VIRGIN MEDIA'S OBSERVATIONS ON THE ANTICIPATED ACQUISITION BY BT GROUP PLC ("BT") OF EVERYTHING EVERYWHERE ("EE")

1. EXECUTIVE SUMMARY

1.1 This memorandum sets out the observations of Virgin Media (**"VM"**) in respect of the anticipated acquisition by BT Group PLC (**"BT"**) of Everything Everywhere (**"EE"**) (the **"Proposed Transaction"**).

1.2 The Proposed Transaction is an important development in the rapidly evolving UK communications sector, and comes at a time when further consolidation is expected with the proposed merger of O2 and Three. In particular, communications providers are positioning themselves through commercial agreements, consolidation and organic growth to be able to offer a broader range of fixed, pay TV and mobile services to residential and business customers.

1.3 In that context, the Proposed Transaction will create an operator with a leading position in respect of several key retail communication services (fixed line telephony, broadband and mobile) and advantages in pay TV due to vertical integration. Whilst the merged entity will be able to self-supply, on a national basis, high speed fibre products, 4G mobile services and exclusive pay TV content, it will also be a key, and in some cases the only, provider of those wholesale inputs to downstream retail rivals.

1.4 VM is a wholesale customer of EE and offers mobile services to its subscribers using EE's mobile network through a mobile virtual network operator (**"MVNO"**) arrangement. VM offers a broad range of mobile communications products and services, including mobile voice services and data services (such as SMS and picture messaging), and mobile broadband services which complement the fixed broadband offering. VM is also a wholesale customer of BT for exclusive sports content which is an important element of many of VM's retail propositions.

1.5 VM is not in principle opposed to the Proposed Transaction, but has identified certain concerns in relation to the Proposed Transaction that VM considers the CMA should take into account as part of its assessment, namely that:

(a) the Proposed Transaction will remove competition from BT in connection with both:

(i) the provision of retail mobile telephony services. Absent the Transaction, BT would have provided independent retail mobile telephony services using existing mobile radio spectrum, WiFi and MVNO arrangements. Although at the early stages in developing its mobile business, BT would have been a significant competitor to both MNOs (including EE) and MVNOs; and

(ii) in the medium term, the potential provision of wholesale MVNO services; and

(b) as a result of changed incentives of the merged entity, the Proposed Transaction will result in a potential loss of competition from VM as it may not be able to secure access to MVNO services **[REDACTED]** on commercially viable and competitive terms from the merged entity. This is because:

(i) **[REDACTED]**;

(ii) **[REDACTED]**;

(iii) the anticipated O2/Three merger will further reduce the theoretically available providers of wholesale MVNO services from four to three; and

(iv) Vodafone, the only MNO other than the merged entity with 2.6GHz mobile spectrum holdings (i.e. spectrum best suited for high capacity 4G services in urban areas), appears to have chosen not to enter into MVNO deals with any significant retail rivals, and has indicated in public statements that incentives to offer attractive MVNO arrangements are not always clear.

1.6 VM has identified the following remedies which would, in combination, remedy, mitigate or prevent this risk of a substantial lessening of competition from arising:

(a) **[REDACTED]**;

(b) **[REDACTED]**; and

(c) an obligation on the merged entity to supply MVNO services on fair, reasonable and non-discriminatory terms (including the same level of services as are made available to BT and EE's mobile customers). This is required to ensure that, following the Proposed Transaction, MVNOs (including VM) are able to access the necessary wholesale MVNO services on competitive terms such as to ensure effective competition in the retail provision of retail mobile telephony (both under existing arrangements and when new arrangements are negotiated). This is particularly important in relation to 4G retail services because, as a result of the Proposed Transaction, all of the 2.6GHz spectrum best suited for high capacity 4G services in urban areas will be in the hands of only two MNOs (i.e. BT/EE and Vodafone).

2. INTRODUCTION

2.1 VM, a subsidiary of Liberty Global plc, is an entertainment and communications business which provides fixed line telephony, mobile telephony, broadband and TV services to residential and (in relation to some services) commercial customers in the UK. VM owns and operates a cable network that, as of 31 December 2014, passed approximately 12.6 million addressable homes in the UK and provides services to approximately 5 million cable customers.[1]

2.2 This memorandum provides VM's preliminary comments on the anticipated acquisition by BT of EE:

(a) Section 3 provides an overview of the market landscape;

(b) Section 4 outlines VM's market position as a provider of communications services and its objective to become a more effective competitor in relation to mobile services (and packages containing mobile services) by moving from the current thin MVNO model to a thick MVNO model;

(c) Sections 5 to 7 set out the main concerns which VM has identified in relation to the Proposed Transaction; and

(d) Section 8 outlines the remedies that VM considers will be necessary to address effectively the restrictions of competition arising from the Proposed Transaction.

3. AN EVOLVING MARKET LANDSCAPE

3.1 The markets in which VM, and other communications providers, operate are evolving and the ability to offer a range of attractive retail services is becoming increasingly important. This trend is reflected in recent deals and agreements in the market, for example:

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[1] VM's Consolidated Financial Statements 31 December 2013 and 2014, published March 2015 http://www.libertyglobal.com/pdf/fixed-income/Virgin-Media-December-31-2014-FINAL.pdf.

(a) the Proposed Transaction itself, which will create an operator with a leading position in respect of several key retail communication services (fixed line telephony, broadband and mobile) and advantages in pay TV due to vertical integration;

(b) prior to the announcement of the deal with BT, EE launched a pay TV service[2] (in October 2014) which is offered free to all EE mobile customers who sign up to an EE broadband plan;

(c) Vodafone launched a consumer broadband services in June 2015, using its Cable and Wireless fibre network as well as BT's infrastructure, and is expected to add a cloud based TV service later in the year;[3]

(d) Sky will soon enter the mobile voice and data market following the announcement of a MVNO arrangement with O2, to add to its existing pay TV services and broadband service. The wholesale deal means that Sky will be able to offer mobile services to Sky customers on Sky bills from 2016;[4]

(e) TalkTalk launched mobile handset and SIM only contracts for customers taking its broadband and fixed line services in 2012. It has recently entered into a multi-year agreement with O2 for the provision of mobile services commenting that partnering with O2 "*is also a major step forward in our long-term strategy to build a small cell and fibre-to-the-premise network.*"[5] TalkTalk has also bought Tesco's broadband business, as well as the video download service Blinkbox owned by the supermarket group in order to expand its TV business; and

(f) as described in further detail below, VM has been able to offer four services (mobile services, landline, broadband and TV) since its acquisition of Virgin Mobile in 2006 with 17% of VM's customers now taking all four of these services.[6] VM is seeking to enhance this offer by: (i) investing to expand its network; and (ii) moving to an MVNO arrangement which permits greater differentiation and innovation by VM (rather than simply re-selling existing MNO products).

3.2 Post transaction, BT/EE will be able to self-supply, on a national basis, high speed fibre products, 4G mobile services and exclusive key pay-TV content (in particular Premier League and, from summer 2015, Champions League sports content). This distinguishes the merged entity from other providers of multiple services which, in all cases, will rely to a much greater extent on wholesale inputs, in particular:

(a) primarily fixed operators, such as VM or TalkTalk, who offer retail mobile services by means of unregulated wholesale MVNO arrangements which they conclude with MNOs; and

(b) primarily MNOs, on the other hand, who offer retail fixed services through regulated wholesale arrangements with BT.

3.3 Whilst access to the majority of fixed wholesale services is ensured by the regulatory arrangements overseen by Ofcom, operators such as VM rely upon commercial

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2 EE's TV smart box offers Freeview channels, some catch up and on-demand content and recording functionality (controlled via smartphones and tablets).

3 http://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/half_year_30september2014/dl_halfyear2014.pdfb

4 http://news.sky.com/story/1417269/sky-to-enter-mobile-market-in-o2-partnership

5 http://www.theinquirer.net/inquirer/news/2381833/talktalk-dumps-vodafone-in-favour-of-o2-ahead-of-4g-launch

6 VM's Consolidated Financial Statements 31 December 2013 and 2014, published March 2015 http://www.libertyglobal.com/pdf/fixed-income/Virgin-Media-December-31-2014-FINAL.pdf, page I-4.

arrangements with the MNOs in order to secure wholesale mobile services. These arrangements have worked reasonably effectively in the past in relation to 2G and 3G services, but there is evidence **[REDACTED]** that the competitive dynamics in the UK mobile wholesale services market have changed and will change in the future in ways which make effective competition, particularly in relation to 4G services, less assured.

3.4 In particular, the merger between T-Mobile and Orange to create EE had a significant effect on competitive dynamics in both the retail and wholesale mobile markets in the UK. That merger gave EE significant advantages in 4G spectrum and network density which allowed it to establish itself as the UK's leader in 4G services. Although the other MNOs have since made attempts to match EE's 4G capabilities (notably through the conclusion of network sharing arrangements between Vodafone and O2, and the proposed merger between Three and O2), EE retains clear and significant advantages over other MNOs in 4G. **[REDACTED]**

3.5 It is widely recognised that the ability to provide 4G services is increasingly important for a compelling mobile retail offer given rapidly growing demand and projections of further significant increases in the medium term. For example:

(a) Ofcom's 2014 Communication Report indicated that "*there were over six million 4G mobile subscriptions in the UK at the end of March 2014, equivalent to approximately 8% of all active mobile subscriptions. This represents a significant increase since a year ago, when EE, then the only UK 4G provider, announced that it had 318,000 4G subscriptions, accounting for less than 0.5% of all UK mobile subscriptions.*"[7] Recent data published by the MNOs show that there has been a significant increase in 4G take up in the past 12 months with: EE reporting that it now has c.10 million 4G customers;[8] Vodafone has 3 million 4G customers[9]; O2 has 5.5 million 4G customers[10]; and Three has over 3 million 4G customers[11].

(b) Ofcom also describes the benefits to customers of 4G mobile networks as follows. "*These are able to provide faster download speeds than those possible over 3G (according to EE, the UK's largest 4G provider, average actual speeds over its 4G network are around 8 to 10Mbit/s), allowing consumers to surf the web and download apps at faster speeds and stream higher quality video content. Data provided to Ofcom by the MNOs show that by June 2014 73% of UK premises were in areas with outdoor 4G coverage from at least one mobile network*."[12]

(c) EE places significant emphasis on its leadership position in relation to 4G. It highlights in its Q1 2015 results, for example, that it has the highest 4G take up in Europe and that it reached over 10 million 4G customers in the UK by May 2015 (an increase in c.7 million subscribers in 12 months)[13]. EE also highlights that "*96% of new connections are on 4G, with nearly 50% on exclusive double-speed 4GEE Extra*" which indicates the importance of a strong 4G position in attracting new customers.[14] [15]

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7 Ofcom *Communications Market Report 2014*, http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr14/telecoms-networks/, page 3.

8 http://ee.co.uk/content/dam/everything-everywhere/Newsroom/PDFs%20for%20newsroom/EEMLIH12015FINAL.pdf

9 http://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/preliminary_results_31march2015/dl_prelim2015.pdf

10 http://www.telefonica.com/en/shareholders-investors/pdf/rdos15t1-pres.pdf

11 http://www.threemediacentre.co.uk/news/2014/pr-04-12-2014.aspx

12 Ofcom *Communications Market Report 2014,* http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr14/telecoms-networks/, page 22.

13 http://ee.co.uk/content/dam/everything-everywhere/Newsroom/PDFs%20for%20newsroom/EEMLIH12015FINAL.pdf

14 http://ee.co.uk/our-company/newsroom/2015/04/27/ee-results-for-the-first-quarter-to-31-march-2015

3.6 Moreover, the acceleration in mobile data usage driven by 4G is widely reported by market players and commentators:

(a) Vodafone reports that average data usage by customers after they migrate from 3G to 4G services more than doubles from 1GB to 2.1GB.[16] Vodafone also reports that customers are increasingly exceeding their bundles (21 per cent of UK and Spanish customers in Q2 2014/15), and demand for content (for example, in the UK, for content provided by Sky, Spotify and Netflix) drives bigger bundle selections; [17]

(b) O2 reports that "LTE usage" (i.e. use of 4G services) is three times higher as compared to use of 3G services.[18] O2 also reports that data traffic grew 94 per cent year-on-year in Q1 2015 to 30,928TB;[19]

(c) Three reports that it has seen average data usage per customer grow to 3.3GB per month in 2014 from 2.0GB in December 2013 (an increase of 60 per cent);[20]

(d) EE has reported its prediction that "*a colossal amount of data, at least a one Exabyte of data*[21]*, will be carried across the network per year by 2018. This is triple the amount of data the network carries today, 16 times more than over the 3G network in 2012*";[22]

(e) EE also reports that 4G users are "*rapidly increasing data usage overall, at a rate of 3-5% a month. Over the course of a contract this means that most customers require double the data limit at the time of renewal. This particular trend is showing no sign of slowing down*";[23] and

(f) market reports produced by Cisco forecast a 43% CAGR in monthly data traffic per mobile device in Western Europe in the period 2014-2019.

3.7 **[REDACTED]**

3.8 The Proposed Transaction should therefore be assessed in the context of a UK market in which:

(a) effective access to wholesale mobile services (in particular, to 4G services on terms which enable commercially viable retail offerings by MVNOs) is essential to secure effective retail competition;

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15 EE further describes its leading position in terms of population coverage, mobile broadband speeds and its investment plans: "*Trialled Europe's fastest 4G of 400 Mbps at Wembley Stadium. 4G population coverage now 87%, double-speed 4G to 67% of the population. Named RootMetrics® 2014 #1 UK network, Best Network at 2015 Mobile News Awards and in April, Ofcom's fastest mobile broadband network. Announced three year £1.5bn network investment programme to reach 99% 4G population and 90% geographic voice coverage by 2017 and rollout network innovations including 4G over 800 MHz, voice over 4G, micro-network technology and the UK's first seamless WiFi Calling service*."http://ee.co.uk/our-company/newsroom/2015/04/27/ee-results-for-the-first-quarter-to-31-march-2015

16 http://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/half_year_30september2014/p_halfyear2014.pdf, slide 31

17 http://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/half_year_30september2014/p_halfyear2014.pdf, slide 33.

18 http://www.telefonica.com/en/shareholders-investors/pdf/rdos14t4-pres.pdf, slide 22.

19 http://www.telefonica.com/en/shareholders-investors/xls/rdos15t1-data.zip, page 41

20 http://www.threemediacentre.co.uk/news/2015/pr-26-02-2015.aspx

21 1,000,000,000,000,000,000 bytes

22 http://ee.co.uk/our-company/newsroom/2015/05/13/EE-network-to-carry-an-exabyte-of-data-a-year-by-2018

23 http://ee.co.uk/content/dam/everything-everywhere/Newsroom/PDFs%20for%20newsroom/EEMLI%20H1%202015%20FINAL.pdf, page 9.

(b) access is not currently subject to regulation by Ofcom (unlike fixed wholesale services on which the MNOs and others rely); and

(c) **[REDACTED]**

4. VIRGIN MEDIA'S COMPETITIVE POSITION

Virgin Media is an important provider of multiple services

4.1 As indicated above, VM offers its customers a wide choice of packages and tariffs across all its products. As at 31 December 2014, 83% of VM's customers subscribe to packages across multiple services, with 49% and 17% of customers subscribing to triple-play and quad-play packages respectively.[24]

Broadband

4.2 VM delivers high-speed broadband internet services to customers using its cable network. As of 31 December 2014, VM provided cable broadband services to approximately 4.5 million customers.

4.3 VM introduced high-speed broadband services with speeds of 50 Mbps in 2009, subsequently launching speeds of 120 Mbps which now reach VM's entire network. In January 2012, VM announced a programme to double the speed of its broadband, involving a significant investment in network capacity. All VM's customers who were on 10 Mbps, 20 Mbps, 30 Mbps and 50 Mbps saw their headline speeds at least doubled under this program. In November 2013, VM announced a further speed increase which it began to implement in February 2014. As a result, VM is currently offering three tiers of cable broadband services available to new subscribers with unlimited downloads at speeds of up to 50 Mbps, 100 Mbps and 152 Mbps.[25]

4.4 Not only is VM investing to improve its existing network, but also expand its network. VM recently announced its plans to connect up to approximately a further 4 million homes and businesses over the course of the next 5 years in towns and cities across the UK. This will help to promote competition in those areas.[26]

Fixed line telephony

4.5 VM provides local, national and international fixed-line telephony services to its residential customers across its network. VM offers a basic line rental service to its cable customers for a fixed monthly fee. In addition, VM also offers tiered bundles of call tariffs, features and services, including calling plans that enable customers to make unlimited national landline calls and calls to mobile telephones either during specified periods or anytime, for an incremental fixed monthly fee. VM's fixed-line customers may also subscribe to additional services such as call waiting, call blocking, call forwarding, three-way calling, advanced voicemail and caller line identification services for an additional fee. As of 31 December 2014, VM provided cable telephony services to approximately 4.2 million residential subscribers.

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[24] VM's Consolidated Financial Statements 31 December 2013 and 2014, published March 2015 http://www.libertyglobal.com/pdf/fixed-income/Virgin-Media-December-31-2014-FINAL.pdf, page I-4.

[25] VM's Consolidated Financial Statements 31 December 2013 and 2014, published March 2015 http://www.libertyglobal.com/pdf/fixed-income/Virgin-Media-December-31-2014-FINAL.pdf, page I-6.

[26] http://about.virginmedia.com/press-release/9467/virgin-media-and-liberty-global-announce-largest-investment-in-uks-internet-infrastructure-for-more-than-a-decade

Pay TV

4.6 VM's digital cable platform includes access to over 260 linear television channels, advanced interactive features, and a range of premium subscription-based and pay-per-view services. As of 31 December 2014, VM provided digital cable pay TV services to approximately 3.8 million residential subscribers.

4.7 Virgin TV On Demand, provides VM customers with instant access to a wide selection of premium movies, television programs, music videos and other digital cable-on-demand content including live pay-per-view events. Content is available in broadcast standard definition, high definition (HD) and in three-dimensional (3D). VM's cable network enables it to provide digital cable on-demand content to its customers separately from their high-speed data services, thereby maintaining their broadband speed.

4.8 In November 2012, VM launched Virgin TV Anywhere, the UK's most comprehensive internet streaming TV service that allows its TV customers to stream up to 103 live TV channels and watch Virgin TV On-Demand through their web browser, anywhere in the UK with a broadband connection. VM's TiVo customers with iOS or Android mobile devices can watch up to 103 live TV channels, manage their TiVo box and discover new shows with these mobile devices. When in the home, these mobile devices can act as a remote control for their TiVo boxes. Virgin TV Anywhere is available at no extra cost to VM's digital cable customers. VM subscribers of Sky Sports or Sky Movies are able to stream these premium channels online or on iOS and Android mobile devices through Sky-provided services.

Mobile

4.9 VM's residential mobile services are provided using the mobile network owned by EE with which VM has entered into a MVNO arrangement. VM offers a broad range of mobile communications products and services, including mobile voice services and data services, (such as SMS, picture messaging) and mobile broadband services which complement the fixed broadband offering. VM also offers a broad range of handsets, including Android-based, Window-based and Apple iOS-based smartphones.

4.10 VM's customer base comprises:

(a) post-paid customers, who subscribe to VM's services for periods ranging from a minimum of 30 days for a SIM-only contract to up to 24 months for contracts taken with a subsidised mobile handset; and

(b) prepaid customers, who top up their accounts prior to using the services and have no minimum contracted term.

4.11 As of 31 December 2014, VM had over 3 million mobile customers, comprising approximately 2.1 million and 0.94 million post-paid and prepaid customers respectively.[27]

4.12 In September 2013, VM also launched a mobile service to public and private sector business customers, providing voice and 4G and 3G data services as a reseller of EE's business services (separate and distinct from the MVNO arrangements). Under its reseller agreement, VM launched a new range of high-speed connectivity and voice packages targeting SME and SOHO[28] customers in June 2015.

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[27] VM's Consolidated Financial Statements 31 December 2013 and 2014, published March 2015 http://www.libertyglobal.com/pdf/fixed-income/Virgin-Media-December-31-2014-FINAL.pdf, page I-4.

[28] Small Office / Home Office.

Virgin Media's MVNO arrangements and strategy

Current MVNO arrangement

4.13 As noted above, VM has a MVNO arrangement with EE for voice, non-voice and other telecommunication services it provides to its residential mobile customers, as well as for certain ancillary services such as voicemail and pre-pay account management. **[REDACTED]**

[REDACTED]

4.14 **[REDACTED]**.

4.15 **[REDACTED]**.

4.16 **[REDACTED]**:

(a) **[REDACTED]**;

(b) **[REDACTED]**; and

(c) **[REDACTED]**.

4.17 **[REDACTED]**.

4.18 **[REDACTED]**.

5. VIRGIN MEDIA'S CONCERNS

5.1 Against the above background, Sections 6 and 7 below describe a number of concerns which VM considers the CMA should take into account as part of its assessment, namely:

(a) a loss of independent competition from BT in the supply of retail mobile telephony and data services; (section 6 below); and

(b) as a result of changed incentives of the merged entity (as described in Section 7 below), a loss of competition from VM in relation to retail mobile services as it may not be able to secure access to MVNO services on commercially viable and competitive terms, in particular:

(i) **[REDACTED]**; and

(ii) **[REDACTED]**

6. LOSS OF COMPETITION FROM BT IN THE RETAIL SUPPLY OF MOBILE TELEPHONY AND DATA SERVICES

6.1 The Proposed Transaction removes BT as an independent and powerful new entrant into the UK retail mobile market with access to spectrum. In 2013, BT acquired 2.6 GHz spectrum (at a cost of £186 million) and in 2014 concluded a new MVNO agreement with EE (having previously had an agreement with Vodafone). BT CEO Ian Livingston said that BT planned to use the spectrum it had won to offer a mobile network to existing customers alongside its broadband, television and landline offerings.[29]

[29] http://www.techweekeurope.co.uk/workspace/bt-4g-mobile-network-spectrum-116137#vKDv6FLLgozg2IHt.99 and http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/10051578/BT-returns-to-mass-market-with-4G-network.html

6.2 These steps anticipated BT's re-entry into the UK mobile service markets on a scale and with a level of commitment which had not been evident in the previous 10 years. Although BT had pursued various mobile projects since the divestiture of O2 in 2005 (using the MVNO agreement with Vodafone), it had no significant presence in the UK mobile market before it announced, in March 2015, the launch of its own 4G mobile services under the brand BT Mobile.

6.3 On 21 March 2015, BT announced its intention to launch its own retail 4G mobile service under the brand BT Mobile.[30] Under the current offers, customers choose between three SIM-only plans offering a 4G service. All three plans offer customers a fast 4G service, unlimited texts and the BT Sports App[31] free of charge. The monthly tariffs then vary between £10, £17 or £25 per month depending on the size of data allowance (500 MB, 2GB or 20GB respectively) and the free minutes allowance (200 minutes, 500 minutes or unlimited respectively). Existing BT broadband customers, the vast majority of whom will currently be customers of other mobile providers, are eligible for a £5 monthly discount.[32] BT reports that it has signed up 50,000 customers in the six weeks since the launch of the service.[33] BT therefore already represents a new and significant competitive force in the mobile market.

6.4 Moreover, absent the Proposed Transaction BT could have been expected, independently of EE, to extend the range of services it offers, to further develop its network capabilities and to apply its formidable marketing and sales resources to promoting its mobile services more aggressively in order to build market share. In this regard, BT has a recent track record of bold investment and entry into new markets. For example, BT has spent considerable sums purchasing sports content for the launch of its BT Sport TV channels,[34] and its strategy illustrates that, absent the Proposed Transaction, BT could have been expected to make the investments necessary to successfully launch a MNO service.

6.5 BT has other competitive advantages over the existing MNOs and other MVNOs which would ensure it was a strong competitor. For example, it has the UK's most extensive set of WiFi assets and has already indicated that it would seek to integrate the services it provides via its wholesale MVNO agreement with EE with WiFi services it provides over its fixed network. BT would no doubt also have sought to use its 2.6 GHz mobile spectrum to enhance its 4G capabilities still further.

6.6 The Proposed Transaction will remove BT as an independent new entrant, as well as eliminating competition between BT and EE. BT/EE will no doubt still seek to exploit BT's WiFi assets and the merged entity's spectrum holdings, but it will do so not as a new entrant seeking to build scale, but as the UK's largest mobile operator with significant existing revenues to protect. Industry commentators have already noted the difference which this will make to BT/EE's conduct and incentives, in at least two ways:

(a) the pricing of BT's plans is not as aggressive as it was previously anticipated would be the case. In this context, it has been observed that: "*It is understood that BT has softened its attack in anticipation of ownership of EE, which will mean it will have more to lose by starting a price war.*"[35]; and

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30 http://telecoms.com/391612/merger-of-o2-and-3-not-an-instant-fix-say-analysts/

31 BT Sports App allows customers to watch BT Sport (including live and exclusive Barclays Premier League football matches) via a smartphone, even if they do not have BT Broadband.

32 http://www.productsandservices.bt.com/products/4g-sim-only-plans/bb.html

33 http://www.btplc.com/news/articles/showarticle.cfm?articleid=%7Bb2ef0c4a-ea85-4af8-8df0-592b06b3c721%7D

34 As part of this strategy, BT has spent over £2.5 billion in acquiring live TV rights to English Premier League and Champions Leagues football alone.

35 http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/telecoms/11487517/BT-to-launch-its-4G-mobile-arm.html

(b) secondly, instead of offering a full retail service (including handsets), BT's offer will be limited to SIM only. Again commentators observe that BT has chosen to launch a SIM-only proposition as a direct consequence of the Proposed Transaction: "*Similarly, because of the takeover* [of EE] *BT will initially offer mobile service on a SIM-only basis and not provide customers with handsets. Setting up a business to buy and distribute smartphones would mean investing hundreds of millions of pounds to duplicate a major part of EE, which has hundreds of stores and longstanding relationships with manufacturers."*[36]

6.7 In short, absent the Proposed Transaction, industry commentators suggest that the new mobile offering announced by BT on 21 March would have been both more aggressive on price and would likely have been a fuller offering (in other words it would not have been limited to a SIM-only offering). In the absence of the Proposed Transaction, BT may therefore have been expected to have been a more aggressive entrant into the provision of retail mobile and data services.

6.8 In summary, the Proposed Transaction will remove competition from BT as an independent, and powerful, new entrant into the UK mobile market. This loss of competition from BT as an independent MVNO and, in the medium term, MNO utilising its spectrum (and therefore also as a potential supplier of wholesale MVNO services in the future) is particularly significant in circumstances in which O2 and Three are intending to merge. In other words, as a consequence of the Proposed Transaction and the proposed O2/Three transaction, the number of MNO's in the UK will be reduced from five (including BT's entry) to three.

7. REDUCTION IN COMPETITION IN THE SUPPLY OF WHOLESALE MVNO SERVICES

7.1 If VM is to remain an effective retail competitor, it is important that VM can secure competitive mobile wholesale access arrangements. As noted earlier, the UK mobile wholesale market is not subject to regulation (unlike the UK fixed wholesale market), with the result that VM is dependent upon effective competition prevailing between the potential suppliers of wholesale mobile services (i.e. the MNOs) such that they have the incentive to offer credible wholesale alternatives.

Position prior to the Proposed Transaction

7.2 **[REDACTED]**

7.3 **[REDACTED]**:

(a) **[REDACTED]**;

(b) **[REDACTED]**:[37]

[REDACTED]

[REDACTED]

(c) barriers to entry are high (in particular, gaining access to spectrum) with the result that, with the removal by the Proposed Transaction of BT as a potential entrant, there is no prospect of new MNO entrants capable of providing wholesale MVNO services in the short to medium term.

[REDACTED]

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36 http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/telecoms/11487517/BT-to-launch-its-4G-mobile-arm.html

37 **[REDACTED]**

7.4 **[REDACTED]**.

7.5 As indicated in Section 3, a wide range of commentators highlight the acceleration in mobile data usage driven by 4G. More specifically:

(a) 4G data usage has increased rapidly as customers use 4G to stream, share, and perform a host of data-heavy activities, in particular, video streaming and social networking;

(b) customers often end up using more than their data allowances, and EE reports that most customers require double the data limit of their original contract at the time of renewal; and

(c) rapid growth in data usage is predicted to continue as customers become greater users of data-intensive apps and other mobile internet services.

7.6 Mobile service providers are therefore responding to this by offering new plans and/or promotions with more data available for the same or lower price as shown in the table below.

Summary of data allowances for 12-month sim-only plans by monthly charge band

	EE		**O2**		**Vodafone**		**Three**	
	Dec 12	**Dec14**	**Dec 12**	**Dec14**	**Dec 12**	**Dec14**	**Dec 12**	**Dec14**
Up to £19.99	No offer	2GB	500MB	1GB	500MB	3GB	Unltd	Unltd
Up to £24.99	500MB	5GB	1GB	5GB	1GB	6GB	Unltd	Unltd
Up to £29.99	1GB	10GB	2GB	5GB	2GB	10GB	Unltd	Unltd

Pure pricing: UK mobile pricing developments, Q4 2014. All EE tariffs are 4G. For both O2 and Vodafone, the tariffs for Dec-12 are 3G and the tariffs for Dec-14 are 4G.

7.7 In the last two years, EE and Vodafone have significantly increased the data allowances offered at particular price points:

(a) for users paying up to £19.99, EE now offers 2GB (previously there was no offer at this price point), and Vodafone now offers 3GB instead of 500MB;

(b) for users paying a monthly charge of up to £24.99, EE has improved its offer from 500MB to 5GB, and Vodafone from 1GB to 6GB;

(c) for higher monthly band users, EE now offers 10GB as compared to 1GB and Vodafone also offers 10GB as compared to 2GB;

(d) the increases in data allowance within each price band offered by O2 are similar; and

(e) Three's unlimited data price is unchanged but the voice value (inclusive minutes) has decreased obliging moderate voice users to spend an additional £5 per month to get an allowance of 600 minutes and unlimited data. Three's offer has pushed up the market price floor whilst other operators are moving downwards towards the floor.

7.8 Offers with lower data allowances are increasingly becoming less relevant as customers turn to plans which can accommodate data-intensive uses such as video and music streaming, as well as unlimited call minutes and texts which provides greater peace of mind (for example BT's recently launched 20GB package at £20).

7.9 **[REDACTED]**.

7.10 **[REDACTED]** [38] **[REDACTED]**.

7.11 **[REDACTED]**.

7.12 **[REDACTED]**:

(a) **[REDACTED]** [39] **[REDACTED]**

(b) **[REDACTED]** [40]**[REDACTED]**.

7.13 **[REDACTED]**.

7.14 **[REDACTED]**.

7.15 **[REDACTED]** [41] **[REDACTED]**.

7.16 **[REDACTED]**:

(a) **[REDACTED]**;

(b) **[REDACTED]**;

(c) **[REDACTED]**.

[REDACTED]

7.17 **[REDACTED]**:

(a) **[REDACTED]**:

(i) **[REDACTED]**,[42] **[REDACTED]**; and

(ii) **[REDACTED]**;[43]

(b) **[REDACTED]**:

(i) **[REDACTED]**;[44] and

(ii) **[REDACTED]**;

(c) **[REDACTED]** [45] **[REDACTED]**;

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38 As noted above, the only MVNOs in the UK that currently offer 4G rates (with the exception of iD) are those which are part owned by the MNOs (GiffGaff and Tesco) or, in the case of BT, launched 4G when its merger with EE was in contemplation.

39 Average revenue per user.

40 **[REDACTED]**.

41 **[REDACTED]**.

42 **[REDACTED]**.

43 **[REDACTED]**

44 **[REDACTED]**

(d) **[REDACTED]**:

(i) **[REDACTED]**;

(ii) **[REDACTED]**;

(e) **[REDACTED]** [46]**[REDACTED]**; and

(f) **[REDACTED]**

7.18 **[REDACTED]**.

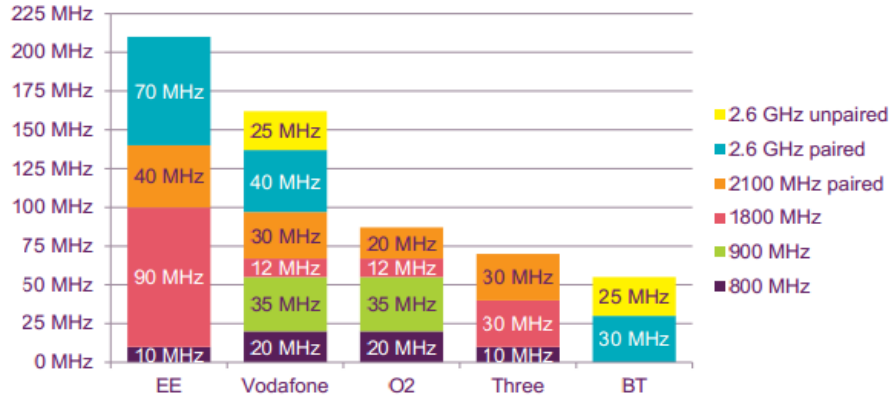
Position following the Proposed Transaction

7.19 The Proposed Transaction will lead to concentration in 4G spectrum in BT/EE which will further increase the leadership position of EE in 4G services. This outcome will reduce competition by increasing the incentive on the merged entity to restrict the ability of VM (and other MVNOs) to offer 4G mobile services on competitive terms (both in the short term and the long term). This will, in turn, further, reduce competition in the retail supply of mobile voice and data services.

Increased concentration in high frequency spectrum

7.20 Current spectrum ownership in the UK is as follows:[47]

Figure 68 - UK spectrum holdings (bands currently in use for mobile services)



7.21 Higher frequency spectrum has the greatest capacity, enabling greater traffic flow at higher speeds, but offers the least coverage such that it is best suited for use in urban areas. Higher frequency spectrum, particularly 2.6 GHz spectrum, is the most suitable for rolling out 4G mobile networks in areas of high demand. In contrast, lower frequency ranges have greater coverage (i.e. more suited for use in rural areas) and are more suited for in-home connectivity, but lack speed and capacity.

7.22 At the last spectrum auction, Ofcom imposed a cap on bidders which prevented them from acquiring more than 210MHz of spectrum (in total) in order to protect competition at both the wholesale and retail levels of the mobile market. With EE's acquisition of 70 MHz of 2.6 GHz spectrum and 10 MHz of 800 MHz spectrum, EE took its spectrum holdings up to the maximum allowed, with a holding of 210 MHz.

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45 **[REDACTED]**.

46 **[REDACTED]**

47 Source: Ofcom *Infrastructure Report 2014,* Figure 68, http://stakeholders.ofcom.org.uk/binaries/research/infrastructure/2014/infrastructure-14.pdf

7.23 The Proposed Transaction, therefore, raises a number of concerns in relation to the ownership of spectrum since it not only concentrates spectrum within the hands of the four MNOs, and only three following the O2/Three transaction,[48] but also brings about a high degree of asymmetry in spectrum ownership, particularly with respect to the high-frequency spectrum. Ofcom has previously raised asymmetrical ownership as a potential concern "*if operator's shares of spectrum become very asymmetric, we could potentially have a concern if the market were to develop in a way that the difference in spectrum shares did start to matter in a way that reduced competition*".[49]

7.24 As regards ownership share post transaction:

(a) the merged entity will have the largest overall share of UK mobile spectrum i.e. 265 MHz (45%) of the total UK spectrum currently awarded for mobile use, with an increment of nearly 10%;

(b) Vodafone will own 28%; and

(c) O2 and Three will have 15% and 12% respectively (27% combined).

7.25 The merged entity will also have the largest share of high-frequency mobile spectrum which, as noted above, is best suited for the roll out of high-capacity 4G services:

(a) BT/EE will own 66% of all 2.6 GHz spectrum;[50] and

(b) Vodafone will remain the only other MNO which owns 2.6 GHz spectrum.

Increased concentration will not be resolved by the next spectrum auction

7.26 Two further bands of spectrum are due to be made available by Ofcom within the next 12 months, namely 40 MHz of spectrum within the 2.3 GHz band; and 150 MHz of spectrum within the 3.4 GHz band.

7.27 This will not, however, resolve competition concerns relating to spectrum, for the following reasons:

(a) Whilst the auction will make 190MHz of spectrum available, the vast majority (150 MHz) is 3.4 GHz spectrum which Ofcom acknowledges is not as important as other spectrum bands, and certainly not in the short to medium term:

"*The 'ecosystem' for user devices in the 3.4GHz band is some years behind the 2.3 GHz band in terms of development….Some user equipment is now available for this band - although lower in quantity that for the 2.3GHz band…We now expect there to be a reasonable selection of user devices that use this band in the medium term.*" [51]

"*We therefore consider that the 3.4 GHz band is likely to be relevant for adding mobile data capacity in the future, but that there is uncertainty about its relative importance compared to other spectrum*"[52]

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48 In response to Ofcom's spectrum auction consultation, BT itself argued that measures were needed to ensure that spectrum did not simply end up in the hands of the four existing national wholesalers because they have an interest in ensuring smaller players cannot obtain sufficient spectrum to compete. See Ofcom *PSSR: Award of the 2.3 GHz and 3.4 GHz bands*, paragraph 7.11.

49 Ofcom *PSSR: Award of the 2.3 GHz and 3.4 GHz bands,* paragraph 7.47.

50 The merged entity will have 71% of paired 2.6MHz spectrum.

51 Ofcom *PSSR: Award of the 2.3 GHz and 3.4 GHz bands,* paragraphs 7.57 and 7.58.

52 Ofcom *PSSR: Award of the 2.3 GHz and 3.4 GHz bands*, paragraph 7.78.

(b) In the short to medium term, the next auction will, at best, result in the release of 40MHz of 2.3 GHz spectrum capable of being used for 4G services (subject to potential delays in roll-out, as described below). If more than one bidder is successful in acquiring the 2.3 GHz spectrum, this is unlikely to reduce the high-degree of asymmetry which the Proposed Transaction will bring about.

(c) Introduction of additional bands can create significant complexity in terms of cell layer management and cell site development. Each band will require an additional /replacement antenna system and require a roll out plan and there is a risk of an impact on the existing service offered on the pre-existing bands. There will be at least a 12-18 month delay before these spectrum bands are used whilst the winning bidders roll out the necessary infrastructure. Furthermore, based on information currently available, the extent to which there may be interference from neighbouring bands is unknown. Ofcom acknowledges that it is unable to provide full information to potential bidders given the nature of some MOD systems in adjacent bands.[53]

(d) The spectrum being auctioned is unpaired, requiring the use of Time-Division Duplex LTE technology (TDD-LTE) as opposed to Frequency Division LTE (FDD-LTE). To date, this technology has not been used in the UK by the MNOs. Current handsets cannot be retrospectively configured and, as such, new handsets will need to be introduced into the UK market and customers will need to be migrated from one handset to another. This will inevitably cause delay in any roll-out of services using these spectrum bands.

(e) The date of the auction is unknown. Whilst Ofcom has stated it will likely take place late 2015 or early 2016, there is no specific date and, with the degree of merger activity currently being undertaken in the market, the ongoing consultation by Ofcom reviewing the scope of the auction[54] and any potential challenge brought in relation to the auction rules, there is a possibility that the spectrum auction may be delayed. It is, therefore, uncertain when any effect of the release of the 2.3GHz and 3.4GHz spectrum bands will be felt in the UK.

7.28 As such, VM believes that the future 2.3 GHz and 3.4GHz auction will not resolve BT/EE's leadership position in 4G services or the deficiencies in the wholesale services market which arise as a result.

Adverse impact on competition

7.29 The aggregation in high-frequency spectrum holdings resulting from the Proposed Transaction will also have a significant adverse impact on the shape of future competition in the supply of wholesale MVNO services.

7.30 The concentration in spectrum resulting from the Proposed Transaction will increase the incentives of the merged entity to restrict the ability of MVNOs (including VM) to offer competitive mobile services at the retail level. This is because the concentration of high frequency spectrum in the hands of the merged entity will allow it to create a differentiated network that will be clearly superior to rival networks in meeting future demand for mobile services, and particularly 4G services. Specifically:

(a) the merged entity will be able to offer better coverage and speeds to consumers in urban and metropolitan areas. In addition a combined BT/EE entity will have access to dense urban fixed fibre networks, potentially speeding up rollout and throughput in busy metropolitan areas;

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53 Ofcom *PSSR: Award of the 2.3 GHz and 3.4 GHz bands*, paragraph 4.15.

54 http://stakeholders.ofcom.org.uk/binaries/consultations/2.3-3.4-ghz-auction-design/statement/statement.pdf

(b) the merged entity will be able to exploit its 2.6GHz spectrum by deploying small cells on existing WiFi furniture on BT's vast number of enterprise and residential sites. The merged entity will therefore be able to roll out faster than any other MNO and control 4G services with greater capability (such as download speeds) and coverage. Only Vodafone could attempt to compete with the merged entity by offering high capacity 4G services in densely populated areas (albeit with access to far fewer sites and with more restricted access to the home and office); and

(c) with its greater level of spectrum capacity, the merged entity will also be more able than any other MNO (including Vodafone) to facilitate carrier aggregation i.e. the combining of lower and higher bands, leveraging better coverage of the former with higher capacity of the latter. This aggregation of spectrum increases bandwidth and, in effect, lets operators create "fatter" pipes that support better quality services with greater speeds which is required for higher volumes of data traffic.

7.31 These technological advantages mean that the merged entity will, relative to rivals, have clear advantages in seeking to win retail mobile customers. In particular, VM notes that a network with the greatest 4G coverage supported by a fibre network with access to an unrivalled small cell base will enable EE to offer services with the fastest download and upload speeds which are essential for mobile video services and data uploading services. Video services are becoming increasingly important to customers who want to watch/stream video on the go with an increasing number of social media apps embedding video (e.g. on Facebook and Twitter) or via live video platforms such as Periscope or Twitch.[55] Data uploading is also becoming extremely important to consumers with a significant rise in the number of people uploading pictures and videos to sites such as Instagram and Snapchat.[56] Consumers will increasingly demand instant connectivity at high speed with no delays – this requires high bandwidth which the merged entity will be able to deliver more reliably than other MNOs. EE itself recently highlighted the importance of being able to offer such services stating that "*The increase in data is being fuelled by video and social media (now representing 51% of data on the network), as well as by new industries and sectors looking towards mobile connectivity to better serve businesses and consumers*"[57]. Relative to the pre-merger position, this will mean that the merged entity can expect to win a greater share of new mobile customers than EE on its own and to be much better able to offer a service that will cause existing mobile customers to switch away from rival MNOs and MVNOs.

7.32 In turn, this will alter the trade-off for the merged entity between wholesale revenues achieved from making wholesale services available to MVNOs on one hand, and the forgone retail revenues that may be lost to MVNOs as a result of facilitating their ability to offer attractive retail mobile propositions. In circumstances in which the merged entity is better placed than rivals to attract mobile customers, it will have a reduced incentive to facilitate the offer by MVNOs of attractive mobile services, because it expects to be able to win those retail customers (or a higher number of them) in any event.

7.33 In summary, therefore, VM considers that post-merger, the merged entity will in practice have a reduced incentive to :

(a) **[REDACTED]**;

(b) **[REDACTED]**;

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55 http://ee.co.uk/content/dam/everything-everywhere/Newsroom/PDFs%20for%20newsroom/EEMLIH12015FINAL.pdf – page 10.

56 http://www.vodafone.com/content/dam/vodafone/investors/financial_results_feeds/preliminary_results_31march2015/p_prelim2015.pdf - page 32.

57 http://ee.co.uk/our-company/newsroom/2015/05/13/EE-network-to-carry-an-exabyte-of-data-a-year-by-2018

(c) **[REDACTED]**; and

(d) **[REDACTED]**.

7.34 **[REDACTED]**.

7.35 The reduction in the competitive constraint posed by VM at the retail level as a consequence of the Proposed Transaction is of particular concern given that VM is one of the largest and most well established MVNOs in the UK, the Proposed Transaction will remove BT as a powerful new entrant, and the number of MNOs is expected to reduce to three following the merger of O2/Three. In circumstances in which there are only three MNOs in the UK, competition from MVNOs (including VM) will become increasingly important to ensure that there is effective competition at the retail level to the benefit of consumers. This is particularly the case, given recent news that Tesco Mobile, one of the other large MVNOs, may be sold to O2,[58] thereby removing further competition from the market and strengthening the position of the few remaining MNOs.

8. REQUIRED REMEDIES

8.1 As noted above VM is not in principle opposed to the Proposed Transaction, but has identified certain concerns that VM considers the CMA should take into account as part of its assessment. Specifically, the Proposed Transaction can be expected to result in:

(a) a loss of independent competition from BT in the supply of retail mobile services; (section 6 above); and

(b) as a result of changed incentives of the merged entity as set out in Section 7, a loss of competition from VM in relation to retail mobile services as it may not be able to secure access to MVNO services on commercially viable and competitive terms, in particular:

(i) **[REDACTED]**; and

(ii) **[REDACTED]**.

8.2 VM has identified the following remedies which would, in combination, remedy, mitigate or prevent these losses in competition:

(a) **[REDACTED]**;

(b) **[REDACTED]**; and

(c) an obligation on the merged entity to supply MVNO services **[REDACTED]** on fair, reasonable and non-discriminatory terms including the same level of services as are made available to BT and EE customers.

8.3 Each of these remedies is discussed in more detail in turn below.

8.4 For completeness, VM would observe that a standalone remedy requiring the divestment of spectrum would be insufficient to address the loss of competition expected to result from the Proposed Transaction. This is because:

(a) a divestment of spectrum to Vodafone would not facilitate the provision of wholesale MVNO services as Vodafone has not entered into MVNO deals with any significant retail rivals and has indicated that it does not currently have incentives to supply services to MVNOs;

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[58] http://www.techweekeurope.co.uk/mobility/4g/tesco-mobile-4g-sale-168007

(b) a divestment of spectrum to O2 or Three cannot be guaranteed to facilitate competition given their anticipated merger. As noted above, BT itself argued that measures were needed to ensure that spectrum did not simply end up in the hands of the four existing national wholesalers because they have an interest in ensuring smaller players cannot obtain sufficient spectrum to compete[59]; and

(c) a divestment of BT's spectrum to a non-MNO is unlikely to enable that non-MNO to launch as an MNO and/or a provider of MVNO services as BT's spectrum would need to be coupled with significant installed infrastructure (such as that of BT) in order to be a viable basis for a mobile network.

[REDACTED]

8.5 **[REDACTED]**.

8.6 **[REDACTED]**:

(a) **[REDACTED]**;[60] and

(b) **[REDACTED]**.[61]

8.7 **[REDACTED]**.

[REDACTED]

8.8 **[REDACTED]**.

8.9 **[REDACTED]**.

8.10 **[REDACTED]**.

8.11 **[REDACTED]**:

(a) **[REDACTED]**;

(b) **[REDACTED]**; and

(c) **[REDACTED]**.

Fair, reasonable and non-discriminatory supply

8.12 VM has explained the importance of EE in the supply of wholesale MVNO services in the UK in section 7 above **[REDACTED]**.

8.13 In order to ensure that MVNOs are able to access the necessary wholesale MVNO services on competitive terms such as to ensure effective competition in the retail provision of retail mobile telephony (both currently under existing arrangements and when new arrangements are negotiated), the merged entity should be required to provide MVNO services on fair reasonable and non-discriminatory (**"FRAND"**) terms.

8.14 **[REDACTED]**. As a result of the Proposed Transaction, all of the 2.6GHz spectrum (best suited for high capacity 4G services) will be in the hands of two MNOs (i.e. BT/EE and Vodafone). **[REDACTED]** [62]

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59 See Ofcom *PSSR: Award of the 2.3 GHz and 3.4 GHz bands*, paragraph 7.11.

60 *Commission notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004* paragraphs 67 and 68.

61 M.7018 *Telefonica Deutschland/E-Plus* 2 July 2014, paragraph 1378.

8.15 For completeness, VM submits that, as part of this FRAND obligation, the merged entity should be required to, *inter alia*:

(a) Improve MVNOs' network traffic costs on an on-going basis to reflect changes in pricing and usage in the UK mobile market;

(b) provide MVNOs access to future technology within reasonable timeframes;

(c) provide, and be bound to, service level commitments; and

(d) supply MVNO services on a non-discriminatory basis compared to EE and BT's own mobile customers.

8.16 Such obligations would mitigate the risk of EE constraining (to an even greater degree than is currently the case) the ability of MVNOs to compete in the retail provision of mobile telephony services following the Proposed Transaction.

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[62] Virgin Media observes that, in relation to mergers affecting mobile markets, the European Commission has accepted commitments **[REDACTED]** (see M.7018 *Telefónica Deutschland/E-Plus* 2 July 2014, paragraph 1378).

ANNEX 1

TABLE OF MVNO PAY MONTHLY SIM-ONLY OFFERS ABOVE 2GB

	MRC	**Data**	**Text**	**Minutes**
Tesco	£12.50	2GB	5000	1500
Tesco	£15.00	2GB	5000	3000
Tesco	£20.00	4GB	5000	5000
Tesco	£22.50	6GB	5000	5000
Tesco	£25.00	8GB	5000	5000
iD	£12.50	2GB	5000	500
iD	£12.50	3GB	5000	200
iD	£15.00	4GB	5000	500
iD	£15.00	3GB	5000	500
iD	£20.00	Unltd	5000	2000
Giff Gaff	£15.00	3GB	Unltd	500
Giff Gaff	£18.00	5GB	Unltd	1000
BT	£5	500MB	Unltd	200
BT	£12	2GB	Unltd	500
BT	£20	20GB	Unltd	Unltd