increases the measure of contestable pre-paid customers per month by one twelfth of the existing subscriber base and also removes cross-segment switching. Column (3) introduces, in addition, a diversion ratio of 20% to the outside good. The differences across specifications are summarised at the very top of the Table.

⁴⁰ There is a slight discrepancy to the exact figures reported in the SO. This is due to a small mistake in the aggregation of data under the brand "48" (a sub-brand of O2) with the data of O2. This mistake was spotted and corrected by the Notifying Party in the data room.

Table 3. Revised UPP results

Specification		(1)	(2)	(3)			
Cross segment switching		yes	no	no			
Contestable pre-paid customer adjustment		no	yes	yes			
Outside good diversion ratio		0%	0%	20%			
(b) Baseline based on contribution margins							
Segment	MNO	IPR (%)	CMCR (€)	IPR (%)	CMCR (€)	IPR (%)	CMCR (€)
Pre-paid	H3G	23.0%	[...]*	21.1%	[...]*	16.2%	[...]*
	O2	13.0%	[...]*	6.3%	[...]*	4.7%	[...]*
Post-paid private	H3G	10.5%	[...]*	8.6%	[...]*	6.1%	[...]*
	O2	8.7%	[...]*	9.0%	[...]*	6.8%	[...]*
Business	H3G	13.5%	[...]*	13.5%	[...]*	10.2%	[...]*
	O2	4.7%	[...]*	4.7%	[...]*	3.5%	[...]*
(b) Sensitivity based on incremental margins							
Segment	MNO	IPR (%)	CMCR (€)	IPR (%)	CMCR (€)	IPR (%)	CMCR (€)
Pre-paid	H3G	15.9%	[...]*	15.2%	[...]*	11.6%	[...]*
	O2	9.0%	[...]*	4.6%	[...]*	3.4%	[...]*
Post-paid private	H3G	7.0%	[...]*	5.8%	[...]*	4.1%	[...]*
	O2	5.8%	[...]*	6.2%	[...]*	4.7%	[...]*
Business	H3G	8.5%	[...]*	8.5%	[...]*	6.4%	[...]*
	O2	2.9%	[...]*	2.9%	[...]*	2.1%	[...]*

Source: Commission calculations based on data provided by O2 and Three.

- (109) The two modifications have only a relatively minor net effect on the results presented in the SO, as can be seen from a comparison of specification (2) with specification (1). Predicted unilateral price increases by the Parties after the first two modifications are implemented are now 21% for Three and 6% for O2 in the pre-paid segment, around 9% for both Parties in the post-paid private segment and 5 to 13% in the business segment in the baseline case. In the sensitivity scenario which uses lower incremental margins, the level of price effects is lower but again comparable to the equivalent results in the SO.
- (110) The introduction of a 20% diversion ratio to an outside good (as a proxy for usage reductions following price increases) in specification (3) reduces unilateral incentives to increase price as measured by the UPP analysis somewhat as expected.⁴¹ In the baseline scenarios, the predicted unilateral price increases by the Parties (ignoring

⁴¹ A 20% diversion ratio to an outside good scales down diversion ratios between the Parties by a factor 0.8.

rival reactions) are 16% for Three and 5% for O2 in pre-paid, 6 to 7% for both Parties in post-paid private, and 4 to 10% in the business segment.

- (111) In the sensitivity scenario based on incremental margins for substantial variations in subscriber numbers, the predicted price effect for the Parties from a UPP analysis with a 20% diversion to the outside good are 3 to 12% in pre-paid, 4 to 5% in post-paid private and 2 to 6% in the business segment.
- (112) Compensating marginal cost reductions (in Euros per month per additional subscriber) required to exactly offset the merged entity's incentive to increase prices are also reduced compared to those presented in the SO but to a relatively minor extent. The reduction is largest for O2's CMCR in the pre-paid segment but the difference is relatively small in other cases. In specification (3) which includes the modifications discussed above CMCRs range from EUR [...] in the pre-paid segment, EUR [...] in the post-paid private segment and EUR [...] in the business segment. Such CMCRs represent a significant proportion of ARPU which are on the order of EUR [...] per month in pre-paid and EUR [...] per month in the post-paid private and the business segment.

6.2. Merger simulation accounting for rival reactions

- (113) Table 4 reports segment and market wide average price increases when rival equilibrium reactions are accounted for. The table has the same structure as Table 3: the top panel reports results for the baseline scenario and the bottom panel for the sensitivity scenario based on incremental margins; the columns correspond to the different modifications in response to the Parties comments which are introduced subsequently. In response to unilateral price increases by the merged entity, rival MNOs will also raise their prices although to a lesser extent. The segment and market wide average price effects are computed as weighted averages over all MNOs in the predicted new equilibrium. These average price effects are computed based on detailed price predictions for each MNO in Table 5 and Table 6 and use revenue weights.

Table 4. Revised calibrated merger simulation results: average price effects

Specification	(1)	(2)	(3)
Cross segment switching	yes	no	no
Contestable pre-paid customer adjustment	no	yes	yes
Diversion to outside good	0%	0%	20%
(a) Baseline case based on contribution margins			
Pre-paid (private)	13.5%	5.3%	3.2%
Post-paid private	11.1%	9.3%	5.7%
Business	5.2%	5.2%	3.2%
Average private	12.1%	6.6%	4.0%
Total average	10.5%	6.4%	3.9%
(b) Sensitivity scenario based on incremental margins			
Pre-paid (private)	9.7%	4.0%	2.4%
Post-paid private	7.1%	6.4%	3.9%
Business	3.4%	3.4%	2.0%
Average private	8.2%	4.8%	2.9%
Total average	7.1%	4.6%	2.8%

Source Commission calculations based on data provided by Eircom, O2, Tesco Mobile, Three and Vodafone.

Table 5. Revised calibrated merger simulation results: detailed results on price effects for baseline scenario using contribution margins

Specification		(1)	(2)	(3)
Segment	MNO			
Pre-paid	H3G	33.4%	27.2%	19.0%
	O2	18.5%	8.4%	5.5%
	VF	10.1%	3.2%	1.6%
	EIR	9.8%	3.2%	1.6%
	TMI	7.9%	3.6%	2.3%
Post-paid private	H3G	19.2%	14.1%	8.5%
	O2	11.6%	11.1%	7.6%
	VF	6.4%	4.9%	2.4%
	EIR	11.6%	8.9%	4.3%
	TMI	21.9%	20.3%	12.2%
Business	H3G	16.8%	16.8%	11.4%
	O2	6.1%	6.1%	4.0%
	VF	3.4%	3.4%	1.8%
	EIR	5.4%	5.4%	2.6%

Source Commission calculations based on data provided by Eircom, O2, Tesco Mobile, Three and Vodafone.

Table 6. Revised calibrated merger simulation results: detailed results on price effects for sensitivity scenario using incremental margins

Specification		(1)	(2)	(3)
Segment	MNO			
Pre-paid	H3G	23.2%	19.7%	13.7%
	O2	12.8%	6.1%	4.0%
	VF	7.9%	2.6%	1.3%
	EIR	7.3%	2.6%	1.3%
	TMI	5.4%	2.5%	1.6%
Post-paid private	H3G	12.7%	9.8%	5.8%
	O2	7.6%	7.6%	5.2%
	VF	4.3%	3.6%	1.8%
	EIR	6.1%	5.6%	2.7%
	TMI	14.8%	14.7%	8.7%
Business	H3G	10.4%	10.4%	7.1%
	O2	3.7%	3.7%	2.5%
	VF	2.6%	2.6%	1.3%
	EIR	1.2%	1.2%	0.6%

Source Commission calculations based on data provided by Eircom, O2, Tesco Mobile, Three and Vodafone.

- (114) The cumulative introduction of the first two modifications in Specification (2) leads to lower predicted average price effects than those reported in the SO. This is, in particular, because the assumption of no priced based switching across segments reduces equilibrium reactions by rivals to price increases by the merged entity. In the baseline scenario and including the first two modifications, segment wide predicted price increases are 5% for pre-paid, 9% for post-paid private and 5% for business. The average over the two segments for private consumers is 7%. The market wide average including the business segment is 6%. In the sensitivity scenario using incremental margins, the corresponding figures are 4% in pre-paid, 6% in post-paid private (overall 5% for private consumers) and 3% in business with a market wide average of 5%.
- (115) Allowing, in addition for a reduction in usage (as proxied by a 20% diversion to an outside good) results, in the baseline scenario, in a 3% average price increase in pre-paid, a 6% average price increase in post-paid private (overall 4% for all private consumers) and a market wide average (including a 3% increase in the business segment) of 4%. In the sensitivity scenario, the average increases are 2% in pre-paid, 4% in post-paid private (3% for private consumers overall) and 2% in business leading to a 3% market wide increase.
- (116) With segment and market wide price increases, one can also approximate the aggregate elasticity implied by the assumption of a 20% diversion to the outside good.⁴² In the baseline scenario, the approximate implied elasticity is [-0.5 to 0]* for the post-paid private segment and [-0.5 to 0]* in the other segments and overall. In the sensitivity scenario, the 20% diversion of an outside good implies an approximate elasticity of [-0.5 to 0]* for pre-paid, [-1 to -0.5]* for post-paid private and [-0.5 to

⁴² This is approximated by the percentage overall quantity change at the segment or overall (not reported) divided by the corresponding average price increase reported above.

0]* for business. The approximate elasticity overall as well as for the two private consumer segments is [0 to 0.5]*.

- (117) As explained, the Commission considers that the diversion to an outside good proxy for possible reductions in usage following general price increases. Interpreted as a reduction of usage, the approximate aggregate elasticities of [-1 to 0]* in the analysis above correspond to a reduction of usage 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 reactions to be a reasonable.
- (118) Overall, the three modifications introduced to account for those of the criticisms by the Notifying Party which the Commission considers to be reasonable reduce the predicted price effects from the Commission's first quantitative approach relative to the results presented in the SO. However, the predicted price increases from the analysis remain significant after applying the three modifications: The predicted segment wide average price increases are highest in the post-paid private segment where the Parties have the strongest position, at 6% (respectively 4%) in the baseline scenario (respectively in the sensitivity scenario), The corresponding predicted market wide average price increase is 4% (respectively 3%). The analysis also continues to predict significant price increases by the Parties.

7. CONCLUSIONS

- (119) The Commission has carried out a quantitative assessment of the likely price effects resulting from the elimination of horizontal competition between Three and O2.
- (120) After adjustments to reflect certain arguments by the Notifying Party in the Response to the SO, the Commission's quantitative approach based on diversion ratios and margins predicts average price increases across all MNOs in the post-paid private segment of 6% and market wide average price increases across all voice segments of 4% in the baseline case using contribution margins as margin measure. In the sensitivity scenario based on incremental margins, the corresponding predicted average price effects are 4% in the post-paid private segment and 3% across all voice segments.
- (121) Overall, the Commission's quantitative assessment indicates that the merger would lead to significant price increases in voice segments.

REFERENCES

Davis, P. and E. Garcés, (2010): *Quantitative Techniques for Competition and Antitrust Analysis*, Princeton University Press, Princeton and Oxford.

Willig, R. (2011): "Unilateral Competitive Effects of Mergers: Upward Pricing Pressure, Product Quality, and Other Extensions" *Review of Industrial Organization* Vol. 39, pp 19-38.

ANNEX II: EVALUATION OF NOTIFYING PARTY'S STUDIES

Contents

ANNEX II: EVALUATION OF NOTIFYING PARTY'S STUDIES 1

Introduction and Structure of the Annex..... 3

PART I: ASSESSMENT OF THE NOTIFYING PARTY'S PRICE CONCENTRATION STUDY 4

The Notifying Party's claims in the Price Concentration Study 4

The Commission's assessment of the Notifying Party's analysis in the SO 5

The Notifying Party's arguments on the Price Concentration Analysis in the Response to the SO and the Commission's assessment 7

Conclusion..... 21

PART II: ASSESSMENT OF THE CUSTOMER INERTIA MODEL 22

The Notifying Party's assumptions and conclusions from the customer inertia model ("CIM") 22

Further technical observations on the consumer inertia model (CIM) in the SO and the Commission's assessment in light of the Notifying Party's response to the SO 22

PART III: ASSESSMENT OF THE QUALITY COMPETITION AND REPOSITIONING THEORETICAL MODEL 26

Summary of the Notifying Party's VPD model and the Notifying Party's claims derived from its model..... 26

The Notifying Party's claims do not hold in an alternative standard equilibrium VPD model 27

Conclusion 29

Introduction and Structure of the Annex

- (1) This annex provides further details regarding the assessment by the Commission of three economic studies submitted by the Notifying Party.
- (2) Part I of the annex elaborates on the Commission's assessment, in Section 7.10.1 of the Decision, of the Notifying Party's price concentration study ("PCS") which, according to the Notifying Party shows that in small countries, scale efficiencies of a four to three merger between MNOs would outweigh competitive harm.¹
- (3) Part II provide further technical comments on the Notifying Party's customer inertia model ("CIM") which is discussed in Section 7.5.7.3 of the Decision and which, according to the Notifying Party, would underpin its price concentration study and would demonstrate that the Commission's quantitative assessment is inappropriate.²
- (4) Part II concerns the Notifying Party's vertical product differentiation model ("VPD model") on quality competition and repositioning which, according to the Notifying Party uses to argue that the merger would be pro-competitive and that the Commission's quantitative assessment is inappropriate.³ This VPD model and associated arguments are assessed in Section 7.5.7.3 of the Decision. Part II of this Annex contains a detailed description of the Notifying Party's model and presents a simple alternative illustrative VPD model which shows that the Notifying Party's claims need not hold even under favourable assumptions to the Parties. This alternative illustrative model is referred to in Section 7.5.7.3. of the Decision.

¹ Compass Lexecon: "Price Concentration Study," 11 November 2013, [Ref: 131111] [ID 1244]; Compass Lexecon "Response to CET Queries on CL's Price-Concentration Study," 20 December 2013, [Ref: 131220] [ID 1935]; Compass Lexecon "Comments on SO's assessment of the Notifying Part's price concentration analysis," 17 February 2014 at Annex 9 of the Response to the SO, [Ref: 032605] [ID 3327].

² Compass Lexecon: "Modelling the structural impact of a merger in a market with customer inertia and large fixed costs" of 20 December 2013, [Ref: 129206] [ID 1933].

³ Compass Lexecon: "Horizontal Merger Effects with Quality Competition and Repositioning", 26 November 2013, [Ref: 131126] [ID 1449] and Kalmus, P., Kamat, V. and V. Kumar (2013) "Mergers with repositioning and investments in quality" Paper presented by Compass Lexecon on behalf of Three, [Ref: 131125] [ID 1448].

(5)

PART I: ASSESSMENT OF THE NOTIFYING PARTY'S PRICE CONCENTRATION STUDY

- (6) The Notifying Party presented an econometric PCS using ARPU data for 27 European countries. According to this study ARPU in “small” countries with four or more MNOs is higher than in small countries with three or fewer MNOs. The Notifying Party argues that this is consistent with its view that the benefit of increased economies of scale resulting from a four to three merger would outweigh the effect of a decrease in the intensity of competition in a small country such as Ireland. This Annex provides details of the Commission's assessment of the Notifying Party's price concentration analysis which is summarised in Section 7.10.1 of the Decision.

The Notifying Party's claims in the Price Concentration Study

- (7) The PCS uses annual data from Quantum for the period 2000 to 2012 on operator revenues, subscriber numbers, and number of MNOs from 27 European countries.⁴
- (8) The PCS classifies countries as "small scale" if the subscriber base is below 20 million in the country in the given year. The "large scale" sample includes country-year combinations with a country-wide subscriber base above 40 million. The econometric analysis has been conducted separately for small and large markets.
- (9) The econometric model aims to explain the observed variation in ARPU across countries and time as a function of relevant factors, such as:
- (1) The number of MNOs in the market;
 - (2) GDP (to control for the difference in wealth across countries and which could have an effect in the level of ARPU);
 - (3) A set of variables to control for differences in consumption patterns (as higher ARPUs may be the result of more intensive usage), in particular share of pre-paid subscription in the market; the share of business customers; and broadband penetration rates;
 - (4) Time fixed effects to control for decreasing ARPUs over time in most countries.
- (10) The Notifying Party argues that the results of their econometric analysis indicate that:
- (1) In "small scale" countries the number of MNOs has a positive impact on ARPU supporting the hypothesis that in small scale countries the economies of scale effect outweighs the competition effect.
 - (2) In "large scale" countries the number of MNOs has a negative impact on ARPU indicating that the competition effect is larger than the economies of scale effect.

⁴ Quantum is a specialised supplier of market data and research from the telecom and media industries.

- (11) The Notifying Party further argues that their econometric results imply that a four-to-three merger in the Republic of Ireland (a small country) is likely to reduce ARPU by 9 to 10%.
- (12) The Commission reviewed the Notifying Party's initial PCS and provided the Notifying Party with detailed comments.⁵ The Commission identified data and methodological issues that call in to question the reliability of the study.⁶ In response, the Notifying Party submitted a second paper prior to the SO.⁷ The Notifying Party also provided a corrected dataset and revised results. According to the Notifying Party the conclusions from its initial price concentration analysis are unaffected by the data revisions or by the alternative specifications which address the Commission's initial comments.

The Commission's assessment of the Notifying Party's analysis in the SO

- (13) In the SO the Commission reached the preliminary conclusion that the price concentration analysis based on the corrected data set did not provide an empirical basis to conclude that a four to three merger between MNOs in a small country such as Ireland would be unproblematic as claimed by Notifying Party. The Commission's revisions to the Notifying Party's analysis indicated that the results were not robust and that when the Commission's main comments on methodology were incorporated in the Notifying Party's analysis cumulatively rather than individually, the econometric results reversed the Notifying Party's results and indicated that the presence of three MNOs instead of four MNOs in a country is correlated with higher ARPU regardless of whether the market is small or large.
- (14) In particular, the Commission examined the cumulative effect of the following changes to the Notifying Party's regressions:
- (a) The Commission excluded CDMA operators from the variable identifying the number of MNOs a CDMA different technology from the TDMA technology generally used by MNOs in Europe as it is questionable whether such operators (which are present in Estonia, Latvia and Norway) compete directly with operators using GSM, UMTS or LTE technologies.
 - (b) The Commission used ARPU of the main operators in the country rather than the average ARPU across the two largest operators where available. The Commission considered that the use of average ARPU for the two largest MNOs in the PCS is problematic because data for the two largest operators is

⁵ Email sent on 4 December 2013 including a document "Issues for discussion on the Price Concentration analysis". These issues were further discussed in the economists meeting that took place on 9 December 2013 [ID 1704].

⁶ The Commission observed that there were problems with the original dataset. In particular, a number of changes in market structure were missing from the data (for example five to four Telering/T-Mobile merger in Austria, entry of T2 in Slovenia in June 2008) or had wrong dates (for example, Xfera's [Yoigo] entry in Spain). In other cases the data also included code division multiple access (CDMA) operators (Telekom Baltija in Latvia and Ice Norge As in Norway) operating in the 450 MHz band. The Notifying Party's corrected dataset addressed the identified issues.

⁷ Compass Lexecon "Response to CET Queries on CL's Price-Concentration Study", 20 December 2013, [Ref: 131220] [ID 1935].

not available in every year-country combination which artificially introduces changes in the time series.⁸

- (c) The Commission included GDP per capita to control for the wealth of the users instead of GDP as it considered that GDP per capita to be a better proxy of differences in purchasing power or demand by subscribers across country than GDP which confounds wealth with population size.
 - (d) The Commission excluded all country-year combinations with two and five operators to concentrate the effect of changing the number of MNOs from four to three or three to four, removing the possibility that results are driven by observations with two or five MNOs.⁹
 - (e) The Commission also included further control variables (that is mobile termination rates, the exchange rate and a dummy for country entering the EU in 2004).
- (15) The Commission provisionally found that when the first two changes (a) and (b) were implemented jointly, the Notifying Party's results became insignificant. Moreover, specifications that further introduced changes (c) to (d) resulted in a significant negative coefficient for the presence of a fourth MNO on ARPU, that is. it reversed the result claimed by the Notifying Party.
- (16) In its initial comments, the Commission had also noted that the results presented by the Notifying Party could be biased because of endogeneity. In response, the Notifying Party submitted an instrumental variable regression prior to the SO in order to show that the potential endogeneity does not change the results. Furthermore, the Notifying Party argued that market structure is unlikely to be endogenous in the telecom sector.
- (17) In the SO, the Commission also investigated the robustness instrumental variable regressions which the Notifying Party presented in response to endogeneity concerns raised by the Commission in its initial comments.¹⁰ The results of these robustness checks again indicated that the Notifying Party's results of its instrumental variable

⁸ In its initial comments, the Commission also raised doubts whether ARPU, which is a revenue measure, is a good indicator for cross-country and cross-time prices comparisons given that customer usage patterns differ across countries. The Notifying Party argues that while it may not be possible to fully control for cross-country differences in usage patterns (due to the unavailability of data) this does not imply that there is an omitted-variable bias affecting the estimated relationship between the number of MNOs and ARPU.

⁹ In its initial comments, the Commission observed that the Notifying Party's regressions were restrictive in that they assumed linearity of ARPU in the number of operators or lumps together observations with three or less and four or more operators. By focusing on only observations with three or four MNOs only, this restriction is removed.

¹⁰ The Commission had noted number of subscribers is an endogenous variable as it depends on the prices. The pre-paid and business shares are also endogenous. Higher post-paid prices could lead to more pre-paid users and lower average ARPU. Most importantly, market structure, as well as entry/exit, is endogenously determined with price. The Commission expressed doubts as to whether the Notifying Party's analysis sufficiently controlled for this. In response the Notifying Party submitted an instrumental variable regression prior to the SO in order to show that the potential endogeneity does not change the results. Furthermore, the Notifying Party argued that market structure is unlikely to be endogenous in the telecom sector.

regressions are not robust and are in fact reversed when the Commission's comments are incorporated cumulatively.¹¹

- (18) The Commission also presented regression results using logarithmic specifications in the SO and implementing similar changes. This again indicated that the Notifying Party's results were not robust and in fact reversed in many specifications.
- (19) The Commission also noted that its revised results were similar to those found in the academic literature.¹²
- (20) Moreover, the Commission also noted that the Notifying Party has not properly substantiated that a substantial part of fixed costs would not be scalable, which is the Notifying Party's rationale why results about the effect of consolidation on ARPUs may be different in small countries and large countries.
- (21) The Commission further noted that a price concentration analysis in itself is not sufficient to take a conclusive decision, especially when the qualitative evidence is not in concordance with the econometric evidence (as it is the case with the Notifying Party's estimates). This is because if the relevant factors (demand, cost or others) affecting market outcomes are not properly taken into account in the econometric model, it might indicate only correlation, and not necessarily causation, between prices and market structure.

The Notifying Party's arguments on the Price Concentration Analysis in the Response to the SO and the Commission's assessment

- (22) In the Response to the SO the Notifying Party claims that the Commission's quantitative analyses are flawed and that the Commission should instead rely on the price concentration analysis presented by the Notifying Party.¹³ The Notifying Party argues that the Commission's assessment in the SO of the price concentration analysis is misleading and incorrect and that contrary to the Commission's preliminary conclusion in the SO the Notifying Party's results from the PCS are robust. In particular, in the Response to the SO the Notifying Party claims that its original findings are confirmed when: (i) the average ARPU of the two largest MNOs in each country is used in the regressions instead of focusing on the ARPU of the market leader; (ii) changes in the identity of the market leader over time are taken into account; and (iii) the analysis is re-run using all the available data for both the largest and second largest operator. Moreover, the Notifying Party argues that (iv) there is no reasons to exclude CDMA operators; and that (v) removing countries with two and five MNOs does not change the results when the data for the two largest operators in each country is used.

¹¹ For the robustness checks, the Commission introduced year fixed effects, instrumented the dummy variable for "4 or more" MNOs with its two year lag and also introduced changes (a) to (d) above.

¹² Li, Y. and Pittman, R. (2013) " The proposed merger of AT&T and T-Mobile: Are there unexhausted scale economies in U.S. mobile telephony?" *Journal of Competition Law & Economics* 9, pp 49-63; Gagnepain, P. and Pereira, P. (2007) "Entry, costs reduction, and competition in the Portuguese mobile telephony industry." *International Journal of Industrial Organization* 25,pp. 461-481; Seim, K and Viard, B (2011) "The Effect of Market Structure on Cellular Technology Adoption and Pricing" *American Economic Journal, Microeconomics* 3, pp 221-251; Li, Y. & Lyons, B. (2012): "Market structure, regulation and the speed of mobile network penetration," *International Journal of Industrial Organization*, vol. 30(6), pp: 697-707.

¹³ Response to the SO, paragraph 28.

- (23) The Commission disagrees with the Notifying Party's arguments in the Response to the SO and considers that the conclusions drawn in the SO are still applicable. Notably, the Commission considers that the Notifying Party's results are not robust.
- (24) In what follows the Commission first discusses general robustness checks and addresses, point (v) above. Second, the annex elaborates on the treatment of CDMA 2000 operators in the 450 MHz band, point (iv) above. Third, the annex discusses the choice of dependent variable in the regression and tackles points (i) to (iii).
- The effect of excluding observations with two and five MNOs and other general robustness checks [point (v)]*
- (25) As the Notifying Party is making claims about the difference in ARPU levels between countries with three MNOs compared to countries with four MNO, the relevant approach for analysing this claim is to focus on country-year observations in the data with three or four MNOs. Excluding countries-year observations with two and five MNOs avoids the risk that the empirical results are biased by these observations with two or five MNOs. As there are only 18 such observations, the Commission considers that their exclusion does not unduly restrict the sample for the analysis.
- (26) In the Response to the SO the Notifying Party contests the Commission's preliminary finding that when observations with two and five MNOs are excluded, the results no longer support the Notifying Party's claim of a significantly positive relationship between the presence of a fourth MNO and the level of ARPU. However, the Commission notes that the coefficient of relevance in most of the specifications included in Tables 9-11 of the Notifying Party's Annex 9 to the Response to the SO are statistically indistinguishable from zero.¹⁴ This fact is also acknowledged by the Notifying Party. Furthermore, the Commission observes that in Table 10 of the Notifying Party's Annex 9 to the Response to the SO, the coefficient that controls for the first operator for those countries which have four or more MNOs is not included so that no meaningful conclusions can be drawn from the specification. Therefore, the Notifying Party's own results in the Response to the SO show that their conclusions of a significant positive relationship between the presence of a fourth MNO and the level of ARPU is not robust.
- (27) The Commission has also performed a number of additional robustness checks which are reported in Table 1. These robustness tests show that contrary to what the Notifying Party argues, the Commission's assessment in the SO is valid. Specification (1) in Table 1 reports the Notifying Party's main regression specification using the weighted average ARPU for the first and second operator as the dependent variable and the following explanatory variables: GDP, the share of prepaid subscriptions, the share of business subscriptions, the broadband penetration rate, a count variable measuring whether there are the number of MNOs is equal of above four, and year fixed effects. This regression is run on the Notifying Party's

¹⁴ See Tables 9-11 of Compass Lexecon "Comments on SO's assessment of the Notifying Party's price concentration analysis," 17 February 2014, at Annex 9 to the Response to the SO, pages 12-14, [Ref: 032605] [ID 3327].

¹⁵ Compass Lexecon "Response to CET Queries on CL's Price-Concentration Study," 20 December 2013, page 5, [Ref: 131220] [ID 1935].

corrected dataset.¹⁵ Specification (2) in Table 1 includes GDP-per-capita instead of GDP. Specification (3) in Table 1 reports GDP-per-capita instead of GDP and includes a dummy variable to control for the period where Norway only had two operators. Specification (4) in Table 1 includes GDP-per-capita instead of GDP and excludes observations with two or five MNOs, that is, the specification compares only the four operator countries to the three operator countries.¹⁶ The results in Table 1 indicate that after these changes have been implemented there is no statistical significant difference between the average ARPUs in small countries with four and three operators.

Table 1: Commission's robustness test on the price concentration analysis

	Notifying Party Table 1 Spec. 5			
	(1)	(2)	(3)	(4)
VARIABLES	ARPU	ARPU	ARPU	ARPU
MNOs equal or above 4	58.724*** (0.000)	26.586** (0.012)	18.606* (0.074)	10.397 (0.328)
GDP	0.371*** (0.000)			
GDP per Capita		0.009*** (0.000)	0.010*** (0.000)	0.009*** (0.000)
Norway			-83.610*** (0.000)	
Share of prepaid subscriptions	-210.728*** (0.000)	-53.721 (0.138)	-57.493* (0.099)	-74.986** (0.045)
Share of business subscriptions	-121.834 (0.330)	-149.955 (0.136)	-179.132* (0.071)	-126.461 (0.207)
Broadband penetration rate	-29.014 (0.598)	-116.952*** (0.003)	-129.484*** (0.001)	-125.373*** (0.001)
Constant	392.437*** (0.000)	221.022*** (0.000)	222.341*** (0.000)	230.908*** (0.000)
Observations	203	203	203	185
R-squared	0.524	0.717	0.731	0.721
YFE	YES	YES	YES	YES

*Note: Robust pval in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

Source: Commissions regression based on data submitted by the Notifying Party

The treatment of CDMA 2000 operators [point (iv)]

¹⁵ Compass Lexecon "Response to CET Queries on CL's Price-Concentration Study," 20 December 2013, page 5, [Ref: 131220] [ID 1935].

¹⁶ By doing this the Commission drops the seven observations from Norway for 2000-2007, two observations in Austria (years 2004 and 2005), one observation for Denmark (year 2004), five observations for the Netherlands (years 2000-2004), one observation for Slovakia (year 2006) and two observations for Slovenia (years 2006 and 2007).

- (28) The Notifying Party claimed at the Oral Hearing and in the Response to the SO that the Commission was wrong to exclude the CDMA operators from the dataset.¹⁷ The Notifying Party argued that the results do not change when controlling for the presence of CDMA operators instead of adjusting the MNO count to exclude CDMA 2000 operators in the 450 MHz band in Norway, Estonia, and Latvia which was the approach taken in the SO.¹⁸
- (29) The Commission considers that there are indications that constraints from CDMA 2000 operators are different from constraints from other MNOs. First, CDMA 2000 in the 450 Mhz band is most commonly used to provide niche services often located in rural areas and MNOs based on CDMA 2000 technology operating in the 450 MHz band do not provide the full range of mobile technologies.¹⁹ Moreover, the Commission notes that the handset choice offered by CDMA 2000 operators in the 450 MHz band is more limited than that for the harmonised GSM, UMTS and LTE technologies²⁰
- (30) In any event, the Commission considers it reasonable to check the sensitivity of the results to the exclusion of CDMA 2000 operators. The Commission finds that the Notifying Party's results do actually change when the countries in which CDMA 2000 operators are present are removed from the data (which are 14 observations out of 203, so less than 7% of all observations).²¹ The Commission obtains consistent results also when the adjusting the MNO count to exclude the CDMA 2000 operators in the 450 MHz band instead of removing the observations from the dataset. The same is true when these observations on CDMA operators are included but their presence is controlled for with a dummy variable. In both cases the difference in ARPU between four and three operator countries is not statistically different from zero as reported in Table 2 .
- (31) Specification (1) in Table 2 replicates the Notifying Party's specification where CDMA operators are removed from the MNO count variable.²² Specification (2) in Table 2 includes GDP per capita instead of GDP. Specification (3) additionally

¹⁷ "Assessing the SO's quantitative evidence" Presentation by Jorge Padilla at the Oral Hearing of 25 February 2014, slide 29, [Ref: 021637] [ID 2978].

¹⁸ Compass Lexecon "Comments on SO's assessment of the Notifying Part's price concentration analysis", 17 February 2014 at Annex 9 of the Response to the SO, page 10 [Ref: 032605] [ID 3327].

¹⁹ See "Proposed acquisition of Telefónica Ireland Limited by Hutchinson 3G UK Holdings Limited- Oral Hearing: - Comreg observations on slide presentation and oral presentations", Reference 5M(14)07 of 3 March 2014, page 4 and "ComReg Observations on Compass Lexecon's preliminary draft report dated 11 November 2013, entitled "Case Comp/M.6992- Price Concentration Study" ("the Report")", 26 November 2013, pages 4 and 5.

²⁰ For instance, handsets like the Iphone 5s, Iphone 4s or Samsung Galaxy S4 the following handsets are not available for CDMA 2000. Sources:
<http://www.samsung.com/no/consumer/mobile/mobilephones/smartphones/GT-I9506ZKANEE-spec>,
<http://www.apple.com/no/iphone-5s/specs/>, <http://store.apple.com/no/buy-iphone/iphone4s/8gb-sort-ul%C3%A5st>

²¹ Overall there are 7 observations for Estonia and Latvia and 13 for Norway for countries where there are MNO operating with CDMA 2000 technology in the 450MHz band. The observations for Norway appear to be outliers and therefore the Commission has controlled for them. Nonetheless, included the observations for Norway represents 13% of the observations.

²² Compass Lexecon, "Response to CET Queries on CL's Price-Concentration Study," 20 December 2013, page 9 Table 4 Specification 5 [Ref: 131220] [ID 1935] and Compass Lexecon "Comments on SO's assessment of the Notifying Part's price concentration analysis," 17 February 2014, page 3, Table 1 Specification 1, [Ref: 032605] [ID 3327].

includes the dummy controlling for the seven observations in Norway where there are just two operators for a significant period of time and is one of the countries with CDMA 2000 operators in the 450 MHz band. Specification (4) excludes CDMA operators from the MNO count variable but includes GDP per capita and limits the analysis to three and four MNOs countries. Specification (5) limits the analysis to three and four MNOs countries but instead of excluding the CDMA observations from the MNO count variable it includes a dummy variable to control for them and includes GDP per capita. Specification (6) is based on the entire dataset, includes GDP per capita instead of GDP and includes the dummy variables for Norway and CDMA operators.

- (32) Specifications (7) to (10) replicate regressions (1) to (4) but instead of excluding the CDMA operators from the count variable exclude the observations from the dataset. The regressions excluding the CDMA observations yield consistent results to the regressions excluding the CDMA observations from the count variable. In the regressions reported on the rest of the annex exclude the CDMA 2000 operators in the 450 MHz band from the dataset rather than adjusting the MNO count variable. For completeness, the Commission has also run these regressions, although not reported in this Annex, and as in the case of Table 2 obtains consistent results.
- (33) The Commission notes that the difference in ARPU between three and four MNOs countries operators in specifications (3) to (6) is not statistically significant different from zero which implies that the data do not allow to conclude that small countries with three MNOs would have lower ARPU than small countries with four MNOs

Table 2: Commission's robustness tests on the price concentration analysis controlling for CDMA operators

							Excluding CDMA countries		
	NP Table 4 Spec. 5			Only 4-3	Only 4-3		NP Table 4 Spec. 5		Only 4-3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)
VARIABLES	ARPU	ARPU	ARPU						
MNOs equal or above 4 (excluding CDMA from MNO count)	55.909*** (0.004)	26.694* (0.051)	15.866 (0.249)	5.594 (0.698)					
MNOs equal or above 4					9.722 (0.431)	18.397 (0.124)	70.536*** (0.000)	13.529 (0.345)	3.080 (0.836)
CDMA					3.183 (0.796)	1.012 (0.932)			
GDP	0.341*** (0.000)						0.346*** (0.000)		
GDP per Capita		0.009*** (0.000)	0.010*** (0.000)	0.010*** (0.000)	0.009*** (0.000)	0.010*** (0.000)		0.010*** (0.000)	0.010*** (0.000)
Norway			-85.202*** (0.000)			-84.730*** (0.000)			
Share of prepaid subscriptions	-204.585*** (0.000)	-51.137 (0.170)	-56.481 (0.117)	-75.630* (0.053)	-75.304** (0.049)	-57.592 (0.104)	-173.619*** (0.000)	-58.119 (0.109)	-77.934** (0.049)
Share of business subscriptions	-58.513 (0.660)	-118.616 (0.258)	-165.036 (0.115)	-125.921 (0.233)	-132.948 (0.217)	-181.091* (0.091)	-248.145** (0.027)	-178.568 (0.103)	-126.737 (0.253)
Broadband penetration rate	-64.207 (0.219)	-139.183*** (0.001)	-141.883*** (0.000)	-128.750*** (0.001)	-121.986*** (0.003)	-128.422*** (0.002)	-75.374 (0.170)	-131.629*** (0.005)	-122.871*** (0.007)
Constant	385.562*** (0.000)	214.767*** (0.000)	219.448*** (0.000)	230.742*** (0.000)	232.241*** (0.000)	222.746*** (0.000)	397.187*** (0.000)	219.218*** (0.000)	223.791*** (0.000)
Observations	203	203	203	185	185	203	176	176	165
R-squared	0.507	0.714	0.728	0.720	0.721	0.731	0.531	0.696	0.688
YFE	YES	YES	YES						

Note: Robust pval in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

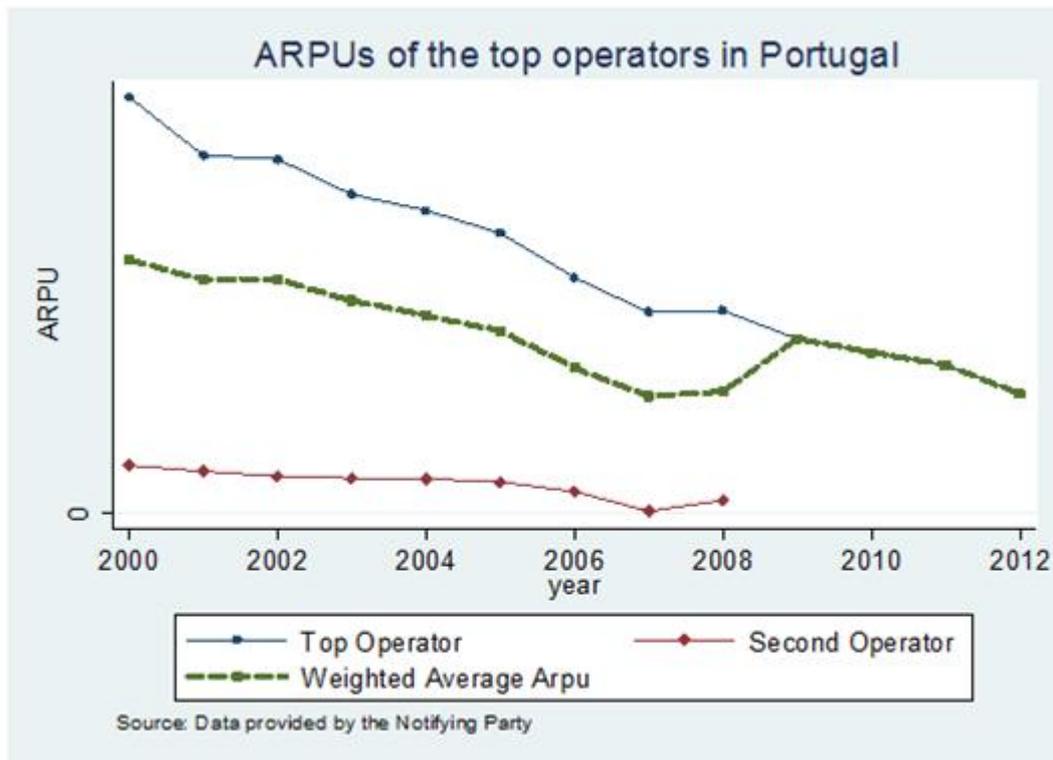
Source: Commissions regression based on data submitted by the Notifying Party

The choice of dependent variable in the regression [points (i) to (iii)]

- (34) In the Response to the SO, the Notifying Party criticises the Commission's approach to run part of its robustness analysis on the basis of ARPU for the first operator only. The Notifying Party argues that there is no technical justification for this approach and that it renders the results in the SO irrelevant. The Notifying Party also claims that the Commission's finding that results are not robust is contingent upon the Commission adopting this approach.
- (35) The Commission disagrees with these arguments. First, as noted in the SO, an analysis using average ARPU as a dependent variable is problematic as there are numerous instances where data on one of the operators is missing and where the average ARPU would hence be computed over only one MNO rather than two.²³ This data problem causes aggregation bias and introduces artificial variation in the data. To illustrate that this aggregation bias, Figure 1 depicts the evolution of ARPU in Portugal which is a country for which the data series for the second operator is missing in parts of the sample. The figure presents the ARPU figures for both the first and second operator and includes the weighted average ARPU as employed by the Notifying Party in its analysis. It is clear from the graph that the increase in the average ARPU from 2008 to 2009 is artificially driven by the fact that data for the second operator is missing from 2009 onwards. Furthermore, the ARPU of the second operator for Portugal is unreasonably low which indicates that the data for the second operator is likely unreliable.

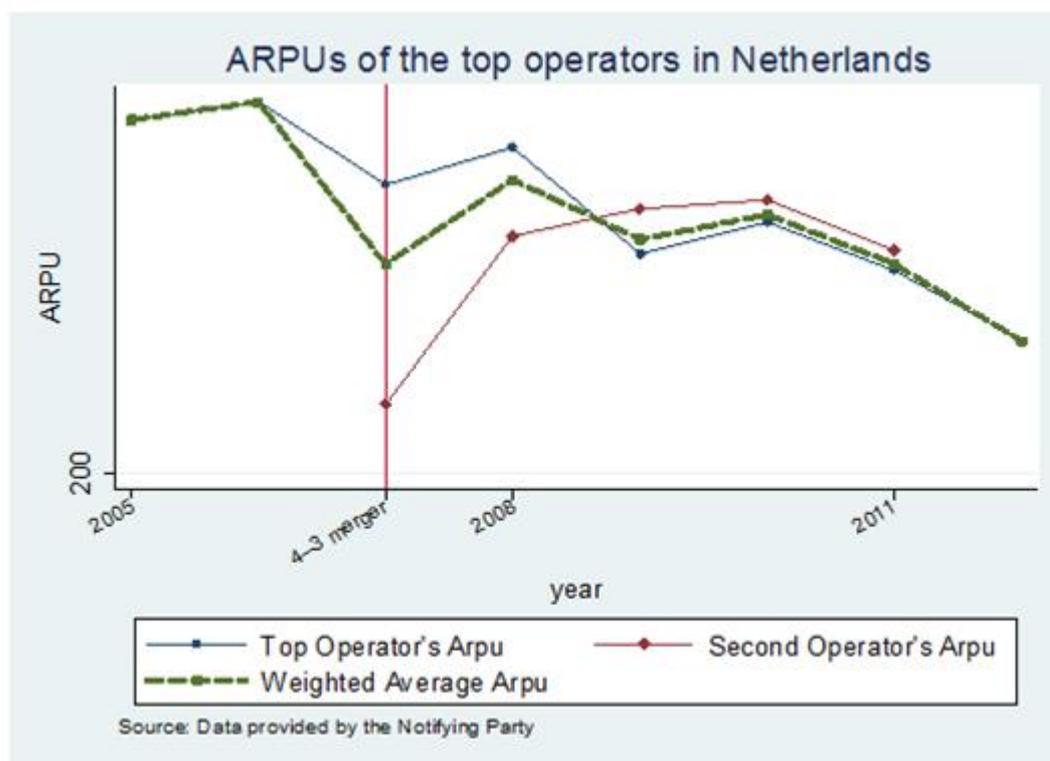
²³ Out of the 203 observation only 145 relate to countries where both the first and the second operators' ARPUs is observed in every period.

Figure 1: ARPU of the top operators in Portugal



- (36) A second example is the case of Netherlands where data for the second MNO is missing before 2007. Figure 2 shows the ARPU time series for the first and second operator and the weighted average ARPU. Before 2007 the average ARPU corresponded is the ARPU of the largest operator as data for the second MNO is missing. The large drop in average ARPU that appears from 2006 to 2007 mostly results from the fact that 2007 ARPU data for the second largest operator is available and the average ARPU is hence computed over the both operators. The observation that the (weighted) average ARPU declined significantly in 2007 when a four to three merger happened to take place in Netherlands is hence due to an aggregation bias resulting from the change in data availability for the second MNO. Following the merger in August 2007 there is an increase in weighted average ARPU following an increase in ARPU of the second operator by roughly 30% while the top operator increased its ARPU by roughly 5%.

Figure 2: ARPU of the top operators in the Netherlands



- (37) The above examples illustrate that the incompleteness of the data result in important composition effects when a measure of average ARPU is used. The Commission considers it reasonable to run the analysis using the ARPU of the first operator as dependent variable only as this avoids such composition problems. Table 3 reports the Commission's robustness analysis when the dataset is limited to observations for the first operator. In particular, specification (1) reports the Notifying Party's results reported in their submission addressing some of the Commission's comments.²⁴ Specification (2) replaces GDP by GDP per capita. In this specification there is no statistically significant difference between countries with three or less and four or more MNOs. Specification (3) additionally includes a dummy of the years 2000 to 2007 in Norway. Specification (4) removes the Norway dummy but limits the analysis to series with only three or four MNOs. This regression yields a negative and statistically significant result for the relevant coefficient, thus reversing the results proposed by the Notifying Party. Specification (5) corresponds to specification (4) and in addition excludes CDMA operators observations and specification (6) additionally controls for the EU enlargement in 2004, for the termination rates and the euro exchange rate for non-euro countries. Both specifications also show a negative and statistically significant coefficient. Moreover, the Commission considers the number of observations in these regressions to be high enough for a statistical analysis of these regression specifications.

²⁴ See column 5 of Table 2 in Compass Lexecon "Response to CET Queries on CL's Price-Concentration Study," 20 December 2013, [Ref: 131220] [ID 1935].

Table 3: Commission's robustness tests on the price concentration analysis limiting the dataset to the ARPU for the first operator

	NP Table 2 Spec. 5			Only 4-3	Only 4-3	Only 4-3
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	ARPU1	ARPU1	ARPU1	ARPU1	ARPU1	ARPU1
MNOs equal or above 4	23.039* (0.070)	5.694 (0.625)	-4.931 (0.666)	-19.122* (0.074)	-31.911** (0.023)	-28.427** (0.039)
GDP	0.418*** (0.000)					
pc		0.009*** (0.000)	0.010*** (0.000)	0.009*** (0.000)	0.009*** (0.000)	0.008*** (0.000)
(mean) per_pre	-261.076*** (0.000)	-69.180** (0.048)	-73.813** (0.023)	-106.706*** (0.001)	-120.545*** (0.000)	-134.157*** (0.000)
(mean) per_bus	-119.629 (0.412)	-190.129* (0.100)	-232.751** (0.042)	-142.410 (0.207)	-243.411** (0.039)	-322.341** (0.014)
(mean) per_broad	-22.093 (0.639)	-71.338** (0.032)	-86.018*** (0.006)	-83.903*** (0.009)	-28.712 (0.465)	-58.416 (0.146)
termination_rate						-0.715 (0.398)
eur_exchange_gr						-244.893 (0.108)
eu2004						-29.403** (0.046)
nor			-97.723*** (0.000)			
Constant	403.867*** (0.000)	232.947*** (0.000)	234.188*** (0.000)	242.788*** (0.000)	270.615*** (0.000)	371.707*** (0.000)
Observations	184	184	184	167	151	136
R-squared	0.594	0.725	0.747	0.757	0.725	0.799
YFE	YES	YES	YES	YES	YES	YES

*Note: Robust pval in parentheses *** p<0.01, ** p<0.05, * p<0.1*

Source: Commissions regression based on data submitted by the Notifying Party

- (38) The Notifying Party in its Response to the SO argues that the SO's results are not robust to the introduction of operator fixed effects which would control for a change in market leader over time.
- (39) Using the Notifying Party's specification the Commission finds that these fixed effects are highly significant. Table 4 reports this kind of analysis using ARPU data for the largest operator.
- (40) As most operators in the data operate in only one country, it is not clear whether these fixed effects control for the identity of the operator or specific conditions of the country. For instance, the fixed effect for the Danish operator TDC in the regression has a highly significant negative fixed effect in every specification reported below. It is not clear whether prices for the Danish operator are lower because Denmark has four operators or because of some unobserved reason such as lower costs. The inclusion of operator fixed effects hence changes the interpretation of the results. It cannot be claimed that the MNO variable measures the ARPU differences between three and four operator countries. Instead, the variable will measure the effect of the within country changes in the number of operators confounded with some across country effects for the few operators which are present in more than one country.

There are only a very few within country changes and most of them due to entry. The only four to three merger in the data is the Dutch merger which took place in August 2007. Figure 2 shows the significant price increase within Netherlands following the merger. While ARPUs are generally falling in each country in Europe due to the decreasing costs (for example, termination fees), in Netherland there was a significant break in the trend after the merger in August 2007 and the downward trend returned back to Netherlands only in 2010.

Table 4: Commission's robustness test on the price concentration analysis using operator fixed effects

	(1)	(2)	(3)	(4)
VARIABLES	ARPU1	ARPU1	ARPU1	ARPU1
MNOs equal of above 4	100.190*** (0.000)	63.674*** (0.000)	37.256** (0.011)	37.289* (0.052)
GDP	-0.066 (0.502)			
GDP per capita		0.006*** (0.000)	0.007*** (0.000)	0.004 (0.101)
Share of prepaid subscriptions	-398.764*** (0.000)	-332.726*** (0.000)	-325.426*** (0.000)	-301.903*** (0.000)
Share of business subscriptions	22.291 (0.864)	-89.795 (0.465)	132.392 (0.284)	24.974 (0.861)
Broadband penetration rate	-99.312* (0.080)	-197.848*** (0.000)	-211.614*** (0.000)	-186.339*** (0.001)
Mobile termination rate				-0.714 (0.239)
Exchange rate				-227.905** (0.036)
Countries joining after 2003				-43.249 (0.404)
top1==Deutsche Telekom	-85.066*** (0.000)	0.704 (0.971)	8.046 (0.675)	28.505 (0.441)
top1==Elisa	-160.494*** (0.000)	-84.334*** (0.000)	-106.481*** (0.000)	-89.254*** (0.003)
top1==KPN	47.421* (0.088)	53.816** (0.016)	-5.344 (0.730)	19.827 (0.342)
top1==Mobistar	-176.743*** (0.000)	-95.590*** (0.002)	-64.658* (0.056)	-40.046 (0.454)
top1==OTE	-63.253*** (0.004)	-6.684 (0.765)	12.611 (0.588)	-11.461 (0.746)
top1==Portugal Telecom	40.881 (0.112)	103.872*** (0.000)	111.608*** (0.000)	72.959** (0.025)
top1==Swisscom	117.295*** (0.000)	97.338*** (0.000)	76.478*** (0.000)	101.072*** (0.001)
top1==TDC	-235.647*** (0.000)	-157.947*** (0.000)	-140.061*** (0.000)	-95.010*** (0.009)
top1==Telefonica	-95.067*** (0.002)	-21.706 (0.362)	-26.380 (0.246)	-20.904 (0.625)
top1==Telekom Austria	-151.210*** (0.000)	-65.710*** (0.003)	-48.169** (0.020)	-45.635 (0.134)
top1==Telenor				
top1==TeliaSonera	-151.592***	-83.220***	-78.710***	-69.623**

	(0.000)	(0.000)	(0.000)	(0.026)
top1==Vodafone	-92.276*** (0.002)	-19.263 (0.426)	-0.964 (0.969)	
Constant	604.598*** (0.000)	421.348*** (0.000)	348.932*** (0.000)	467.524*** (0.000)
Observations	161	161	151	136
R-squared	0.843	0.866	0.873	0.898
YFE	YES	YES	YES	YES

Note: Robust pval in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Commissions regression based on data submitted by the Notifying Party

- (41) Moreover, it is not clear why the change in the identity of the market leader would bias the results in any way. In any event, the Commission considers that the appropriate way to control for the change in the identity of the market leader over time would be to use consistently use the ARPU from the same company over time within a country. In Table 5 the Commission has done this using ARPU data for the operator that is usually the market leader even if that operator is the second largest operator in some years (but ARPU data is still available). Specification (1) runs the analysis using the ARPU for the company that is usually the market throughout the period and limits the sample to countries with three and four MNOs. Specification (2) in addition excludes the Norwegian observations. Specification (3) includes data for three and four MNOs countries and has ARPU for the market leader as a dependent variable. Specification (4) employed the ARPU of the operator which is usually the leader. All of these specifications indicate that small countries with four MNOs have lower prices than countries with three MNOs. The coefficients are statistically significant. Finally, specification (5) uses the ARPUs of the second operator. The Commission notes that the ARPUs of the second operators, however, are less reliable than the first ones as Figure 1 above indicates and consequently the Commission observes that there is no significant different between prices of second operators in four and three operators countries.

Table 5: Commission's robustness test on the price concentration analysis

VARIABLES	Only 4-3	Excluding Norwegian outliers	Only 4-3		
	(1)	(2)	(3)	(4)	(5)
	ARPU1_adj	ARPU1_adj	ARPU1	ARPU1_adj	ARPU2
MNOs equal or above 4	-22.683** (0.039)	-19.934* (0.058)	-28.427** (0.039)	-33.958** (0.013)	26.548 (0.172)
GDP per capita	0.009*** (0.000)	0.009*** (0.000)	0.008*** (0.000)	0.008*** (0.000)	0.008*** (0.000)
Share of prepaid subscriptions	-136.769*** (0.000)	-132.382*** (0.000)	-134.157*** (0.000)	-148.768*** (0.000)	-28.721 (0.581)
Share of business subscriptions	-210.477* (0.087)	-178.747 (0.129)	-322.341** (0.014)	-299.946** (0.019)	89.865 (0.539)
Broadband penetration rate	-75.692** (0.034)	-82.506** (0.019)	-58.416 (0.146)	-32.643 (0.410)	-188.258*** (0.007)
Mobile termination rate	-0.644 (0.448)	-0.681 (0.409)	-0.715 (0.398)	-0.647 (0.450)	0.720 (0.649)
Exchange rate	-268.890** (0.049)	-264.670* (0.061)	-244.893 (0.108)	-255.541* (0.095)	469.249 (0.104)

Countries joining after 2003	-19.861 (0.108)	-23.433* (0.055)	-29.403** (0.046)	-29.949** (0.044)	-16.586 (0.454)
Portugal					-248.366*** (0.000)
Constant	336.173*** (0.000)	332.660*** (0.000)	371.707*** (0.000)	376.470*** (0.000)	261.001*** (0.005)
Observations	150	154	136	137	128
R-squared	0.817	0.817	0.799	0.803	0.738
YFE	YES	YES	YES	YES	YES

*Note: Robust pval in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

Source: Commissions regression based on data submitted by the Notifying Party

- (42) Finally, Table 6 reports instrumental variable regressions. Specifications (1) to (9) were reported in the SO. Specification (1) reproduces the results of the Notifying Party. Specification (2) introduces year fixed effects. Specification (3) uses the first operator's ARPU, excludes the CDMA operators observations and uses GDP per capita. Specification (4) includes mobile termination rates, the exchange rate and a dummy variable for countries joining after 2003 as control variables. Specification (5) takes the number of MNOs as endogenous and instruments it with the two-year lagged value. The rest of the specifications exclude all country-year combinations with two and five operators. Specifications (6) and (8) include only small countries while specification (7) and (9) include only large countries. Specifications (6) and (7) exclude CDMA operators observations while specifications (8) and (9) include them.
- (43) In addition, Specifications (10) and (11) report instrumental variable regressions using the ARPU for the operator which is usually the largest as dependent variable, and including observations with three or four MNOs only. Specification (10) gives the result for small countries and (11) for large countries. In line with the instrumental variable regressions in the SO, the Commission observes that these regressions indicate that prices in 4 MNO countries are statistically significantly lower than in countries with three MNOs.

Table 6: Commission's robustness test on the price concentration analysis using instrumental variables

					Endg naux	Only 4-3 Small	Only 4-3 Large	Only 4-3 Small	Only 4-3 Large	Only 4-3 Small	Only 4-3 Large
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
VARIABLES	IV	IV	arpu1	arpu1	arpu1	arpu1	arpu1	arpu1	arpu1	arpu1_adj	arpu1_adj
MNOs equal or above 4	43.826** (0.027)	30.347 (0.138)	-11.460 (0.413)	-26.297** (0.031)	-46.109*** (0.007)	-51.329*** (0.003)	-119.679*** (0.000)	-22.582* (0.074)	-119.679*** (0.000)	-43.071*** (0.002)	-85.090*** (0.000)
GDP	0.509*** (0.000)	0.405*** (0.000)									
pc			0.010*** (0.000)	0.008*** (0.000)	0.008*** (0.000)	0.008*** (0.000)	0.009 (0.350)	0.009*** (0.000)	0.009 (0.350)	0.009*** (0.000)	0.008 (0.291)
(mean) per_pre	-420.223*** (0.000)	-418.457*** (0.000)	-89.141** (0.018)	-154.201*** (0.000)	-175.457*** (0.000)	-177.145*** (0.000)	-98.941** (0.013)	-148.231*** (0.000)	-98.941** (0.013)	-178.855*** (0.000)	-122.871*** (0.000)
(mean) per_bus	-1,810.653*** (0.000)	-2,233.188*** (0.000)	-377.700 (0.110)	-487.157*** (0.009)	-570.305*** (0.001)	-561.836*** (0.001)	-845.456 (0.489)	-488.690*** (0.003)	-845.456 (0.489)	-465.246*** (0.004)	-806.442 (0.412)
(mean) per_broad	-227.938*** (0.000)	217.829* (0.065)	-41.250 (0.554)	-31.090 (0.593)	-0.364 (0.995)	3.436 (0.951)	412.831** (0.016)	-67.762 (0.137)	412.831** (0.016)	-27.236 (0.552)	313.362** (0.022)
termination_rate				0.780 (0.373)	4.398*** (0.004)	4.901*** (0.002)	5.587*** (0.001)	4.632*** (0.002)	5.587*** (0.001)	5.461*** (0.000)	2.168* (0.080)
eur_exchange_gr				-288.184* (0.087)	-209.721 (0.216)	-201.795 (0.233)	113.723 (0.429)	-242.631 (0.114)	113.723 (0.429)	-245.693 (0.109)	52.507 (0.648)
eu2004				-29.197* (0.067)	-32.229** (0.043)	-33.465** (0.035)	-10.016 (0.936)	-16.858 (0.236)	-10.016 (0.936)	-19.973 (0.159)	-26.531 (0.790)
Constant	668.606*** (0.000)	514.908*** (0.000)	49.297 (0.313)	145.807*** (0.006)	137.943** (0.010)	138.012** (0.010)	-20.807 (0.939)	130.933*** (0.003)	-20.807 (0.939)	122.798*** (0.005)	42.314 (0.846)
Observations	183	183	146	130	120	118	49	132	49	130	49
R-squared	-0.128	-0.048	0.723	0.785	0.788	0.784	0.887	0.814	0.887	0.815	0.916
YFE	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Note: Robust pval in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Commissions regression based on data submitted by the Notifying Party

Conclusion

- (44) In light of the above, the Commission concludes that the results from the PCS are not robust and, contrary to what is claimed by Notifying Party, do not provide an empirical basis to conclude that four to three merger between MNO's in a small market, such as Ireland, would be unproblematic.

PART II: ASSESSMENT OF THE CUSTOMER INERTIA MODEL

- (45) The Notifying Party submitted a model on "the structural impact of a merger in a market with customer inertia and large fixed costs".²⁵ In the SO, the Commission made a number of points regarding this analysis²⁶ to which the Notifying Party responded in the Response to the SO.²⁷

The Notifying Party's assumptions and conclusions from the customer inertia model ("CIM")

- (46) In the Notifying Party's CIM, symmetric firms compete for a given number of "contestable customers" which will all purchase from the firm offering the lowest price (that means there is no product differentiation). Each firm also has a given symmetric share of "non-contestable" customers in the market which will never switch to a rival regardless of the prices offered. Firms cannot price discriminate between contestable and non-contestable customers. The firm setting the lowest price, that is the firm which "wins" the contestable customers, has to incur an incremental cost for serving these additional customers. There is no pure strategy equilibrium in the model. The Notifying Party's conclusions from the model are based on comparative statics in the unique symmetric mixed strategy equilibrium (that is the equilibrium in which firms randomly choose price over a range of prices according to a specific cumulative probability distribution function) as the number of symmetric firms and the share of contestable customers' changes.
- (47) The Notifying Party derives the following technical conclusions from the model: First, firms will not price below average avoidable costs of serving contestable customers regardless of whether these costs are fixed or variable. Second, as the number of symmetric firms increases, firms will focus more on their installed base in the unique mixed strategy equilibrium. This would imply that mergers may increase competition for contestable customers and, by extension for non-contestable customers. Third, such a pro-competitive effect in the reduction of the number of firms is more likely in small markets.

Further technical observations on the consumer CIM in the SO and the Commission's assessment in light of the Notifying Party's response to the SO

- (48) The main points made in the SO regarding the Notifying Party's CIM are presented in Section 7.5.7.3 of the Decision. That section also discusses the Notifying Party's main responses to these points and the Commission's assessment of these responses.
- (49) In addition to the points summarised in Section 7.5.7.3 of the Decision, the Commission made a number of additional observations of a more technical nature. In the following, the Commission recalls the main additional observations in the SO, summarises the Notifying Party's responses and assesses the Notifying Party's response on each point:

²⁵ Compass Lexecon: "Modelling the structural impact of a merger in a market with customer inertia and large fixed costs" of 20 December 2013, [Ref: 129206] [ID 1933].

²⁶ SO, paragraphs 465 to 481 and SO Annex II, part II.

²⁷ Response to the SO, paragraphs 497 to 519.

- (50) First, the Commission noted that the Notifying Party's CIM unambiguously predicts that the expected price paid by new customers increases as the number of firms decreases.
- (51) In the Response to the SO, the Notifying Party disputes this and claims that "new and existing customers pay in expectation the maximum price when the number of firms is sufficiently large".²⁸
- (52) This claim is incorrect. In the Notifying Party's model the expected average price for all consumers is independent of the number of firms and strictly below the maximum price.²⁹ The fact that the average market price does not depend on the degree of competition (as measured by the number of symmetric firms) raises further doubts about the usefulness of the Notifying Party's analysis for a merger assessment.
- (53) Moreover, the Notifying Party argues that as the number of firms increases, firms will focus more on their non-contestable customers in equilibrium which implies that the expected price paid by non-contestable customers increases with the number of firms. As the average expected price across all customers is independent of the number of firms, the expected price paid by contestable customers must therefore decrease as the number of firms increases as noted by the Commission in the SO.
- (54) Second, the Commission noted in the SO that the Notifying Party's conclusion that firms will not price below avoidable costs is driven by the assumption that such costs only need to be incurred if the firm succeeds in winning contestable customers. The Commission does not disagree that this is the implication in the Notifying Party's model. However, the key question in this case is what costs are actually avoidable or incremental for limited changes in the number of subscribers. The CIM does not address this question. Moreover, the Notifying Party's CIM does not allow for a meaningful distinction between avoidable fixed and avoidable variable costs of serving non-contestable customers.
- (55) The Notifying Party argues in the response to the SO that the distinction between avoidable fixed and avoidable variable costs of serving contestable customers

²⁸ Response to the SO, paragraph 515.

²⁹ In the Notifying Party's CIM the expected equilibrium profit of each firm is equal to the profit each firm can guarantee itself by charging the maximum price to its non-contestable customers accepting that it will not win non-contestable customers (CIM, page 3). In the Notifying Party's notation this expected equilibrium profit per firm is $(R-c)\sigma/N-F_\sigma$ (CIM, page 3), where R is the maximum price each customer is willing to pay, c the marginal cost of serving a customer, σ/N the number of non-contestable customers of each firm, and F_σ the fixed cost of serving non-contestable customers. Total expected equilibrium profits across all N firms is hence: $(R-c)\sigma-NF_\sigma$.

Expected total sales revenues in the market are the sum of total expected equilibrium profits and total costs across all firms in the industry. As non-contestable customers (of which there are σ) and all contestable consumers (of which there are d) are served in the market, total costs are $c(\sigma+d)+(NF_\sigma+F_d)$ which is the sum of variable costs $c(\sigma+d)$ and fixed costs $NF_\sigma+F_d$ where the fixed costs F_d of serving contestable customers is incurred only by one firm in the CIM. Expected total sales revenues are therefore $(R-c)\sigma-NF_\sigma+c(\sigma+d)+NF_\sigma+F_d=R\sigma+cd+F_d$ which does not depend on the number of firms N .

The expected average price per customer is simply expected total sales revenues divided by the number of customers. As neither sales revenues nor the number of customers served depends on the number of firms in the CIM, the expected average price per customer is also independent of the number of firms. It is also strictly below the maximum price R as long as contestable customers can be profitably served at the maximum price R , that is, as long as $(R-c)d-F_d > 0$ which is assumed in the CIM. (Otherwise no competition over contestable customers would ever take place).

matters in its model and that the Commission's comment in the SO indicates a complete misunderstanding of the CIM.

- (56) The Notifying Party has not provided any explanation in response to the Commission's point on where and how in its model this distinction matters. The Commission hence maintains its position.
- (57) Third, the Commission noted in the SO that the Notifying Party's conclusions from the CIM that certain results may hold under certain conditions are derived on a purely theoretical level without showing whether these conditions are satisfied in the present case. For example, the Notifying party claims that a decrease in the number of symmetric firms may lead to more competitive pricing when the number of firms is initially "relatively large" and that the threshold for this to be true would be lower in "small" markets.³⁰ No analysis is undertaken to see what number of MNOs should be regarded as "relatively large" or what constitutes a "small" market in the context of mobile markets.
- (58) The Notifying Party does not respond to this point. The Notifying Party's claims derived from its model could only support the view that a reduction from four MNOs to three MNOs in Ireland is pro-competitive if three MNOs could be considered to be a "relatively large" number of firms. The Commission does not regard markets with three competitors to be markets with a relatively large number of firms. The Notifying Party provides no evidence that three firms would be a "relatively large" number of firms within the meaning of their model in the present case.
- (59) Fourth, the Commission also noted that it is unclear why "larger" markets should have a greater proportion of contestable customers as the Notifying Party appears to be assuming.³¹
- (60) The Notifying Party disputes that this is the assumption underpinning the claim about the difference between "large" and "small" markets in its model.
- (61) However, the Notifying Party's analysis on the difference between large and small markets looks at the impact of an increase in the number of contestable customers for a given number of non-contestable customers.³² This implies that the proportion of contestable customers increases. The Commission hence maintains its criticism.
- (62) Fifth, the Commission also maintains that the Notifying Party should have explained why an analysis based on mixed strategy equilibria, that is a situation in which firms are assumed to randomise over price is informative in this case. The Commission does not consider the Notifying Party's response that the economic theory literature routinely performs comparative statics analysis based on mixed strategy equilibria to be an adequate justification.

³⁰ CIM page 5.

³¹ The Commission also noted that the Notifying Party's computation of the derivatives of the equilibrium distribution function on which the Notifying Party bases these appears to be incorrect. The Commission provided the correct derivatives of the mixed strategy equilibrium distribution function in a footnote to Annex II to the SO. The expressions were clearly different to the corresponding expressions given at page 5 of the Notifying Parties CIM.

³² More technically, the relevant derivative at the bottom of page 5 of the CIM is taken with respect to the number of contestable customers d while holding the number of non-contestable customers σ constant.

- (63) The above additional reasons further support the Commission's view that the Notifying Party's CIM is not informative for the assessment of this case.

PART III: ASSESSMENT OF THE QUALITY COMPETITION AND REPOSITIONING THEORETICAL MODEL

- (64) As discussed in section 7.5.7.3 of the Decision, the Notifying Party argues that quality is an important differentiating factor in the industry and that the merger will narrow the gap between Three and the market leader Vodafone in terms of quality of products and services. The Notifying Party argues that the merger will transform Three into a well-funded high-quality provider able to challenge the market-leader Vodafone in neck to neck competition to the benefit of consumers.³³
- (65) To this effect the Notifying Party has submitted a report on product repositioning and investments in quality which was accompanied by a theoretical economic model in a separate technical paper.³⁴ In the technical paper, the Notifying Party proposes a VPD model. On the basis of these papers the Notifying Party argues that the merger between Three Ireland and O2 would have a beneficial impact on investments and on competition.
- (66) In the Section 7.5.7.3 of the Decision, the Commission identified a number of flaws in the Notifying Party's analysis and assesses the points raised by the Notifying Party in the response to the SO. This Annex first describes the modelling framework chosen by the Notifying Party for its VPD model in more detail and recalls the main conclusions from which the Notifying Party derives from the model. The Annex then presents a simple alternative illustrative VPD model and shows that the Notifying Party's claims do not hold in an alternative standard equilibrium VPD model. This further confirms the Commission's conclusion in Section 7.5.7.3 of the Decision that the Notifying Party's VPD model has no informative value for the assessment of the present merger.

Summary of the Notifying Party's VPD model and the Notifying Party's claims derived from its model

- (67) The Notifying Party proposed a VPD model to evaluate the effects quality repositioning and investments in quality following the merger. The model compares a three-firm scenario in which each firm owns one product with a different quality to that of other firms and subsequently a two-firm scenario in which the two firms owning the products with the mid- and low-quality merge. It is assumed that the low quality product disappears from the market post-merger, that is, the merged entity will have only one product. The comparison of both scenarios is used to assess the effect of the merger. For each scenario, competition is modelled as a two stage game. In the first stage, firms choose how much to invest in the quality of their product. In the second stage, firms compete on price.
- (68) According to the Notifying Party, this VPD model demonstrates, first, that a merger which sufficiently increases the quality of the products of the merged entity

³³ Response to the Article 6(1)(c) Decision on efficiencies, page 7.

³⁴ Compass Lexecon: "Horizontal Merger Effects with Quality Competition and Repositioning", 26 November 2013, [Ref: 131126] [ID 1449] and Kalmus, P., Kamat, V. and V. Kumar (2013) "Mergers with repositioning and investments in quality" Paper presented by Compass Lexecon on behalf of Three, [Ref: 131125] [ID 1448].

compared to the pre-merger quality levels of the Parties' products³⁵ can have a competition-enhancing effect which can outweigh the negative effect of the loss of a competitor following the merger. Second, the merged entity and the market leader will have continued incentives to keep investing in quality to differentiate themselves from one another and avoid margin erosion resulting from increased head-to-head competition. The Notifying Party considers that the situation in the Irish market is such that the merger between Three and O2 is likely to generate these effects.

The Notifying Party's claims do not hold in an alternative standard equilibrium VPD model

- (69) To illustrate the shortcomings of the Notifying Party's VPD model and to test the robustness of the claims made by the Notifying Party within a simple and abstract VPD model, the Commission has analysed the effect of a merger on equilibrium investments and prices in a standard VPD model. The model in this section follows as close as possible the standard literature but extends it as required for example by analysing an oligopoly with three firms instead of a duopoly.³⁶ The Commission does not regard this alternative model as an appropriate model to evaluate the merger effect in this specific case.³⁷ Its sole purpose is to analyse the robustness of the claimed results from the Notifying Party's VPD model.
- (70) Consumers have utility function $U=\theta u-p$ if they buy one unit of the differentiated good, and $U=0$, if they do not buy. The symbols u and p denote quality and price of the good, while θ represents the taste parameter. It is assumed that the distribution of tastes is uniform and that $\theta \in [0,1]$ with unit density. Note that assuming that the highest value in the support equals 1 is a normalisation, whereas assuming that θ can be as low as zero implies that the market is not covered. This assumption is in line with the literature and is also made in Section 3 of the Notifying Party's VPD study. Qualities are ranked $u_1 > u_2 > u_3$.
- (71) Firms play a quality-then-price two-stage game, the cost of quality improvement falling upon fixed costs only according to the function $F(u_i)=(u_i-\bar{u}_i)^2/2$, where \bar{u}_i is the initial quality level. As in the Notifying Party's VPD model there are no variable costs of quality or of production.
- (72) First the initial conditions of the game are determined, starting from zero qualities. The pre-merger quality levels u_i are thus obtained endogenously rather than assumed as in the Notifying Party's VPD.
- (73) Then two different configurations are considered: (i) the situation absent the merger (N) with the three firms playing the quality then price game and adjusting the quality of their product to the desired new level; (ii) a merger scenario (M) between the firm with the low quality product and the firm with the mid quality product leading to a

³⁵ The Notifying Party refers to this as "product repositioning in a model without investments".

³⁶ See for instance Mussa, M. and Rosen, S. (1978): "Monopoly and Product Quality", *Journal of Economic Theory*, 18, pp. 301-317; Shaked, A. and Sutton, J. (1983): "Natural Oligopolies", *Econometrica*, 51, pp. 1469-1483; Motta, M (1993): "Endogenous Quality Choice: Price vs. Quantity Competition" *Journal of Industrial Economics*, Vol. 41, No. 2, pp. 113-131; Motta, M., Thisse, J.F and A. Cabrales (1997): "On the Persistence of Leadership or Leapfrogging in International Trade" *International Economic Review*, Vol. 38, No. 4, pp. 809-824;

³⁷ The Mathematica file used to produce this model has been provided to the Notifying Party on 13 December 2013.

situation post-merger situation where the merged entity's product has a quality level of $\bar{u}_2(1+s)$, where s represents the merger synergy expressed as the percentage improvement of the product quality level of the merged entity over the firm with the mid-quality product. Synergies are assumed to be non-negative, although the merger may well have a negative impact on the merged entity's perceived product quality. The two firms will then play the quality investment then price game. Two cases are assessed, one where $s=0$, and another where $s=10\%$ such as assuming that synergies are assumed to be very sizeable.

(74) To determine the initial conditions, that are the starting qualities, the game is solved by backward induction. The initial conditions may be interpreted as using the model to predict the current state of the industry.

(75) For given quality levels, the demand functions for the triopoly case are derived by identifying consumers that are indifferent between firms with adjacent product quality levels:

$$q_1(p_1, p_2, p_3) = 1 - \frac{p_1 - p_2}{u_1 - u_2}; q_2(p_1, p_2, p_3) = \frac{p_1 - p_2}{u_1 - u_2} - \frac{p_2 - p_3}{u_2 - u_3}; q_3(p_1, p_2, p_3) = \frac{p_2 - p_3}{u_2 - u_3} - \frac{p_3}{u_3}$$

(76) This implies the profit functions $\pi_i = p_i q_i(p_1, p_2, p_3) - u_i^2/2$ (at the beginning of the life of the industry, initial product quality is assumed to be zero). Equilibrium prices in the last stage of the game maximise these profits for given prices of rivals.

(77) After that, one can solve for the first stage of the game and obtain all the equilibrium values in the pre-merger situation (see Table 1).

(78) Absent the merger the three firms play a quality-then-price game again where the initial qualities \bar{u}_i are determined by the pre-merger game and investments can be made according to the cost function $F(u_i) = (u_i - \bar{u}_i)^2/2$, in order to increase quality from the initial level \bar{u}_i to the desired level u_i . Equilibrium qualities, prices, profits as well as consumer, producer and total welfare are provided in Table 1.

(79) The same way to proceed is then adopted to analyse the merger case. Two sub-cases are considered. In the first one (M), it is assumed that after the merger the low quality product disappears and the initial level of product quality for the merged firm is given by u_2 . In the second case (MS), it is assumed that the merger gives rise to very sizeable synergies, such that the initial level of product quality for the merged firm is given by $\bar{u}_2(1+10\%)$. Note that in both cases there will be only two firms, rather than three, playing the game. All equilibrium values are reported in Table 1.

(80) Table 7 shows the two main insights from the alternative VPD model described above. The first is that absent synergies the product quality of the merged firm, u_2 , decreases, while u_1 increases relative to the situation absent the merger. This implies that the merger does not necessarily increase investments by the merged entity. Both prices increase, and consumer welfare decreases.

Table 7: Model initial conditions and results under the different scenarios

$u_i(100)$	Pre-merger triopoly (initial conditions.)	Framework absent the merger (N)	Merger, no synergy (M)	Merger+synergies (MS)
u_1	25.26	50.53	50.6	50.64
u_2	4.97	9.94	9.77	10.19
u_3	0.95	1.9		
p_1	10.6	21.2	21.45	21.29
p_2	0.91	1.82	2.07	2.14
p_3	0.08	0.17		
q_1	52.25	52.25	52.53	52.65
q_2	27.21	27.21	26.27	26.32
q_3	11.36	11.36		
π_1	235	788	806	799
π_2	12	37	43	45
π_3	0.5	1.5		
CS	443	886	867	878
PS	248	827	849	844
W	691	1714	1716	1723

Source: model developed by the Commission for illustrative purposes

- (81) The second result is that, relative to the situation absent the merger, if there are synergies which lead to an increase by 10% of the product quality of the merged entity (as indicated above, there are also reasons to believe that the merged entity might reduce the product quality of the merged entity relative to the firm with the mid-quality product pre-merger), the qualities of both firms increase but prices also increase. Overall, consumer welfare also decreases in this case.
- (82) This second result shows that even under favourable assumptions on synergies which lead to increases in qualities of both firms, the decrease in competition caused by the reduction in competitors can outweigh the benefit from increased investments.
- (83) The Commission notes the analysis is complete in that it derives equilibrium quality levels, price and consumer welfare for all firms in each of the three scenarios and assesses the effects of the merger scenarios (M) and (MS) by comparing them to the situation absent the merger. In contrast, the Notifying Party's analysis did not derive full equilibrium outcomes in the different scenario and did hence not allow for internally consistent comparisons in their abstract model of the effect of a merger compared to the situation absent the merger.

Conclusion

- (84) The results from the alternative standard VPD model show that the Notifying Party's conclusions from its VPD model are not robust even in under favourable assumptions on merger synergies.
- (85) This further confirms the Commission's conclusion in Section 7.5.7.3 that the Notifying Party's VPD model has no informative value for the assessment of the present merger.

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CASE M.6992

**HUTCHISON 3G UK HOLDINGS LIMITED/
TELEFÓNICA IRELAND LIMITED**

COMMITMENTS TO THE EUROPEAN COMMISSION

22 MAY 2014

Pursuant to Article 8(2) of Council Regulation (EC) No 139/2004 (the *Merger Regulation*), Hutchison 3G UK Holdings Limited (*H3GUKH*) and Hutchison 3G Ireland Holdings Limited (*H3GIH*) hereby enter into the following commitments (the *Commitments*) vis-à-vis the European Commission (the *Commission*) with the view to rendering the acquisition of Telefónica Ireland Limited (*O2 Ireland*, together with H3GUKH and H3GIH, the *Parties*) (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 the 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 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 (the *Remedies Notice*).

A. DEFINITIONS

For the purpose of the Commitments, the following terms shall have the following meaning:

Affiliated Undertakings: means any undertakings controlled by the Parties and/or the ultimate parents of the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 of the Merger Regulation and in light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings.

Capacity Agreement: means an agreement between Three and the Upfront MVNO or the Second MVNO under which Three will make available capacity and wholesale access to the Three Network substantially on the terms set out in paragraphs 4 and 8 respectively.

Capacity Allocation: means an amount of capacity expressed as a percentage of the Three Network Total Capacity made available to each of the Upfront MVNO and the Second MVNO under a Capacity Agreement.

Closing: means the completion of the acquisition of O2 Ireland by H3GUKH or its nominee (*inter alia*) through the transfer of the share capital of O2 Ireland to H3GUKH or its nominee.

ComReg: means Ireland's Commission for Communications Regulation.

Confidential Information: means 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: means any conflict of interest that impairs the Trustee's objectivity and independence in discharging its duties under the Commitments.

Divestiture Trustee: means one or more natural or legal person(s), independent from the Parties, who is/are approved by the Commission and appointed by H3GIH, and who has/have received the exclusive mandate to make available the Capacity Allocation in accordance with the provisions in paragraphs 35 and 36.

Divestment Spectrum: means:

- (a) 2 x 5 MHz of 900 MHz spectrum in Time Slice 2 (13 July 2015 to 12 July 2030);
- (b) 2 x 10 MHz of 1800 MHz spectrum in Time Slice 2 (13 July 2015 to 12 July 2030);
and
- (c) 2 x 10 MHz of 2100 MHz spectrum for the remainder of the licence period until 24 July 2022.

Eircom: means eircom Limited, a company incorporated under the laws of Ireland under number 98789 whose registered office is at 1 Heuston South Quarter, St. John's Road, Dublin 8, and its affiliated undertakings including Meteor.

Eircom Offer: means as defined in paragraph 1.

HWL: means Hutchison Whampoa Limited.

Meteor: means Meteor Mobile Communications Limited a company incorporated under the laws of Ireland under number 282645 whose registered office is at 1 Heuston South Quarter, St. John's Road, Dublin 8, which is a wholly owned subsidiary of Eircom.

Monitoring Trustee: means one or more natural or legal person(s), independent from the Parties, who is/are approved by the Commission and appointed by H3GIH, and who has/have the duty to monitor H3GUKH and H3GIH's compliance with the conditions and obligations attached to the Decision.

MOU: means the draft Memorandum of Understanding attached as **Annex 1** which is to be entered into between H3GUKH (or an Affiliated Undertaking) and Eircom.

MVNO Entry Period: means the period of [...] from the Effective Date.

Network Share Agreement: means the network share agreement between O2 Ireland and Meteor dated 5 April 2011.

O2 Ireland: means Telefónica Ireland Limited, a company incorporated under the laws of Ireland under number 234895 whose registered office is at 28/29 Sir John Rogerson's Quay, Dublin 2.

Second MVNO: means as defined in paragraph 8.

Second MVNO Commercial Launch Date: means the date of the commercial launch of the Second MVNO.

Three: means Hutchison 3G Ireland Limited, a company incorporated under the laws of Ireland under number 316982 with its registered office at 3rd Floor, One Clarendon Row, Dublin 2.

Three Network: means the mobile communications network operated or used by Three in Ireland from time to time (including for the avoidance of doubt as it evolves through the integration of the O2 Ireland network, as well as components owned by Three and third parties) subject to any limitations contained in national roaming or infrastructure (including site) sharing agreements with third parties.

Three Network Total Capacity: means [...] * Gbps for data traffic and [...] * Erlangs for voice and SMS traffic, which is forecast to be achieved in 2018.

Trustee(s): means the Monitoring Trustee and/or the Divestiture Trustee as the context requires.

Trustee Divestiture Period: means the Trustee Divestiture Period I and the Trustee Divestiture Period II.

Trustee Divestiture Period I: means the period of [...] * from the end of the MVNO Entry Period.

Trustee Divestiture Period II: means the period of [...] * from the end of Trustee Divestiture Period I.

Upfront MVNO Commercial Launch Date: means the date of the commercial launch of the Upfront MVNO.

Upfront MVNO: means as defined in paragraph 4.

B. COMMITMENT TOWARDS EIRCOM RELATING TO NETWORK SHARING

1. H3GUKH and H3GIH commit to procure that Three and/or O2 Ireland will offer to Eircom that the existing Network Share Agreement is amended to become the amended and restated Network Share Agreement, including in particular the following amendments (*Eircom Offer*):

[...].

2. In order to achieve such a result, H3GUKH and H3GIH commit to make, or procure the making of, the Eircom Offer to Eircom on substantially the same terms as the

MOU attached as **Annex 1**. The Eircom Offer shall remain open until [...]*, unless otherwise extended by H3GUKH and/or H3GIH (or an Affiliated Undertaking).

3. H3GUKH and H3GIH will be deemed to have complied with the Commitment in this Section B upon the earlier of Eircom accepting the Eircom Offer and the Eircom Offer lapsing in accordance with paragraph 2.

C. COMMITMENT TO ENTER INTO A CAPACITY AGREEMENT WITH AN UPFRONT MVNO

4. H3GUKH and H3GIH commit to procure that Three will enter into a Capacity Agreement with an MVNO to be approved by the Commission (*Upfront MVNO*) on substantially the following terms:

- (a) Three will make available a minimum Capacity Allocation of [...]* for use by the Upfront MVNO on a non-transferable basis for a period of 5 years starting from the earlier of the Upfront MVNO Commercial Launch Date and the payment of the first annual fee referred to in sub-paragraph (f) in accordance with a reasonable capacity glide path leading to a [...]* Capacity Allocation in year 5 (such as [...]* in the first 5 years respectively);
- (b) in consideration of the use of the Capacity Allocation, the Upfront MVNO shall pay Three a fixed annual fee which can reflect an agreed discounted payment glide path in years 1 to 5;
- (c) during the 5 year term of the Capacity Agreement, the Upfront MVNO will have the option to increase the Capacity Allocation up to a maximum Capacity Allocation cap of 15%. If the Upfront MVNO exercises this option, the fixed annual fee shall increase in proportion to the increase in the Capacity Allocation based on the fee(s) payable for the applicable years remaining during the 5 year term. However, Three shall not be obliged to make available any additional capacity above the minimum [...]* Capacity Allocation unless and until the Three Network Total Capacity (as defined in Section A) has been achieved;
- (d) during the 5 year term of the Capacity Agreement, the Upfront MVNO will have the option to increase the Capacity Allocation in proportion to any increase in the size of the Three Network Total Capacity. If the Upfront MVNO exercises this option, the fixed annual fees during this period will increase in proportion to the increase in the Capacity Allocation based on the fee(s) payable for the applicable years remaining during the 5 year term. For the avoidance of doubt, if there is an increase in the Three Network Total Capacity during this period, the maximum Capacity Allocation cap of 15% shall apply to the increased Three Network Total Capacity;
- (e) at the end of the 5 year period, the Upfront MVNO will have the option to extend the term of the Capacity Agreement for a maximum additional period of 5 years (10 years in total). If the option to extend is exercised, the following will apply during any such additional period:

- (i) Three will continue to provide wholesale access to the Three Network on the basis of a Capacity Allocation model, in consideration for the payment of fixed annual fees. Three shall not provide wholesale access to the Upfront MVNO during years 6-10 on the basis of a different model;
 - (ii) the fixed annual fees for years 6-10 will be set out in the option to extend and shall be proportionate to the fees payable in years 1-5 excluding any discount agreed as part of the payment glide path in years 1-5;
 - (iii) the maximum Capacity Allocation cap of 15% shall continue to apply and the Upfront MVNO shall be entitled to (aa) increase its Capacity Allocation up to this 15% cap or (bb) reduce its Capacity Allocation in each year to an amount equivalent to its actual usage of the Three Network Total Capacity in the immediately preceding year; and
 - (iv) the Upfront MVNO will have the option to increase its Capacity Allocation in proportion to any increase in the size of the Three Network Total Capacity in consideration for the payment of an incremental fee calculated by reference to any increase in the operating costs of the Three Network between the 12 month period ending 31 December 2018 and the date when the option is exercised. Provided that this incremental fee shall not exceed an amount equal to the Upfront MVNO's then current % Capacity Allocation multiplied by the increase in the operating costs. For example, if the Upfront MVNO's Capacity Allocation is 10%, then the incremental fee would at a maximum equal 10% of the increase in operating costs. For the avoidance of doubt, if there is an increase in the Three Network Total Capacity during this period, the maximum Capacity Allocation cap of 15% shall apply to the increased Three Network Total Capacity;
- (f) the first annual fee for the Capacity Allocation shall be payable by the Upfront MVNO by a date no later than 12 months from the date of the signing of the Capacity Agreement or 12 months from the Effective Date, whichever is later; and
- (g) the Upfront MVNO will have the option to acquire the "48" brand (a sub-brand of O2 Ireland) and/ or the "48" customer base (being such number of "48" customers in existence as at the date the offer is accepted) at fair value and Three/ O2 Ireland will use its reasonable efforts to achieve an effective transfer of such customers. The option to acquire these customers will be exercisable by the Upfront MVNO at the time of entry into the Capacity Agreement and thereafter the offer will lapse.
5. The Concentration shall not be implemented before Three has entered into a final binding Capacity Agreement with the Upfront MVNO and the Commission has approved the Upfront MVNO and the terms of the Capacity Agreement in accordance paragraph 22.

6. H3GUKH and H3GIH will be deemed to have complied with the Commitment in this Section C upon approval by the Commission of the Upfront MVNO and Three having entered into the Capacity Agreement with the Upfront MVNO.
7. During the term of the Capacity Agreement (being the initial 5 year period and a maximum additional period of 5 years (up to 10 years in total)), H3GUKH and H3GIH shall procure that Three shall (i) make the Capacity Allocation available for use by the Upfront MVNO in accordance with paragraph 4 and in the manner described in **Annex 2** and (ii) provide the Upfront MVNO with the wholesale access services described in **Annex 2** together with technical assistance that may reasonably be required from time to time by the Upfront MVNO.

D. COMMITMENT TO ENTER INTO A CAPACITY AGREEMENT WITH A SECOND MVNO

8. H3GUKH and H3GIH commit to procure that Three will enter into a Capacity Agreement with one additional MVNO to be approved by the Commission (**Second MVNO**) on substantially the following terms:
 - (a) Three will make available a minimum Capacity Allocation of [...] * for use by the Second MVNO on a non-transferable basis for a period of 5 years starting from the earlier of the Second MVNO Commercial Launch Date and the payment of the first annual fee referred to in sub-paragraph (f) in accordance with reasonable capacity glide path leading to a [...] * Capacity Allocation in year 5 (such as [...] * in the first 5 years respectively);
 - (b) in consideration of the use of the Capacity Allocation, the Second MVNO shall pay Three a fixed annual fee which can reflect an agreed discounted payment glide path in years 1 to 5;
 - (c) during the 5 year term of the Capacity Agreement, the Second MVNO will have the option to increase the Capacity Allocation up to a maximum Capacity Allocation cap of 15%. If the Second MVNO exercises this option, the fixed annual fee shall increase in proportion to the increase in the Capacity Allocation based on the fee(s) payable for the applicable years remaining during the 5 year term. However, Three shall not be obliged to make available any additional capacity above the minimum [...] * Capacity Allocation unless and until the Three Network Total Capacity (as defined in Section A) has been achieved;
 - (d) during the 5 year term of the Capacity Agreement, the Second MVNO will have the option to increase the Capacity Allocation in proportion to any increase in the size of the Three Network Total Capacity. If the Second MVNO exercises this option, the fixed annual fees during this period will increase in proportion to the increase in the Capacity Allocation based on the fee(s) payable for the applicable years remaining during the 5 year term. For the avoidance of doubt, if there is an increase in the Three Network Total Capacity during this period, the maximum Capacity Allocation cap of 15% shall apply to the increased Three Network Total Capacity;

- (e) at the end of the 5 year period, the Second MVNO will have the option to extend the term of the Capacity Agreement for a maximum additional period of 5 years (10 years in total). If the option to extend is exercised, the following will apply during any such additional period:
- (i) Three will continue to provide wholesale access to the Three Network on the basis of a Capacity Allocation model, in consideration for the payment of fixed annual fees. Three shall not provide wholesale access to the Second MVNO during years 6-10 on the basis of a different model;
 - (ii) the fixed annual fees for years 6-10 will be set out in the option to extend and shall be proportionate to the fees payable in years 1-5 excluding any discount agreed as part of the payment glide path in years 1-5;
 - (iii) the maximum Capacity Allocation cap of 15% shall continue to apply and the Second MVNO shall be entitled to (aa) increase its Capacity Allocation up to this 15% cap or (bb) reduce its Capacity Allocation in each year to an amount equivalent to its actual usage of the Three Network Total Capacity in the immediately preceding year; and
 - (iv) the Second MVNO will have the option to increase its Capacity Allocation in proportion to any increase in the size of the Three Network Total Capacity in consideration for the payment of an incremental fee calculated by reference to any increase in the operating costs of the Three Network between the 12 month period ending 31 December 2018 and the date when the option is exercised. Provided that this incremental fee shall not exceed an amount equal to the Second MVNO's then current % Capacity Allocation multiplied by the increase in the operating costs. For example, if the Second MVNO's Capacity Allocation is 10%, then the incremental fee would at a maximum equal 10% of the increase in operating costs. For the avoidance of doubt, if there is an increase in the Three Network Total Capacity during this period, the maximum Capacity Allocation cap of 15% shall apply to the increased Three Network Total Capacity; and
- (f) the first annual fee for the Capacity Allocation shall be payable by the Second MVNO by a date no later than 12 months from the date of the signing of the Capacity Agreement.
9. H3GUKH and H3GIH commit to find a Second MVNO and to enter into a Capacity Agreement substantially on the terms set out in paragraph 8 within the MVNO Entry Period. H3GUKH and H3GIH further commit to procure that Three shall enter into good faith negotiations during the MVNO Entry Period with parties that reasonably request to enter into a Capacity Agreement with a view to concluding a Capacity Agreement and making the Capacity Allocation available for use by the Second MVNO in the manner described in **Annex 2**. In the course of such good faith negotiations and, dependent on the stage of negotiations, H3GUKH and H3GIH shall

procure that Three shall provide to potential Second MVNOs sufficient information as regards the available Capacity Allocation.

10. If Three has not entered into a Capacity Agreement with a Second MVNO by the end of the MVNO Entry Period, H3GIH shall grant the Divestiture Trustee an exclusive mandate to make available the Capacity Allocation in accordance with the provisions of paragraph 35 and 36.
11. H3GUKH and H3GIH will be deemed to have complied with the Commitment in this Section D if:
 - (a) by the end of the MVNO Entry Period, Three has entered into a Capacity Agreement with a Second MVNO in accordance with paragraph 8 and the Second MVNO and the Capacity Agreement have been approved by the Commission as being consistent with the Commitments in accordance with the procedure in Section F; or
 - (b) by the end of the Trustee Divestiture Period I, Three or the Divestiture Trustee has entered into a Capacity Agreement with a Second MVNO following the procedure in paragraph 35 and the Second MVNO and the Capacity Agreement have been approved by the Commission as being consistent with the Commitments in accordance with the procedure in Section F; or
 - (c) by the end of the Trustee Divestiture Period II, Three or the Divestiture Trustee has entered into a Capacity Agreement with the Second MVNO or the Upfront MVNO following the procedure in paragraph 36 and the Second MVNO (if applicable) and the Capacity Agreement have been approved by the Commission as being consistent with the Commitments in accordance with the procedure in in Section F.
12. During the term of the Capacity Agreement (being the initial 5 year period and a maximum additional period of 5 years (up to 10 years in total)), H3GUKH and H3GIH shall procure that Three shall (i) make the Capacity Allocation available for use by the Second MVNO in accordance with paragraph 8 and in the manner described in **Annex 2** and (ii) provide the Second MVNO with the wholesale access services described in **Annex 2** together with technical assistance that may reasonably be required from time to time by the Second MVNO.

E. COMMITMENT TO OFFER THE DIVESTMENT SPECTRUM

13. In order to enable either the Upfront MVNO or the Second MVNO (but not both) to develop into an MNO, H3GUKH and H3GIH commit to procure that Three will offer each of them the option to acquire, by way of transfer from Three, the rights of use to some or all of the Divestment Spectrum (at the election of the MVNO) (***Spectrum Option***). The Spectrum Option may be exercised by the Upfront MVNO or the Second MVNO for a period of ten years commencing from 1 January 2016 (***Spectrum Option Period***) subject to the following:
 - (a) once the Spectrum Option is exercised by either the Upfront MVNO or the Second MVNO (the ***Purchasing MVNO***), either in whole or in part, the Spectrum Option will no longer be available to the other MVNO;

- (b) the Spectrum Option is to be exercised by the Purchasing MVNO sending a written notice to Three indicating that it intends to exercise the Spectrum Option subject to the provisions of the Commitments;
 - (c) the Spectrum Option may only be exercised by the Upfront MVNO or the Second MVNO if there is a Capacity Agreement in place between it and Three, otherwise its right to exercise the Spectrum Option will lapse;
 - (d) if the Purchasing MVNO exercises the Spectrum Option to acquire the rights to use only part of the Divestment Spectrum, the Spectrum Option with respect to the remaining Divestment Spectrum will continue to be available to the Purchasing MVNO until the end of the Spectrum Option Period and subparagraph (c) shall not apply to the further exercise of the Spectrum Option in respect of the remaining Divestment Spectrum. At the end of the Spectrum Option Period, any remaining part of the Spectrum Option will lapse; and
 - (e) the Spectrum Option may only be exercised by the Upfront MVNO or the Second MVNO (as the case may be) if it demonstrates to the Monitoring Trustee (at the time it first seeks to exercise the Spectrum Option) that it has a concrete business plan to use the Divestment Spectrum to become an MNO within a reasonable period of time following the first exercise of the Spectrum Option.
14. H3GUKH and H3GIH commit to procure that Three shall offer (i) the rights of use to the 1800 MHz and 2100 MHz Divestment Spectrum at no minimum price but shall not be obliged to transfer this Divestment Spectrum at [...]*
15. If the transfer of the rights of use to the Divestment Spectrum is subject to ComReg approval then the Commitment in paragraph 13 shall be conditional on that approval.
16. Upon the Spectrum Option being exercised by the Purchasing MVNO either in whole or in part, H3GUKH and H3GIH shall no longer be required to procure that Three makes available the Capacity Allocation to the Purchasing MVNO, and Three shall have the right to terminate the applicable Capacity Agreement, subject to providing a reasonable transitional period which shall be agreed between Three and the Purchasing MVNO by reference to its business plan to become an MNO. If Three and the Purchasing MVNO cannot agree a transitional period, the matter shall be determined by the Commission, following a report from the Monitoring Trustee, and having heard representations from H3GUKH/H3GIH and the Purchasing MVNO.
17. If the Spectrum Option is exercised in accordance with this Section, H3GUKH and H3GIH commit to procure that Three shall clear and transfer the Divestment Spectrum within a period of 6 months from the date of the exercise of the Spectrum Option.
18. If at any point following the transfer of the Divestment Spectrum until the expiry of the applicable rights of use under the relevant spectrum licences (i) the Purchasing MVNO is no longer independent of and unconnected to any mobile network operator active in Ireland or (ii) the Purchasing MVNO seeks to transfer the rights of use to the Divestment Spectrum to a third party, Three shall have the right, subject to applicable

approvals under Irish and/or EU law, to re-acquire the rights of use to the Divestment Spectrum by way of transfer from the Purchasing MVNO at the same price as the Purchasing MVNO has paid to Three and, in such circumstances, the Purchasing MVNO shall be required to clear and return the Divestment Spectrum to Three within a period of 6 months from the date of Three exercising its rights to re-acquire the Divestment Spectrum. Provided that (i) above shall not prevent the Purchasing MVNO entering into network sharing, spectrum pooling or roaming agreements with mobile network operators in Ireland.

19. When Three has reached or is about to reach a legally binding agreement with the Purchasing MVNO to transfer all or part of the Divestment Spectrum, H3GUKH and H3GIH shall provide the Commission with a copy of the agreement and a reasoned statement in writing, enabling the Commission to verify that the commitment to transfer the rights of use to some or all of the Divestment Spectrum has been fulfilled in a manner consistent with these Commitments.
20. H3GUKH and H3GIH will be deemed to have complied with the commitment in this Section E upon the earlier of the acquisition of the rights of use to the Divestment Spectrum by the Upfront MVNO or the Second MVNO and the option lapsing in accordance with paragraph 13.

F. CRITERIA FOR APPROVAL OF THE UPFRONT AND SECOND MVNO

21. In order to be approved by the Commission, the Upfront MVNO or the Second MVNO must:
 - (a) be independent of and unconnected to Three or any mobile network operator active in Ireland;
 - (b) possess the financial resources, proven expertise and incentive to be a viable and active competitive force in competition with Three and other competitors on the Irish market for mobile communications to end customers. Companies which fulfil the aforementioned criteria may (*inter alia*) include existing MVNOs in or outside Ireland, companies with telecoms activities, specialised electronic retailers in or outside Ireland or mass market retailers in Ireland; and
 - (c) neither be likely 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, the MVNO must reasonably be expected to obtain all necessary approvals (if required) from the relevant regulatory authorities to operate as an MVNO in Ireland.
22. The final binding Capacity Agreement shall be conditional on the Commission's approval. When Three has reached, or is about to reach, an agreement with the relevant MVNO, H3GUKH and H3GIH shall provide a reasoned proposal including a copy of the final Capacity Agreement, within one week to the Commission and the Monitoring Trustee. H3GUKH and H3GIH must be able to demonstrate to the Commission that the MVNO fulfils the criteria in paragraph 21 and that the Capacity Agreement is being entered into in a manner consistent with the Commission's

Decision and the Commitments. For the approval, the Commission shall verify that the relevant MVNO fulfils criteria in paragraph 21 and that the Capacity Agreement is being entered into in a manner consistent with the Commitments.

G. TRUSTEE

Appointment procedure

23. H3GIH shall appoint a Monitoring Trustee to carry out the functions specified in paragraph 32 below. H3GUKH and H3GIH commit not to close the Concentration before the appointment of a Monitoring Trustee.
24. If Three has not entered into a Capacity Agreement with a Second MVNO before the end of the MVNO Entry Period or if the Commission has rejected an MVNO proposed by H3GUKH and H3GIH at that time or thereafter, H3GIH shall appoint a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Trustee Divestiture Period.
25. The Trustee shall, at the time of the appointment, be independent of the Parties and their Affiliated Undertakings, possess the necessary qualifications to carry out its mandate, including telecoms sector expertise, and shall neither have nor become exposed to a Conflict of Interest.
26. The Trustee shall be remunerated by H3GIH in a way that does not impede the independent and effective fulfilment of its mandate.

Proposal by H3GUKH and H3GIH

27. No later than two weeks after the Effective Date, H3GUKH and H3GIH shall submit the name or names of one or more natural or legal persons whom they propose H3GIH appoint as the Monitoring Trustee to the Commission for approval. No later than one month before the end of the MVNO Entry Period or on request by the Commission, H3GUKH and H3GIH shall submit a list of one or more persons whom they propose H3GIH appoint as Divestiture Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the proposed Trustee fulfils the requirements set out in paragraph 25 and shall include:
 - (a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under the Commitments;
 - (b) the outline of a work plan, which describes how the Trustee intends to carry out its assigned tasks; and
 - (c) an indication whether it is anticipated that the proposed Trustee is to act as both Monitoring Trustee and Divestiture Trustee or whether different trustees may be proposed for the two functions.

Approval or rejection by the Commission

28. The Commission shall have the discretion to approve or reject the proposed Trustee(s) and to approve the proposed mandate subject to any modifications it deems necessary for the Trustee to fulfil its obligations. If only one name is approved, H3GIH shall appoint or cause to be appointed, the person or persons concerned as Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, H3GIH shall be free to choose the Trustee to be appointed from among the names approved. The Trustee shall be appointed within 1 week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal by H3GUKH and H3GIH

29. If all the proposed Trustees are rejected, H3GUKH and H3GIH shall submit the names of at least 2 more natural or legal persons within 1 week of being informed of the rejection, in accordance with paragraphs 23 and 28 of these Commitments.

Trustee nominated by the Commission

30. If all further proposed Trustees are rejected by the Commission, the Commission shall nominate a Trustee, whom H3GIH shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission. This Trustee shall also fulfil the requirements set out in paragraph 25.

Functions of the Trustee

31. The Trustee shall assume its specified duties and obligations in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Trustee or H3GUKH or H3GIH, give any orders or instructions to the Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

Duties and obligations of the Monitoring Trustee

32. The Monitoring Trustee shall:
- (a) 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;
 - (b) monitor compliance by H3GUKH and H3GIH with the obligations and conditions provided in Sections B-E of the Commitments;
 - (c) review and assess potential parties that are interested in concluding a Capacity Agreement as the Second MVNO and verify that, dependent on the stage of the divestiture process, these interested parties receive sufficient and correct information relating to the conclusion of a Capacity Agreement;
 - (d) act as a contact point for any requests by third parties, in particular potential Second MVNOs, in relation to the Commitments;

- (e) following the signing of the Capacity Agreement with the Upfront MVNO and the Second MVNO, monitor developments regarding the commercial launch of the Upfront MVNO and the Second MVNO;
- (f) following the Upfront MVNO Commercial Launch Date and the Second MVNO Commercial Launch Date be available to receive any complaints from the Upfront MVNO and the Second MVNO regarding Three's compliance with the Commitments in Sections C and D;
- (g) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision;
- (h) propose to H3GUKH and H3GIH such measures as the Monitoring Trustee considers necessary to ensure their compliance with the conditions and obligations in the Commitments;
- (i) in order for the Commission to assess whether H3GUKH and H3GIH are complying with its obligations under the Commitments, provide to the Commission, sending H3GIH a non-confidential copy at the same time, written report(s) in accordance with the following:
 - (i) a written report covering developments in relation to the Eircom Offer to be provided within 15 calendar days of the end of every month from the appointment of the Monitoring Trustee until H3GUKH and H3GIH have been deemed to have complied with the Commitment in Section B in accordance with paragraph 3;
 - (ii) a written report covering developments in relation to the negotiation of the Capacity Agreement with the Upfront MVNO and the Second MVNO to be provided within 15 calendar days of the end of every month from the appointment of the Monitoring Trustee until the end of the MVNO Entry Period;
 - (iii) a written report covering developments in relation to the commercial launch of the Upfront MVNO and (if applicable) the Second MVNO to be provided within 15 calendar days of the end of every quarter from the entering into of the relevant Capacity Agreement until the Upfront MVNO Commercial Launch Date and (if applicable) the Second MVNO Commercial Launch Date respectively; and
 - (iv) a written report covering developments in relation to the exercise of the Spectrum Option as contemplated in Section E (including the determination pursuant to paragraph 13(e) and the determination of the transitional period pursuant to paragraph 16) to be provided within 15 calendar days of the end of every month following notification that the Upfront MVNO or Second MVNO (as the case may be) wish to exercise the Spectrum Option and until the Divestment Spectrum (or part thereof) has been transferred;
- (j) in addition to these periodic reports, promptly report in writing to the Commission, sending H3GIH a non-confidential copy at the same time, if it

concludes on reasonable grounds that H3GUK and H3GIH are failing to comply with any of the Commitments;

- (k) within one week after receipt of the documented proposal referred to in paragraph 22 of these Commitments, submit to the Commission, sending H3GIH a non-confidential copy at the same time, a reasoned opinion as to the suitability and independence of the proposed Upfront MVNO or Second MVNO (as the case may be) and whether the Capacity Agreement is being entered into in a manner consistent with the conditions and obligations attached to the Decision.

- 33. The documents provided for above shall be prepared in English.
- 34. If the Monitoring and Divestiture Trustee are not the same persons, the Monitoring Trustee and the Divestiture Trustee shall cooperate closely with each other during and for the purpose of the preparation of the Trustee Divestiture Period in order to facilitate each other's tasks.

Duties and obligations of the Divestiture Trustee

- 35. Within Trustee Divestiture Period I, the Divestiture Trustee shall:
 - (a) offer, on behalf of Three, to make available to a Second MVNO a [...] Capacity Allocation for use on a non-transferable basis for a period of 5 years with a reasonable capacity glide path in accordance with paragraph 8 at a (capacity unit) price which is not less than [...] of the pro rata price payable under the terms of the Capacity Agreement with the Upfront MVNO in years 1-5; and
 - (b) enter into on behalf of Three or cause Three to enter into, a Capacity Agreement with the Second MVNO substantially in accordance with the terms at paragraph 8, provided that the Commission has approved the Second MVNO and the Capacity Agreement in accordance with Section F.
- 36. If Three or the Divestiture Trustee has not entered into a Capacity Agreement with a Second MVNO by the end of the Trustee Divestiture Period I, then within the Trustee Divestiture Period II, the Divestiture Trustee shall:
 - (a) offer, on behalf of Three, to make available to a Second MVNO or the Upfront MVNO, at [...]*, a [...]* Capacity Allocation for use on a non-transferable basis for a period of 5 years with a capacity glide path under which the Capacity Allocation would be fixed at [...]* in each of the 5 years respectively. Any increase in this fixed Capacity Allocation or extension of the term of 5 years shall be made available on the same terms and subject to the same limits as set out in the Capacity Agreement with the Upfront MVNO; and
 - (b) enter into on behalf of Three or cause Three to enter into, a Capacity Agreement with the Second MVNO or the Upfront MVNO a Capacity Agreement in accordance with the terms of sub-paragraph (a) provided that

the Commission has approved the Second MVNO (if applicable) and the Capacity Agreement in accordance with Section F.

37. The Divestiture Trustee shall make the Capacity Allocation available for use by the Second MVNO in the manner described in **Annex 2**, and shall provide that Three shall provide the Second MVNO with the wholesale access services described therein together with technical assistance that may reasonably be required from time to time by the Second MVNO.
38. Notwithstanding the provisions in paragraphs 35 and 36, the Divestiture Trustee shall act prudently to protect the legitimate financial, legal and operational interests of H3GUKH, H3GIH and Three and shall negotiate reasonable terms for the Capacity Agreement with the Second MVNO.
39. In the Trustee Divestiture Period (or otherwise at the Commission's request), the Divestiture Trustee shall provide the Commission with a comprehensive monthly written report written in English on the progress of the process to enter into a Capacity Agreement with a Second MVNO. Such reports shall be submitted within 15 days after the end of every month with a simultaneous copy to the Monitoring Trustee and a non-confidential copy to H3GIH.

Duties and obligations of H3GUKH and H3GIH

40. H3GUKH and H3GIH shall provide and shall cause its advisors to provide the Trustee with all such co-operation, assistance and information as the Trustee may reasonably require to perform its tasks. The Trustee shall have full and complete access to any of Three's business books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments. H3GUKH and H3GIH shall, and commits to procure that Three shall, provide the Trustee upon request with copies of any document which is relevant for the fulfilment of the tasks of the Trustee. H3GUKH and H3GIH shall procure that Three makes available to the Trustee one or more office(s) on its premises, and that Three shall be available for meetings in order to provide the Trustee with all information necessary for the performance of its tasks.
41. H3GUKH and H3GIH shall submit written reports in English on potential parties that are interested in concluding the Capacity Agreement with the Second MVNO, and on developments in the negotiations with such interested parties, to the Commission and the Monitoring Trustee no later than 10 days after the end of every month following the Effective Date, or otherwise at the Commission's request.
42. H3GUKH and H3GIH shall inform the Commission and the Monitoring Trustee of the receipt of a written notice within the meaning of paragraph 13(b) (i.e., a notice from the Upfront MVNO or the Second MVNO indicating that it intends to exercise the Spectrum Option) no later than 10 days following receipt of such notice.
43. H3GUKH and H3GIH shall procure that its advisors provide the Monitoring Trustee, on request, with the information submitted to all third parties that express an interest in becoming the Second MVNO and keep the Monitoring Trustee informed of all developments in the negotiation process.

44. H3GUKH and H3GIH shall procure that Three shall grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to conclude the Capacity Agreement with the Second MVNO in accordance with these Commitments, and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to conclude the Capacity Agreement with the Second MVNO in accordance with these Commitments, including the appointment of advisors in accordance with paragraph 46 to assist it in the conclusion of the Capacity Agreement. Upon request of the Divestiture Trustee, H3GUKH and H3GIH shall cause the documents required to effect the entry into of a Capacity Agreement with a Second MVNO to be duly executed.
45. H3GIH shall indemnify the 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 H3GUKH or H3GIH for, any liabilities arising out of the performance of the 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 Trustee, its employees, agents or advisors.
46. At the expense of H3GIH, the Trustee may appoint advisors which are independent of the Parties (in particular for legal advice), subject to H3GIH's prior approval (this approval not to be unreasonably withheld or delayed) if the Trustee reasonably considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under its mandate, provided that any fees and other expenses incurred by the Trustee are reasonable. Should H3GIH refuse to approve the appointment of advisors proposed by the Trustee, the Commission may approve the appointment of such advisors, after having heard representations from H3GIH. Only the Trustee shall be entitled to issue instructions to any appointed advisors. Paragraph 45 shall apply to the advisors *mutatis mutandis*. Subject to the consent of H3GUKH and H3GIH, the relevant advisors and any conflict of interest, in the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served H3GUKH and H3GIH during the MVNO Entry Period if the Divestiture Trustee considers this in the best interest of achieving an expedient entry into of a Capacity Agreement.
47. H3GUKH and H3GIH agree that the Commission may share Confidential Information proprietary to them with the Trustee. The Trustee shall not disclose such information and the principles contained in Article 17 (1) and (2) of the Merger Regulation apply *mutatis mutandis*.
48. H3GUKH and H3GIH agree 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, in particular any potential Second MVNOs, of the identity and the tasks of the Monitoring Trustee.
49. 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.

Replacement, discharge and re-appointment of the Trustee

50. If the Trustee ceases to perform its functions under the Commitments or for any other good cause, including exposure to a Conflict of Interest:
- (a) the Commission may, after hearing the Trustee and H3GIH, require H3GIH to replace the Trustee; or
 - (b) H3GIH, with the prior approval of the Commission, may replace the Trustee.
51. If the Trustee is removed according to paragraph 50 of these Commitments, the Trustee may be required to continue in its function until a new Trustee is in place to whom the outgoing Trustee has effected a full hand-over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs 23 to 30 of these Commitments.
52. Besides the removal according to paragraph 50 of these Commitments, the Trustee shall cease to act as Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Trustee if it subsequently appears that the Commitments might not have been fully and properly implemented.

H. FINAL PROVISIONS

I. REVIEW

53. The Commission may extend the time periods foreseen in the Commitments in response to a request from H3GUKH or H3GIH or, in appropriate cases, on its own initiative. Where H3GUKH or H3GIH request 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 H3GIH. Only in exceptional circumstances shall H3GUKH or H3GIH be entitled to request an extension within the last month of any period.
54. The Commission may further, in response to a reasoned request from H3GUKH or H3GIH showing good cause waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in the 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 H3GIH. 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.
55. In determining whether exceptional circumstances may justify a waiver, modification or substitution of the Commitments at the request of H3GUKH or H3GIH, the Commission will take into account *inter alia* significant changes in market circumstances, applicable laws and/or the regulatory environment.

II ENTRY INTO FORCE

56. The Commitments shall take effect upon the date of adoption of the Decision.

[signature]

Name: [...]*

Date: 22 May 2014

Duly authorised on behalf of Hutchison 3G UK Holdings Limited and Hutchison 3G Ireland Holdings Limited

Annex 1 – draft MOU with Eircom

[...]*

Annex 2

1. In this Annex:

- Section A explains how the Capacity Allocation for both data and voice traffic is calculated.
- Section B describes the interconnection points between the MVNO's network and Three's network as well as the technical controls that will be implemented to make available the Capacity Allocation.
- Section C broadly describes the MVNO wholesale access services which are included in the fixed annual fee paid by the MVNO for its Capacity Allocation.

For the avoidance of doubt, the descriptions in this Annex 2 are provided for background information purposes only, and do not constitute representations and warranties to the MVNO.

A. Calculation of the Capacity Allocation

2. The key principles for determining and making available the Capacity Allocation are as follows:

- A dedicated "pipe" from the Three network for each of voice and data traffic will be allocated to the MVNO.
- The size of each pipe will represent a percentage of the total Packet Switched capacity and Circuit Switched capacity in the Three network (i.e. the post-merger consolidated network of Three and O2 Ireland¹).
- The Capacity Allocation will be defined in Gigabits per second (*Gbps*) for Packet Switched traffic, and in Erlangs (*Erl*) for Circuit Switched traffic.

B. Interconnection with the Three Network

3. The implementation of the MVNO onto the Three network will be in accordance with a standard MVNO agreement and architecture. The MVNO must have its own Circuit Switched core network and Packet Switched core network and these will interconnect with Three's Packet Switched and Circuit Switched Networks respectively.

Packet Switched Interconnection – 15% Capacity Allocation Example

4. The enabling of [...] of bandwidth between the MVNO and the Three Packet Switched core networks would require the provision of four [...] Ethernet links. This is to allow for resilience in case of failure. Under normal conditions only two of the links will be used giving a possible [...] between the networks.

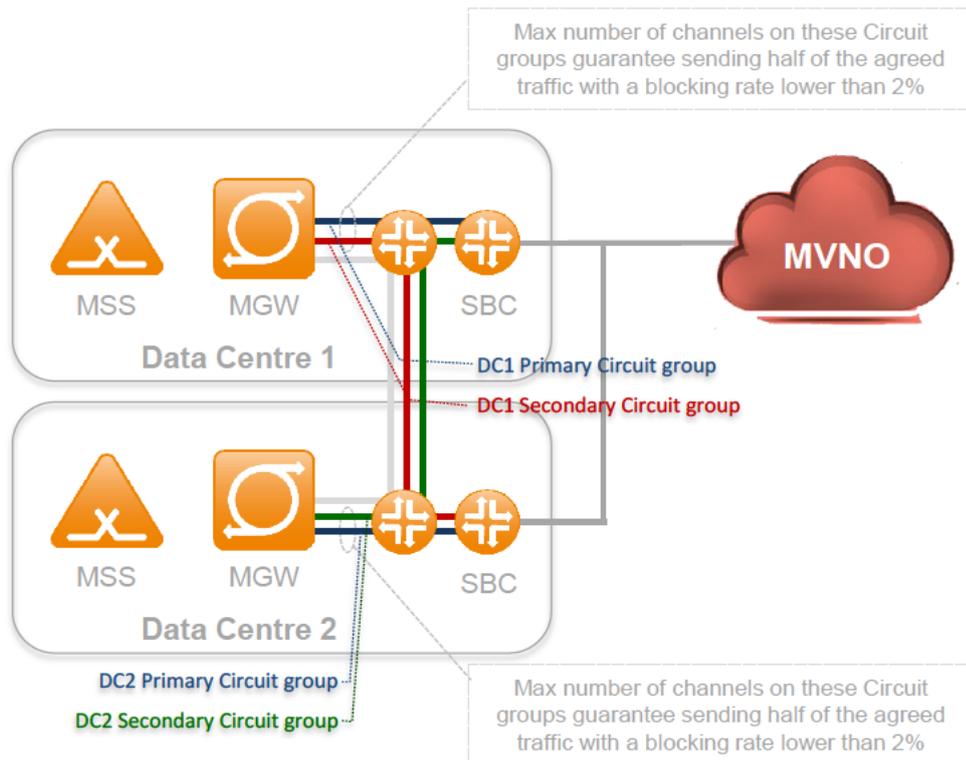
[...]*

¹ [...]*.

5. Bandwidth control would be implemented as follows:
- To ensure that the maximum delivered bandwidth does not exceed [...]*, a limit on the links will be required.
 - To enforce this limit, a quality of service software feature known as a traffic policing will be configured on the IP gateways. This feature is implemented using a token bucket principle. The IP gateway will allocate a bucket of defined size to allow for a maximum transmission rate (in this case [...]*)).
 - All Packet Switched traffic traversing this link will be treated equally.
 - Within the Three Packet Switched core network, both the Three and the MVNO traffic will be treated equally utilising the same quality of service values.
 - The MVNO will be able to monitor the bandwidth traversing the data interconnect in terms of throughput and performance. The MVNO will be able to readily identify if there is any capping of traffic below the [...]* threshold.

Circuit Switched Interconnection – 15% Capacity Allocation Example

6. The limit on voice traffic for the MVNO to [...]* would be implemented in a way which ensures resiliency and a blocking probability lower than 2%. This would be carried out as follows:
- (a) Three's data centres will be connected to the MVNO's Circuit Switched core network on SIP-I for voice. Three circuit groups will be created on the MGWs of each data centre, namely: Primary, Secondary and Overflow. The Primary and the Secondary circuit groups will be connected to the SBCs and from there to the MVNO core on SIP-i. The Overflow circuit group will connect the Three MGWs in one data centre to the MGWs in the other data centre on BICC.



(b) SBC resiliency:

- (i) The Primary circuit groups in each data centre will connect to the SBC of the same data centre. The Secondary circuit groups will connect the MGWs of one data centre to the SBC of the other data centre. Each MGW will therefore be connected to both SBCs guaranteeing no service impact in case that one SBC goes down.

(c) Simultaneous calls limitation:

- (i) It is standard to define the size of a SIP-I circuit group in terms of channels or simultaneous calls. The number of channels allocated to the Primary and Secondary circuit groups of each individual site will be dimensioned to carry not more than half of the traffic agreed with the MVNO with a blocking probability of the virtual circuit group lower than 2%.
- (ii) If the Primary and Secondary circuit groups from one data centre were congested because half of the maximum agreed traffic had been reached, the traffic will overflow to the other data centre via the Overflow circuit groups. The MGWs in the other data centre will forward the traffic to their SIP-I connections until the other half of the maximum agreed traffic is reached. The objective of this is to maximize the utilization of the SIP-I circuit groups preventing call dropping caused from unbalanced traffic between sites.

SMS Design

7. The MVNO will have its own SMSC. SMS traffic will be routed on the same links as the voice interconnects to the MVNO. SMS traffic is carried in the control plane of the links alongside all the signalling. It only constitutes a very small proportion of the overall bandwidth so therefore it is not practical to dimension the circuit switch interconnect specifically for SMS. The practical solution for SMS is to ensure that a fair usage policy is agreed with the MVNO.
8. Within the MSSs, Global Title (GT) analysis is performed. When the GT for the MVNO's SMSC is used, the MSS will route the signalling towards a dedicated signalling link to this SMSC, upon which only SMS traffic will be permitted. This signalling link is associated to a VLAN, which is connected to a router which can be used to manage the amount of signalling traffic throughput, thereby limiting the amount of SMSs that may be passed to the MVNO's SMSC at any given time.

C. MVNO Wholesale Access Services

9. The following services will be included in the fixed annual fee paid by the MVNO for its Capacity Allocation:
 - a) wholesale access to the Three Network for the origination and termination of circuit switched, SMS, packet switched data (including MMS) services to MVNO customers. For the the avoidance of doubt, such wholesale access will enable the MVNO (using its own core network) to provide services to MVNO customers such as call forwarding, caller line identification services, multi-party call services, call waiting, and call transfer;
 - b) wholesale access to the Three Network for the provision by MVNO of its value added services to MVNO customers;
 - c) call routing to MVNO and location data for emergency call delivery services; and
 - d) location data and real time CDRs for legal interception services with respect to the MVNO customers.

The technical specification for the services and the network access requirements will be made available on request and without undue delay.

10. The above wholesale access services are available using the mobile network technologies which Three uses to deliver services to its customers from time to time (UMTS, HSPA, HSDPA and LTE as well as GSM and GPRS to the extent available under its 2G and 2.5G roaming arrangements).
11. Subject to paragraph 12, the MVNO shall be responsible for making its own arrangements to meet its obligations as a public communications network operator under Irish law.
12. In response to reasonable requests, Three shall provide additional services (to those services referred to at 9 (c) and (d) above) with respect to the provision of emergency call delivery services, legal intercept services, numbering by MVNO and assistance

with respect to the MVNO's integration into and participation in the mobile industry's porting database. The provision of any such assistance by Three shall be charged at a price not below Three's incremental cost in providing the service.

13. Three shall consider reasonable requests for additional services other than those set out in paragraph 9 and 12 above (to the extent that it is within Three's technical capability and functionality to provide such additional services) including:
 - (a) the provision of all or part of the core network infrastructure such as the interconnection between the Three and the MVNO, or between the MVNO and other mobile or fixed network operators;
 - (b) the provision of a mobile number portability platform;
 - (c) transit or routing services; or
 - (d) international roaming services.

The provision of any such services by Three shall be subject to separate negotiation and agreement between Three and the MVNO of the terms and conditions (taking into account the investment and operational expenditures made by Three and allowing for a reasonable rate of return on the investment and these expenditures).

14. Three shall supply the same quality of service and coverage to the MVNO in respect of the MVNO customers as it does to its own customers.