# Mobile call termination market review 2015-18

Annexes 1 to 6

NON-CONFIDENTIAL VERSION – REDACTIONS ARE INDICATED BY [✂]

Statement

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# Contents

**Annex 1**

# The regulatory framework

## Introduction

A1.1 This annex provides an overview of the market review process, to give some additional context to and understanding of the matters discussed in the main body of this document and the legal instruments (statutory notifications) published at Annex 3.

A1.2 Market review regulation is technical and complex, including the legislation and the recommendations and guidelines that we need to consider as part of the process. There may be many relevant documents depending on the market and/or issues in question. This overview does not purport to give a full and exhaustive account of all such materials that we have considered in reaching our views in these markets. Key aspects of materials relevant to this market review are, however, discussed in this document.

## Market review concept

A1.3 The concept of a market review refers to procedures under which we at regular intervals identify relevant markets appropriate to national circumstances, carry out analyses of these markets to determine whether they are effectively competitive and then decide on appropriate remedies (known as Significant Market Power (SMP) obligations or conditions). We explain the concept of SMP below.

A1.4 In carrying out this work, we act in our capacity as the independent sectoral regulator for the United Kingdom communications industries. Our functions in this regard are to be found in Part 2 of the Act[1]. We exercise those functions within the framework harmonised across the European Union for the regulation of electronic communications by the Member States (known as 'the Common Regulatory Framework' or the CRF), as transposed by the Act. The applicable rules[2] are contained in a package of five EC Directives, of which the two Directives most relevant for these purposes are:

- Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services ('the Framework Directive'); and

- Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities ('the Access Directive').

A1.5 The Directives require that NRAs (such as Ofcom) carry out reviews of competition in communications markets to ensure that SMP regulation remains appropriate and proportionate in the light of changing market conditions.

[1] http://www.legislation.gov.uk/ukpga/2003/21/contents

[2] The Directives have been reviewed and amendments were adopted on 19 December 2009. The amendments have been transposed into the national legislation and applied with effect from 26 May 2011.

A1.6 Each market review normally has three stages, namely:

- the procedure for the identification and definition of the relevant markets (the market definition procedure);
- the procedure for the assessment of competition in each market, in particular whether the relevant market is effectively competitive (the market analysis procedure); and
- the procedure for the assessment of appropriate regulatory obligations (the remedies procedure).

A1.7 These stages are normally carried out together.

## Market definition procedure

A1.8 The Act provides that, before making a market power determination[3], we must identify (by reference, in particular, to area and locality) the markets, which are in our opinion, the ones which, in the circumstances of the United Kingdom, are the markets in relation to which it is appropriate to consider making such a determination and to analyse that market.

A1.9 The Framework Directive requires that NRAs shall, taking the utmost account of the 2014 EC Recommendation[4] (which replaces the 2007 EC Recommendation) and SMP Guidelines[5] published by the EC, define the relevant markets appropriate to national circumstances, in particular relevant geographic markets within their territory, in accordance with the principles of competition law.

A1.10 The 2014 EC Recommendation identifies a set of product and service markets within the electronic communications sector in which *ex ante* regulation may be warranted. Its purpose is twofold. First, seeking to achieve harmonisation across the single market by ensuring that the same markets will be subject to a market analysis in all Member States. Secondly, providing legal certainty by making market players aware in advance of the markets to be analysed. The 2014 EC Recommendation identifies voice call termination on individual mobile networks as one of the markets to be reviewed. Together with the 2014 EC Recommendation, the Commission has adopted also a revised Explanatory Note. [6]

A1.11 The fact that an NRA identifies the product and services markets listed in the 2014 EC Recommendation does not automatically mean that regulation is warranted. Market definition is not an end in itself but rather a means of assessing effective competition.

A1.12 The SMP Guidelines make clear that market definition is not a mechanical or abstract process. It requires an analysis of any available evidence of past market

[3] The market power determination concept is used in the Act to refer to a determination that a person has SMP in an identified services market.
[4] 2014 EC *Recommendation* , available at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.295.01.0079.01.ENG
[5] The SMP *Guidelines*, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:165:0006:0031:EN:PDF
[6] Explanatory Note to the 2014 EC Recommendation, available at http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?action=display&doc_id=7056

behaviour and an overall understanding of the mechanics of a given sector. As market analyses have to be forward-looking, the Guidelines state that NRAs should determine whether the market is prospectively competitive, and thus whether any lack of effective competition is durable, by taking into account expected or foreseeable market developments over the course of a reasonable period. They clarify that NRAs enjoy discretionary powers that reflect the complexity of all the relevant factors that must be assessed (economic, factual and legal) when identifying the relevant market, and assessing whether an undertaking has SMP.

A1.13 The SMP Guidelines also describe how competition law principles may be used by NRAs in their analyses. In particular, there are two dimensions to the definition of a relevant market: the relevant products to be included in the same market and the geographic extent of the market. Ofcom's approach to market definition follows that used by the United Kingdom competition authorities, which is in line with the approaches adopted by the EC.

A1.14 While such principles are being used in identifying the *exante* markets, they will not necessarily be identical to markets defined in individual competition law cases. This may be the case, especially as the former is based on an overall forward-looking assessment of the structure and the functioning of the market under examination. Accordingly, the economic analysis carried out for the purpose of this review, including the identified markets, is without prejudice to any analysis that may be carried out in relation to any investigation pursuant to the Competition Act 1998[7] (relating to the application of the Chapter I or II prohibitions or Article 101 or 102 of the Treaty on the Functioning of the European Union[8]) or the Enterprise Act 2002[9].

## Market analysis procedure

### Effective competition

A1.15 The Act requires that we carry out market analyses of identified markets for the purpose of making or reviewing market power determinations. Such analyses are normally to be carried out within 2 years from the adoption of a revised recommendation on markets, where such recommendation identifies a market not previously notified to the EC, or within 3 years from the publication of a previous market power determination relating to that market. However, the requirement to review an earlier market power determination within a 3-year period does not apply to this market review[10].

A1.16 In carrying out a market analysis, the key issue for an NRA is to determine whether the market in question is effectively competitive. The 27th recital to the Framework Directive clarifies the meaning of that concept. Namely, "[it] is essential that ex ante regulatory obligations should be imposed only where there is not effective

[7] http://www.legislation.gov.uk/ukpga/1998/41/contents
[8] Previously Article 81 and Article 82 of the EC Treaty, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2010:083:FULL:EN:PDF
[9] http://www.legislation.gov.uk/ukpga/2002/40/contents
[10] The Act was amended on 26 May 2011 to include these requirements under section 84A following amendment to the Directives on 19 December 2009. However, the Electronic Communications and Wireless Telegraphy Regulations 2011 (SI 2011/1210), which introduced these amendments to the Act, provided for a transitional provision which means that the requirement to notify the EC within 3 years from a previous market power determination only applies where that market power determination was made after 25 May 2011 (see section 84A(4) of the Act). The market power determinations under review in this document were made prior to 25 May 2011.

competition, i.e. in markets where there are one or more undertakings with significant market power, and where national and Community competition law remedies are not sufficient to address the problem".

A1.17 The definition of SMP is equivalent to the concept of dominance as defined in competition law. This is provided for by Article 14 of the Framework Directive, as implemented by section 78 of the Act. The Framework Directive requires, however, that NRAs must carry out the market analysis taking the utmost account of the SMP Guidelines. The latter emphasise that NRAs should undertake a thorough and overall analysis of the economic characteristics of the relevant market before coming to a conclusion as to the existence of significant market power.

A1.18 In that regard, the SMP Guidelines set out, additionally to market shares, a number of criteria that can be used by NRAs to measure the power of an undertaking to behave to an appreciable extent independently of its competitors, customers and consumers, including (a) overall size of the undertaking; (b) control of infrastructure not easily duplicated; (c) technological advantages or superiority; (d) absence of or low countervailing buying power; (e) easy or privileged access to capital markets/financial resources; (f) product/services diversification (e.g. bundled products or services); (g) economies of scale; (h) economies of scope; (i) vertical integration; (j) highly developed distribution and sales network; (k) absence of potential competition; and (l) barriers to expansion. A dominant position can derive from a combination of these criteria, which taken separately may not necessarily be determinative.

### Sufficiency of competition law

A1.19 As part of our overall forward-looking analysis, we also assess whether competition law by itself (without *ex ante* regulation) is sufficient to address the competition problems identified. Aside from the need to address this issue as part of the three-criteria test, we also consider this matter in our assessment of the appropriate remedies which, as explained below, are based on the nature of the specific competition problems we identify within the relevant markets as defined. Our analysis in this regard is set out in Section 5 at paragraphs 5.32 – 5.38.

## Remedies procedure

### Powers and legal tests

A1.20 The Framework Directive prescribes what regulatory action NRAs must take depending upon whether or not the market in question has been found effectively competitive. Where a market has been found to be effectively competitive, NRAs are not allowed to impose SMP obligations and must withdraw such obligations where they already exist. On the other hand, where the market is found not to be effectively competitive, the NRAs must identify the undertakings with SMP on that market and then impose appropriate obligations on them. [11]

A1.21 NRAs have a suite of regulatory tools at their disposal, as reflected in sections 87-91 of the Act. Specifically, the Access Directive specifies a number of SMP obligations, including transparency, non-discrimination, accounting separation, access to and use of specific network elements and facilities, price control and cost accounting. When imposing a specific obligation, the NRA will need to demonstrate

[11] See Article 16(3) and (4) of the Framework Directive; sections 84 and 87(1) of the Act.

that the obligation in question is based on the nature of the problem identified, proportionate and justified in the light of the policy objectives as set out in Article 8 of the Framework Directive.[12]

A1.22 Specifically, for each and every SMP obligation we explain why it satisfies the test that the obligation is: (a) objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates; (b) not such as to discriminate unduly against particular persons or against a particular description of persons; (c) proportionate to what the condition or modification is intended to achieve; and (d) in relation to what it is intended to achieve, transparent.[13]

A1.23 Additional legal requirements may also need to be satisfied depending on the SMP obligation in question, for example, for price controls where the NRA's market analysis must indicate that the lack of effective competition means that the MCP concerned might sustain prices at an excessively high level, or apply a price squeeze, to the detriment of end-users. In that instance, NRAs must take into account the investment made by the MCP and allow him a reasonable rate of return on adequate capital employed, taking into account the risks involved, as well as ensure that any cost recovery mechanism or pricing methodology that is mandated serves to promote efficiency and sustainable competition and maximise consumer benefits.[14] Where an obligation to provide third parties with network access is considered appropriate, NRAs must take into account factors including the feasibility of the proposed network access, the technical and economic viability of creating networks[15] that would make the network access unnecessary, the investment of the network MCP which is required to provide access[16] and the need to secure effective competition[17] in the long term.[18]

### Ofcom's general duties - section 3 of the Act

A1.24 Under the Act, our principal duty in carrying out functions is to further the interests of citizens in relation to communications matters and to further the interests of consumers in relevant markets, where appropriate by promoting competition (section 3(1)).

A1.25 In so doing, we are required to secure a number of specific objectives, including securing the availability of a wide range of electronic communications services throughout the UK (section 3(2)(b)).

A1.26 In performing our duties, we are also required to have regard to a range of other considerations, as appear to us to be relevant in the circumstances. In this context, we consider that a number of such considerations are relevant, namely:

- the desirability of promoting competition in relevant markets (section 3(4)(b)); and

[12] See Article 8(4) of the Access Directive.
[13] Section 47 of the Act; Article 8(5) of the Framework Directive and Article 5(2) of the Access Directive.
[14] Section 88 of the Act, which implements Article 13 of the Access Directive.
[15] Including the viability of other network access products, whether provided by the dominant provider or another person.
[16] Taking account of any public investment made.
[17] Including, where it appears to us to be appropriate, economically efficient infrastructure-based competition.
[18] Section 87 of the Act.

- the desirability of encouraging investment and innovation in relevant markets (section 3(4)(d)).

A1.27 We must also have regard to the principles under which regulatory activities should be transparent, accountable, proportionate, consistent, and targeted only at cases in which action is needed (section 3(3)), as well as the interest of consumers in respect of choice, price, quality of service and value for money (section 3(5)).

A1.28 Ofcom has, however, a wide measure of discretion in balancing its statutory duties and objectives. In so doing, we take account of all relevant considerations, including responses received during our consultation process, in reaching our conclusions.

### European Community requirements for regulation - sections 4 and 4A of the Act and Article 3 of the BEREC Regulation

A1.29 Our functions exercised in this review fall under the CRF. As such, section 4 of the Act requires us to act in accordance with the six European Community requirements for regulation. Where it appears to Ofcom that any of their general duties conflict with one or more of their duties under section 4, priority must be given to those latter duties (section 3(6)).

A1.30 In summary, these six requirements are:

- to promote competition in the provision of electronic communications networks and services, associated facilities and the supply of directories;
- to contribute to the development of the European internal market;
- to promote the interests of all persons who are citizens of the European Union;
- to take account of the desirability of Ofcom carrying out its functions in a manner which, so far as practicable, does not favour one form of or means of providing electronic communications networks, services or associated facilities over another – i.e. to be technologically neutral;
- to encourage the provision of network access and service interoperability, to such extent as Ofcom considers appropriate for the purpose of securing efficient and sustainable competition, efficient investment and innovation, and the maximum benefit for customers of CPs;
- to encourage compliance with certain standards in order to facilitate service interoperability and secure freedom of choice for the customers of CPs.

A1.31 We consider that the first, second, third, fourth and fifth of those requirements are of particular relevance to the matters under review and that no conflict arises in this regard with those specific objectives in section 3 of the Act that we consider are particularly relevant in this context.

A1.32 Section 4A of the Act requires Ofcom, in carrying out certain of its functions (including, among others, Ofcom's functions in relation to market reviews under the CRF) to take due account of applicable recommendations issued by the EC under Article 19(1) of the Framework Directive, which aim to achieve the harmonised application of provisions of the CRF and the achievement of the objectives set out in Article 8 of the Framework Directive. Where we decide not to follow such a recommendation, we must notify the EC of that decision and the reasons for it.

A1.33 Similarly, Article 3(3) of the Regulation establishing BEREC[19] requires NRAs to take utmost account of any opinion, recommendation, guidelines, advice or regulatory best practice adopted by BEREC.

A1.34 Accordingly, we have taken due account of the applicable EC recommendations and utmost account of the applicable opinions, recommendations, guidelines, advice and regulatory best practices adopted by BEREC relevant to the matters under consideration in this review.

## The 2009 EC Recommendation

A1.35 In 2009, the European Commission issued a Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates[20] under Article 19(1) of the Framework Directive. This recommends that Member States adopt a common approach when setting price controls.

A1.36 The 2009 EC Recommendation favours recovering elements of common costs not from wholesale termination but from the competitive retail side of the mobile market, based on a bottom-up long-run incremental cost methodology. The Recommendation also outlines the EC's view that all termination charges should be symmetrical.

A1.37 We consider that the Recommendation is relevant to this market review, and that, therefore, we must have regard to it in reaching our conclusions and, in accordance with section 4A of the Act, Ofcom is obliged to take it into account.

A1.38 Further, we consider that when having regard to the Recommendation we must take account of both the course of action which it recommends in relation to setting charge control and cost accounting obligations (the content of the Recommendation) and the harmonising objective or intent of the Recommendation. We discuss the 2009 EC Recommendation in Section 2 at paragraphs 2.10 - 2.11.

### Regulated entity

A1.39 The power in the Act to impose an SMP obligation by means of an SMP services condition provides that it is to be applied only to a 'person' whom we have determined to be a 'person' having SMP in a specific market for electronic communications networks, electronic communications services or associated facilities (i.e. the 'services market').

A1.40 The Framework Directive requires that, where an NRA determines that a relevant market is not effectively competitive, it shall identify 'undertakings' with SMP on that market and impose appropriate specific regulatory obligations. For the purposes of EC competition law, 'undertaking' includes companies within the same corporate

[19] Regulation (EC) No 1211/2009 of the European Parliament and of the Council of 25 November 2009 establishing the Body of European Regulators of Electronic Communications (BEREC) and the Office, 25 November 2009 ('the BEREC Regulation'), http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009R1211&from=EN

[20] 2009 EC *Recommendation*, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:EN:PDF

group (*Viho v Commission* Case C-73/95 P [1996] ECR I-5447[21]), for example, where a company within that group is not independent in its decision making.

A1.41 We consider it appropriate to prevent a dominant provider to whom a SMP service condition is applied, which is part of a group of companies, from exploiting the principle of corporate separation. The dominant provider should not use another member of its group to carry out activities or to fail to comply with a condition, which would otherwise render the dominant provider in breach of its obligations.

[21] *Judgement of 24 October 1996,* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61995CJ0073:EN:PDF

**Annex 2**

# General analytical approach to market definition and SMP assessment

## Introduction

A2.1 This annex sets out in general terms the processes that we have followed in defining the markets within this review, how and on what basis we assess whether anyone has SMP in a given market, whether SMP conditions should be imposed in a relevant market, and in what form. Sections 3 and 4 (market definition and SMP analysis) set out in more detail how we have applied our approach in each relevant market.

## The time period under review

A2.2 Rather than just looking at the current position, market reviews look ahead to how competitive conditions may change in future. Our evaluation of the current market takes into account past developments and evidence, before then considering the foreseeable market changes that we expect to affect its development over the period to April 2017. This forecast period reflects the period covered by this market review.

A2.3 The forward look period that we have used does not preclude us reviewing the market before that point should the market develop in way we have not foreseen to the extent that it is likely to affect the competitive conditions that are operating.

## Approach to market definition

A2.4 In defining markets for market review purposes, our main EU law obligation is to define relevant markets appropriate to national circumstances in accordance with the principles of competition law, taking the utmost account of the 2014 EC Recommendation[22] and the SMP Guidelines published by the EC.[23]

A2.5 There are two dimensions to the definition of the relevant market: the relevant products to be included within the market and the geographic extent of the market. It is often practical to define the relevant product market before exploring the geographic dimension of the market.

A2.6 While we describe below our analytical approach to market definition, it should be borne in mind that this is not a mechanical or abstract process. The approach is a dynamic one based on our overall understanding of the relevant markets, taking account of available evidence of past behaviour as well as our forward-looking analysis over the forecast period, reflecting the characteristics of the relevant retail and wholesale markets and the factors likely to influence their competitive development.

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[22] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.295.01.0079.01.ENG
[23] Article 15(3) of the Framework Directive.

A2.7 It should therefore be recognised that the market definition exercise is not an end in itself, but, rather, a means to an end. Market definition aids the assessment of whether end-users of a product are protected by effective competition and thus whether there is a requirement for the imposition of *ex ante* regulation. It is in this light that we have conducted our market definitions in this review.

A2.8 NRAs may identify markets that differ from those in the 2014 EC Recommendation which may be susceptible to *ex ante* regulation having regard to three cumulative criteria:

- the presence of high and non-transitory barriers to entry, which may be of a structural, legal or regulatory nature;
- a market structure which does not tend towards effective competition within the relevant time horizon (the application of this criterion involves examining the state of competition behind the barriers to entry); and
- the insufficiency of competition law alone to adequately address the market failure(s) concerned.[24] If these conditions are met, where justified in the national circumstances, it may be appropriate to impose *ex ante* regulation in the market. The market definition exercise goes to this end.

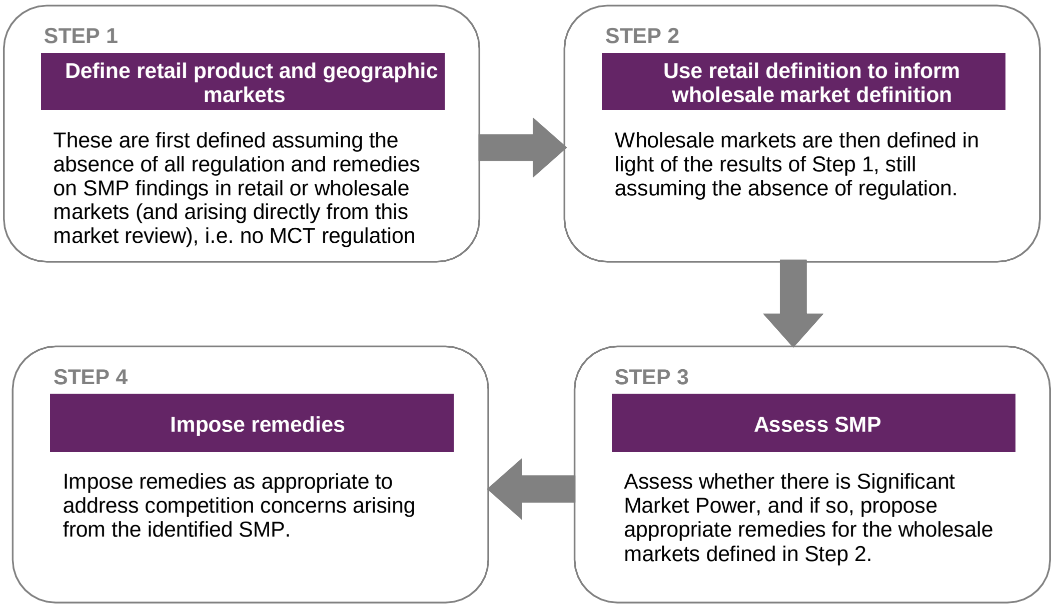
A2.9 In reaching our conclusions, we have taken utmost account of the SMP Guidelines and the 2014 EC Recommendation as well as the accompanying Explanatory Note (the 'Explanatory Note').[25]

## Sequencing of our analysis

A2.10 We now provide an overview of the stages involved in assessing whether or not it is appropriate to impose *ex ante* regulation. Figure A2.1 sets out the sequencing of our analysis.

[24] As set out in recital 11 and point 2 of the 2014 EC Recommendation.
[25] See Explanatory Note to the 2014 EC Recommendation.

**Figure A2.1: Sequencing of market definition, SMP and remedies analysis**




A2.11 The order in which we carry out the various steps is linked with another aspect that often needs to be taken into account – especially in the electronic communications sector – namely the level of the supply chain (e.g. retail, wholesale) that is being analysed. Our usual starting point for identifying markets where there may be a requirement for the imposition of *ex ante* regulation is the definition of retail markets from a forward-looking perspective (Step 1). The wholesale market is defined subsequent to this exercise being carried out (Step 2).

A2.12 The analysis of retail market definition is logically prior to the definition of wholesale markets because the demand for the upstream wholesale service is a derived demand – i.e. the level of the demand for the upstream input depends on the demand for the retail service. Hence the range of available substitutes at the downstream (retail) level will inform the likely range of substitutes for the upstream (wholesale) service. This is because a rise in the price of a wholesale service which is passed through in the price of downstream retail services will cause retail customers to switch to substitute retail products, reducing demand for the wholesale input. We refer to this as an indirect constraint.

A2.13 Consequently, Step 1 (retail market definition) and Step 2 (wholesale market definition) should be regarded as one exercise, the ultimate purpose of which is to define those wholesale markets in the UK where there may be a requirement for the imposition of *ex ante* regulation.[26]

A2.14 We have thus considered the definition of retail and wholesale markets and, in relevant cases, whether the wholesale market is one in which *ex ante* regulation may be appropriate (if so, we have then formally identified a relevant market).[27] Step 3 in our analysis is assessing whether or not there is SMP. In the event that

[26] See, in this respect, recital 7 of the 2014 EC Recommendation which states that *the starting point for the identification of wholesale markets susceptible to ex ante regulation is the analysis of corresponding retail markets*". See also section 2.1 of the Explanatory Note to the 2014 EC Recommendation and paragraph 44 of the SMP Guidelines.
[27] See recital 5 and point 2 of the 20014 EC Recommendation.

we find that SMP exists, we then go on to consider appropriate remedies for the relevant market (Step 4).

## Market definition

### Demand-side and supply-side substitution

A2.15 Market boundaries are determined by identifying constraints on the price setting behaviour of firms.[28] There are two main constraints to consider:

- first, to what extent it is possible for a customer to substitute other services for those in question in response to a relative price increase ('demand-side substitution'); and

- second, to what extent suppliers can switch, or increase, production to supply the relevant products or services in response to a relative price increase ('supply-side substitution').

A2.16 The hypothetical monopolist test (HMT) is a useful tool often used to identify close demand-side and supply-side substitutes. In this test, a product is considered to constitute a separate market if the hypothetical monopolist supplier could impose a small but significant non-transitory increase in price (SSNIP) above the competitive level without losing sales to such a degree as to make this price rise unprofitable. If such a price rise would be unprofitable, because consumers would switch to other products or because suppliers of other products would begin to compete with the hypothetical monopolist, then the market definition should be expanded to include the substitute products.

A2.17 We must first therefore address the issue of which product(s) should form the starting point for the application of the HMT. We refer to this starting point as the 'focal product.'[29] Paragraph 41 of the SMP Guidelines states that "*As a starting point, an NRA should apply this test firstly to an electronic communications service or product offered in a given geographical area, the characteristics of which may be such as to justify the imposition of regulatory obligations …*"

A2.18 We define markets first on the demand-side, considering if other services could be considered as substitutes by consumers in the event of the hypothetical monopolist supplier introducing a SSNIP above the competitive level.

A2.19 Then, where relevant, we assess supply-side substitution possibilities to consider whether they provide any additional constraints on the pricing behaviour of the hypothetical monopolist which have not been captured by the demand-side analysis. In this assessment, supply-side substitution is considered to be a low cost form of entry which can take place within a reasonable timeframe (e.g. up to 12 months). The key point is that, for supply-side substitution to be relevant, not only must suppliers be able, in theory, to enter the market quickly and at low cost by virtue of their existing position in the supply of other products or geographic areas, but there must also be an additional competitive constraint arising from such entry into the supply of the service in question.

[28] See paragraph 38 of the SMP Guidelines.
[29] This reflects the terminology used by the OFT (OFT, *Market definition*, December 2004, OFT403, www.oft.gov.uk/shared_oft/business_leaflets/ca98_guidelines/oft403.pdf).

A2.20 Therefore, in identifying potential supply-side substitutes, it is important that providers of these services have not already been taken into consideration. There might be suppliers who provide other services but who might also be materially present in the provision of demand-side substitutes to the service for which the hypothetical monopolist has raised its price. Such suppliers are not relevant to supply-side substitution since they supply services already identified as demand-side substitutes. As such, their entry has already been taken into account and so supply-side substitution from these suppliers cannot provide an additional competitive constraint on the hypothetical monopolist. However, the impact of expansion by such suppliers can be taken into account in the assessment of market power.

## Bundling

A2.21 A common feature of the telecoms sector is the supply of bundles of different services. The Explanatory Memorandum to the 2014 EC Recommendation in Section 3.2 explains that despite the fact that bundling is one of the dominant trend observed at the retail level, there is no need to define a separate retail market for bundles because evidence to date has not indicated that there is a need for *ex ante* regulation of bundles, which may contain a previously regulated input.

A2.1 Furthermore, the recommendation said that even if an NRA defines a retail market for a bundle of services, the wholesale inputs which compose this bundle would remain separate and non-substitutable.

## Homogeneous competitive conditions

A2.2 In certain circumstances, it may also be appropriate to define a product market by grouping together services which are subject to homogeneous competitive conditions, despite the absence of demand- and supply-side substitutability. Homogeneity of competitive conditions is chiefly used in defining geographic markets to combine, into a single market, different geographic areas in which competitive conditions are nonetheless sufficiently homogeneous. However, it can also be used in the product market definition analysis. This approach can help streamline the subsequent market power analysis by reducing the need to review multiple markets for products the provision of which is subject to homogeneous competitive conditions.

A2.3 However, combining products and services based on homogenous competition conditions, is – by definition – only appropriate where this would not alter any subsequent findings on SMP (relative to defining those markets separately and making separate market power assessments accordingly). Provided this is the case, then we consider applying this criterion to both our product and geographic market definition analysis is appropriate since market definition, as explained above, is a means to an end and the end is an assessment of the effectiveness of competition in the relevant market which involves carrying out the market power analysis.

A2.4 Our approach also takes into account the SMP Guidelines. In particular, paragraph 56 of the SMP Guidelines states that:

> "According to established case-law, the relevant geographic market comprises an area in which the undertakings concerned are involved in the supply and demand of the relevant products or services, in which area the conditions of competition are similar or sufficiently

> homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different…"

A2.5 Hence, subject to the relevant caveats above, where there are geographic areas where competitive conditions are sufficiently homogeneous, the definition of the relevant geographic market will include all of those areas within one market.

### Common pricing constraints

A2.6 Another factor that is sometimes considered in setting market boundaries is whether there exist common pricing constraints across customers, services or geographic areas (i.e. areas in which a firm voluntarily offers its services at a geographically uniform price). Where common pricing constraints exist, the geographic areas in which they apply could be included within the same relevant market even if demand-side and supply-side substitutes are not present. Failure to consider the existence of a common pricing constraint could lead to unduly narrow markets being defined.

### Relevance of existing regulation – the modified Greenfield approach

A2.7 When we conduct our analysis to define the relevant retail and wholesale markets we assume that there is no SMP regulation in place in the market under consideration or in downstream markets – the so-called 'modified Greenfield approach'.[30]

A2.8 This approach means we conduct Step 1 and Step 2 of the approach set out in Figure A9.1 in the absence of SMP regulation. To do otherwise would mean that the subsequent wholesale market power assessment (Step 3) would be informed by a previous retail market definition that itself relied on a wholesale regulatory remedy arising from the finding of wholesale market power. This would be a circular and incorrect approach to market definition.

A2.9 However, at both Steps 1 and 2, it remains appropriate to take into account *ex ante* regulation arising from SMP findings in markets other than those being defined. Further, having defined the wholesale market, it may be necessary to go on to consider whether *ex ante* regulation is necessary at the retail level. In carrying out this retail level assessment, it is appropriate to take into account any regulation that is upstream of the market being considered, as upstream regulation (e.g. wholesale remedies) has the potential to affect the competitive state of downstream (i.e. retail) markets (indeed, this is generally one of the main intentions of upstream regulation).

### Geographic market

A2.10 In addition to the product(s) to be included within a market, market definition also requires the geographic extent of the market to be specified. The geographic market is the area within which demand side and/or supply side substitution can take place and is defined using a similar approach to that used to define the product market. We have considered the geographic extent of each relevant market covered in this market review.

[30] See also section 2.5 of the Explanatory Note to the 2014 EC Recommendation.

A2.11 There are a number of possible approaches to geographic market definition. One approach would be to begin with a narrowly-defined area and then consider whether a price increase by a hypothetical monopolist in that narrowly defined area would encourage customers to switch to suppliers located outside the area (demand-side substitution) or CPs outside the area to begin to offer services in the area (supply-side substitution). If demand and/or supply side substitution is sufficient to constrain prices then it is appropriate to expand the geographic market boundary.

A2.12 We recognise that in certain communications (product) markets in the UK, there could be different competitive pressures in different geographic areas. In this case, we therefore have to consider whether it would be appropriate to identify separate geographic markets for some services (note also that the discussion above about homogenous competitive conditions and common pricing constraints is relevant). Defining separate markets by geographic area may be problematic because, due to the dynamic nature of communications markets, the boundary between areas where there are different competitive pressures may be unstable and change over time, rendering the market definition obsolete.

A2.13 An alternative approach is to define geographic markets in a broader sense. This involves defining a single geographic market but recognising that this single market has local geographical characteristics. That is to say, recognising that within the single market there are geographic areas where competition is more developed than in other geographic areas. This avoids the difficulties of proliferation and instability in the definition.

## Market power assessment

A2.14 As we recognise above, market definition is not an end in itself. The definition of the scope of the relevant economic market is carried out in order to identify the product(s) and the geographic area over which a competition assessment can be made of CPs' ability to act to an appreciable extent independently of competitors, customers and consumers, i.e. whether there are any CPs that hold a position of SMP within a particular market.

### Definition of SMP

A2.15 Sections 45, 46 and 78 of the Act grant us the power under certain circumstances to set conditions which require CPs to do certain things. Specifically, sections 46(7) and 46(8) state that SMP services conditions may be imposed on a particular person who is either a CP or a person who makes associated facilities available, and who has been determined to have SMP in a services market (i.e. a specific market for electronic communications networks, electronic communications services or associated facilities).

A2.16 Accordingly, having identified the relevant product and geographic market(s) and, where relevant having identified the market as susceptible to *ex ante* regulation, we go on to analyse each market in order to assess whether any person or persons have SMP as defined in section 78 of the Act (construed in accordance with Article 14 of the Framework Directive). Section 78 of the Act provides that SMP is defined as being equivalent to the competition law concept of dominance in accordance with Article 14(2) of the Framework Directive which provides:

> "An undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent

> to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers."

A2.17 Further, Article 14(3) of the Framework Directive states that:

> "Where an undertaking has significant market power on a specific market, it may also be deemed to have significant market power on a closely related market, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking."

A2.18 Therefore, in the relevant market, one or more undertakings may be designated as having SMP where that undertaking or undertakings enjoy a position of dominance. Also, an undertaking may be designated as having SMP where it could lever its market power from a closely related market into the relevant market, thereby strengthening its market power in the relevant market.

A2.19 In assessing whether an undertaking has SMP, we take due account of the SMP Guidelines as we are required to do under section 79 of the Act.

## The criteria for assessing SMP

A2.20 The SMP Guidelines require NRAs to assess whether competition in a market is effective. This assessment is undertaken through a forward looking evaluation of the market (i.e. determining whether the market is prospectively competitive), taking into account foreseeable developments and a number of relevant criteria.[31]

A2.21 Our assessments of SMP are concerned with the prospects for competition over the review period of three years. Ultimately, we want to understand how the markets are likely to develop, and whether competition is likely to be, or become, effective during this review period. Below we set out certain key factors that we are likely to consider when assessing SMP.[32]

A2.22 Where a market is found to be competitive then no SMP conditions can be imposed. Section 84(4) of the Act requires that any SMP condition in that market, applying to a person by reference to a market power determination made of the basis of an earlier analysis, must be revoked.

## Market shares

A2.23 In the SMP Guidelines, the EC discusses market shares as being an indicator of (although not sufficient alone to establish) market power:

[31] See, for example, paragraphs 19 and 20, and the opening words of paragraph 75, of the SMP Guidelines.

[32] The factors listed in this annex are not intended to be exhaustive – other evidence may be relevant. Paragraph 78 of the SMP Guidelines lists the following criteria that could be used to assess market power: overall size of the undertaking; control of infrastructure not easily duplicated; technological advantages or superiority; absence of, or low, countervailing buying power; easy or privileged access to capital markets/financial resources; product/services diversification (e.g. bundled products or services); economies of scale; economies of scope; vertical integration; a highly developed distribution and sales network; absence of potential competition; and barriers to expansion.

> "…Market shares are often used as a proxy for market power. Although a high market share alone is not sufficient to establish the possession of significant market power (dominance), it is unlikely that a firm without a significant share of the relevant market would be in a dominant position. Thus, undertakings with market shares of no more than 25% are not likely to enjoy a (single) dominant position on the market concerned. In the Commission's decision making practice, single dominance concerns normally arise in the case of undertakings with market shares of over 40%, although the Commission may in some cases have concerns about dominance even with lower market shares, as dominance may occur without the existence of a large market share. According to established case-law, very large market shares — in excess of 50% — are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position…"[33]

A2.24 Market shares and market share trends provide an indication of how competitive a market has been in the past. If a firm has a persistently high market share, then that in itself gives rise to a presumption of SMP. However, changes in market share are also relevant to our assessment of prospects for competition. For example, a market share trend which shows a decline may suggest that competition will provide an effective constraint within the time period over which the SMP assessment is being conducted, although it does not preclude the finding of SMP.[34]

## Barriers to entry and expansion

A2.25 Entry barriers are important in the assessment of potential competition.[35] The lower entry barriers are, the more likely it is that potential competition will prevent undertakings already within a market from profitably sustaining prices above competitive levels. Moreover, the competitive constraint imposed by potential entrants is not simply about introducing a new product to the market. To be an effective competitive constraint, a new entrant must be able to attain a large enough scale to have a competitive impact on undertakings already in the market. This may entail entry on a small scale, followed by growth. Accordingly, whether there are barriers to expansion is also relevant to an SMP assessment. Many of the factors that may make entry harder might also make it harder for undertakings that have recently entered the market to expand their market shares and hence their competitive impact.

A2.26 A related factor is the growth in demand in the market. In general, CPs are more willing to invest in a growing market (and less willing in a declining market). As a result, barriers to entry and expansion tend to be less of an impediment to competition in rapidly growing markets.

## Countervailing buyer power

A2.27 A concentrated market need not lead to harmful outcomes if buyers have sufficient countervailing buyer power to curtail the exercise of market power. In general, purchasers may have a degree of buyer power where they purchase large volumes and can make a credible threat to switch supplier or to meet their requirements

[33] Paragraph 75 of the SMP Guidelines.
[34] See, for example, paragraph 75 of the SMP Guidelines.
[35] Paragraph 80 of the SMP Guidelines.

through self-supply to a significant degree. It is important to note, however, that the volumes involved must be large enough to make a material difference to the profitability of the current supplier. That is, an individual wholesale customer must represent a significant proportion of the total volume supplied by the relevant CP.

## Excessive pricing and profitability

A2.28 In a competitive market, individual firms should not be able to persistently raise prices above costs and sustain excess profits. As costs fall, prices should be expected to fall too if competition is effective.

A2.29 The ability, therefore, to price at a level that keeps profits persistently and significantly above the competitive level is an important indicator of market power. The SMP Guidelines refer to the importance, when assessing market power on an *ex ante* basis, of considering the power of undertakings to raise prices without incurring a significant loss of sales or revenue (factors that may explain excess profits in the short term, such as greater innovation and efficiency, or unexpected changes in demand, should however be considered in interpreting high profit figures).[36]

A2.30 The reverse is not true: consistently low profits, i.e. profits at or below the cost of capital, cannot be taken as evidence of an absence of market power. It may simply be evidence of inefficiency. For example, if a firm with SMP were to have inefficiently high costs, it may charge a price above the level we would expect to see in a competitive market but this would not result in high profits. In addition, price regulation exists in many of the wholesale markets considered, and therefore low profits may simply be the result of regulation rather than a reflection of the underlying competitive conditions.

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[36] Paragraph 73 of the SMP Guidelines.

## Annex 3

# SMP conditions

## Legal instrument

### NOTIFICATION UNDER SECTION 48(1) AND 79(4) OF THE COMMUNICATIONS ACT 2003

### Notification of the identification of markets, the making of market power determinations and the setting of SMP services conditions in relation to each of the persons named in Schedule 1 to this Notification under section 45 of the Communications Act 2003

#### Background

A3.1 On 15 March 2011, Ofcom published a statement concerning the provision of wholesale mobile voice call termination (the 'MCT 2011 Statement')[37] which identified the relevant markets, made market power determinations and imposed certain significant market power (SMP) conditions. These SMP conditions included a charge control, which expires on 31 March 2015.

A3.2 On 4 June 2014, Ofcom published a consultation document entitled *Mobile call termination 2015-18* (the 'June 2014 Consultation') setting out Ofcom's proposals to identify markets, make market power determinations and set SMP conditions for the period from 1 April 2015 to 31 March 2018. Annex 7 of the June 2014 Consultation set out the notification under section 48A(3) and 80(A)(3) of the Communications Act 2003 (the 'Act') in which Ofcom set out for domestic consultation its proposals. Ofcom invited responses to the June 2014 Consultation by 13 August 2014.

A3.3 Copies of the June 2014 Consultation were also sent to the Secretary of State in accordance with sections 48C(1) and 81(1) of the Act.

A3.4 Ofcom received several responses to its proposals set out in the June 2014 Consultation, and it has considered every such representation. The Secretary of State has not notified Ofcom of any international obligation on the United Kingdom for the purposes of sections 48A(6)(b) or 80A(9)(b) of the Act.

A3.5 The proposals set out in the June 2014 Consultation contained proposals of EU significance for the purposes of the Act. Therefore, after making such modifications of the proposals that appeared to Ofcom to be appropriate following domestic consultation, Ofcom sent on 6 February 2015 a copy of them, and of a draft of the statement accompanying this notification setting out the reasons for them, to the European Commission, BEREC and the regulatory authorities of every other member State for EU consultation, in accordance with sections 48B(2) and 80B(2) of the Act.

[37] The MCT 2011 Statement is available here: http://stakeholders.ofcom.org.uk/consultations/wmctr/

A3.6 Ofcom received comments from the European Commission on its proposals on 5 March 2015 and has considered and taken utmost account of the Commission's comments in making this notification and the Statement accompanying this notification.

### Market identification and market power determinations

A3.7 Ofcom has identified 72 separate markets as described below for the purpose of making a market power determination.

A3.8 The markets that Ofcom has identified are the markets for termination services that are provided by each of those 72 persons named in Part 1 and Part 2 of Schedule 1 to this notification to another communications provider, for the termination of voice calls to UK mobile numbers[38] allocated to that person by Ofcom in the area served by that person and for which that person is able to set the termination rate (each a 'relevant market').

A3.9 Ofcom has made a market power determination that each of the persons named in Part 1 and Part 2 of Schedule 1 to this notification has significant market power in relation to the relevant market in which that provider operates. As specified in Schedule 1, for each of the persons identified under Part 1 and Part 2 of that Schedule, the SMP designation holds with respect to the registered company identified and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 1159 of the Companies Act 2006, in so far as they operate in the relevant market.

A3.10 The effect of, and Ofcom's reasons for deciding to identify the markets and make the market power determinations referred to above are set out in the statement accompanying this notification.

### Determinations to set and revoke SMP service conditions

A3.11 Ofcom is setting the following SMP conditions –

- on each person named in **Part 1** of Schedule 1 to this notification, conditions **M1**, **M3** and **M4** set out in Schedule 2; and

- on each person named in **Part 2** of Schedule 1 to this notification, conditions **M1**, **M2**, **M3** and **M4** set out in Schedule 2.

A3.12 Those SMP conditions shall apply, in the case of each person on whom they are set, in respect of the relevant market on which that person operates.

A3.13 Unless otherwise stated in the Schedules to this notification, the SMP conditions shall take effect from **1 April 2015** and shall have effect until the publication of a notification under section 48(1) of the Act revoking such conditions.

[38] These are the numbers included in the number ranges designated for "mobile services", as defined in Ofcom, *The National Telephone Numbering Plan,* 11 December 2014. http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/Numbering_Plan_Dec_2013.pdf. See also Ofcom, *The National Telephone Numbering Plan,* to enter into force 26 June 2015, currently published for information only prior to that date. http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/Numbering_Plan_version_26_June_2015.pdf. In the current Numbering Plan, these are numbers in the format 07xxx xxx xxx and beginning 071 to 075 and 077 to 079.

A3.14 Ofcom is revoking the SMP conditions set out at Annex 1 to the MCT 2011 Statement, as amended in 2011 and 2012, with effect from **1 April 2015**. Section 16 of the Interpretation Act 1978 shall apply as if this revocation were a repeal of an enactment by an Act of Parliament.

A3.15 The effect of, and Ofcom's reasons for making, the determinations in relation to the SMP conditions referred to above are set out in the Statement accompanying this notification.

## Ofcom's duties and legal tests

A3.16 In identifying and analysing the markets referred to in this notification, and in considering whether to make the corresponding determinations set out in this notification, Ofcom has, in accordance with section 79 of the Act, taken due account of all applicable guidelines and recommendations which have been issued or made by the European Commission in pursuance of the provisions of a European Union instrument, and which relate to market identification and analysis or the determination of what constitutes significant market power. In doing so, pursuant to Article 3(3) of Regulation (EC) No. 1211/2009, Ofcom has also taken utmost account of any relevant opinion, recommendation, guidance advice or regulatory practice adopted by BEREC.

A3.17 Ofcom considers that the SMP conditions set out in Schedule 2 comply with the requirements of sections 45 to 47, 87 and 88 of the Act, as appropriate and relevant to each such SMP condition, and further that the revocation of the SMP conditions set out in the MCT 2011 Statement referred to above comply with the requirements of sections 45 to 47, 87 and 88 of the Act, as appropriate and relevant to them.

A3.18 In making all of the determinations referred to in this notification, Ofcom has also considered and acted in accordance with its general duties set out in section 3 of the Act and the six Community requirements set out in section 4 of the Act. In accordance with section 4A of the Act, Ofcom has also taken due account of all applicable recommendations issued by the European Commission under Article 19(1) of the Framework Directive.

## Interpretation

A3.19 For the purpose of interpreting this notification-

a. except in so far as the context otherwise requires or as otherwise defined in this notification, words or expressions used shall have the same meaning as they have in the Act;

b. headings and titles shall be disregarded;

c. expressions cognate with those referred to in this notification shall be construed accordingly; and

d. the Interpretation Act 1978 (c. 30) shall apply as if this notification were an Act of Parliament.

1.1 The Schedules to this Notification shall form part of this Notification.

**Signed**

**Brian Potterill**
**Competition Policy Director**

**A person authorised by OFCOM under paragraph 18 of the Schedule to the Office of Communications Act 2002**

**17 March 2015**

## SCHEDULE 1

### Part 1

**For each of the persons identified below, the SMP designation holds with respect to the registered company identified and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 1159 of the Companies Act 2006, in so far as they operate in the relevant market.**

1. **08Direct Ltd,** whose registered company number is 06428331 and registered address is Mazhar House, 48 Bradford Road, Stanningley, Leeds, West Yorkshire, LS28 6DD, United Kingdom.

2. **24 Seven Communications Ltd,** whose registered company number is 04468566 and registered address is c/o Novis & Co Chartered Accountants, 1 Victoria Court Bank Square, Morley Leeds, West Yorkshire, LS27 9SE, United Kingdom.

3. **Ace Call Ltd**, whose registered company number is 6729339 and registered address is 11 Hatton Garden, Liverpool, Merseyside, L3 2HA, United Kingdom.

4. **Airwave Solutions Ltd,** whose registered company number is 03985643 and registered address is Charter Court, 50 Windsor Road, Slough, Berkshire, SL1 2EJ, United Kingdom.

5. **Alliance Technologies LLC,** whose registered entity number is 1616678 and registered address is 1932 Service Corp., 1301 East Ninth Street Suite, 3500 Cleveland, OH 44114, USA.

6. **Andrews & Arnold Ltd,** whose registered company number is 03342760 and registered address is Enterprise Court, Downmill Road, Bracknell, Berkshire, RG12 1QS, United Kingdom.

7. **(AQ) Ltd,** whose registered company number is 03663860 and registered address is 13-15 Hunslet Road, Leeds, West Yorkshire, LS10 1JQ, United Kingdom.

8. **AQL Wholesale Ltd** (previously called Telephony Services Ltd), whose registered company number is 05134355 and registered address is 11-15 Hunslet Road, Leeds, LS10 1JQ, United Kingdom.

9. **Bellingham Telecommunications Ltd,** whose registered company number is 07038166 and registered address is 3rd Floor, 67-68 Jermyn Street, London, SW1Y 6NY, United Kingdom.

10. **British Telecommunications Plc,** whose registered company number is 01800000 and registered address is 81 Newgate Street, London, EC1A 7AJ, United Kingdom.

11. **BT OnePhone Ltd,** whose registered company number is 08043734 and registered address is 81 Newgate Street, London, EC1A 7AJ, United Kingdom.

12. **CFL Communications Ltd,** whose registered company number is 04419749 and registered address is Redhill Chambers, High Street, Redhill, Surrey, RH1 1RJ, United Kingdom.

13. **Cheers International Sales Ltd,** whose registered company number is 06288825 and registered address is Britannia House, 1-11 Glenthorne Road, London, W6 0LH, United Kingdom.

14. **Citrus Telecommunications Ltd,** whose registered company number is 03517870 and registered address is Second Floor, 99 Holdenhurst Road, Bournemouth, Dorset, BH8 8DY, United Kingdom.

15. **Cloud9 Communications Ltd**, whose registered company number is 07153956 and registered address is Pinewood Crockford Lane, Chineham Business Park, Chineham, Basingstoke, Hampshire, RG24 8AL, United Kingdom.

16. **Compatel Ltd,** whose registered company number is 07456831 and registered address is 6th Floor, 94 Wigmore Street, London, W1U 3RF, United Kingdom.

17. **Confabulate Ltd,** whose registered company number is 05605939 and registered address is 9 Market Row, Saffron Walden, Essex, CB10 1HB, United Kingdom.

18. **Core Communication Services Ltd,** whose registered company number is 05467282 and registered address is 11 York Road, London, SE1 7NX, United Kingdom.

19. **Core Telecom Ltd,** whose registered company number is 05332008 and registered address is Mazhar House, 48 Bradford Road, Stanningley, Leeds, West Yorkshire, LS28 6DD, United Kingdom.

20. **Eclipse Tel Ltd,** whose registered company number is 06718575 and registered address is Avebury House, Second Floor, 55 Newhall Street, Birmingham, West Midlands, B3 3RB, United Kingdom.

21. **Edge Telecom Ltd,** whose registered company number is 03101247 and registered address is Global House, 2 Crofton Close, Lincoln, LN3 4NT, United Kingdom.

22. **Esendex Ltd,** whose registered company number is 04217280 and registered address is 15 Warwick Road, Stratford-Upon-Avon, Warwickshire, CV37 6YW, United Kingdom.

23. **Euro Thai Exchange Process Company Ltd,** whose registered company number is 10254601272 and registered address is 102/55 Floor.11, #1101 JC Tower, Soi Thonglor 25, Sukhumvit 55, Klongton NUA, Wattana, Bangkok 10110, Thailand.
24. **Flextel Ltd,** whose registered company number is 02772380 and registered address is Griffins Court, 24-32 London Road, Newbury, Berkshire, RG14 1JX, United Kingdom.

25. **Fonix Mobile Ltd** (previously called Orca Digital Ltd), whose registered company number is 05836806 and registered address is 23 Heddon Street, London, W1B 4BQ, United Kingdom.

26. **Hay Systems Ltd,** whose registered company number is SC201362 and registered address is c/o Grant Thornton UK LLP, 7 Exchange Crescent, Conference Square, Edinburgh, EH3 7AN, United Kingdom.

27. **Icron Network Ltd,** whose registered company number is 05445235 and registered address is 54 Marsh Wall, London, E14 9TP, United Kingdom.

28. **Invomo Ltd,** whose registered company number is 06267056 and registered address is Global House, 2 Crofton Close, Lincoln, Lincolnshire, LN3 4NT, United Kingdom.

29. **IPV6 Ltd,** whose registered company number is 06711525 and registered address is Berrycentre, Chiltern Drive, Surbiton, Surrey, KT5 8LS, United Kingdom.

30. **IV Response Ltd,** whose registered company number is 04318927 and registered address is 57-61 Mortimer Street, London, W1W 8HS, United Kingdom.

31. **LegendTel LLC,** whose DOS ID number is 3472935 and registered address is 45 John Street, Suite 711, New York, NY 10038, USA.

32. **Limitless Mobile Ltd,** whose registered company number is 07323927 and registered address is 1000 Cambridge Research Park, Cambridge, CB25 9BD, United Kingdom.

33. **Lycamobile UK Ltd,** whose registered company number is 05903820 and registered address is 3rd Floor Walbrook Building, 195 Marsh Wall, London, E14 9SG, United Kingdom.

34. **Magrathea Telecommunications Ltd,** whose registered company number is 04260485 and registered address is Unit 5, Commerce Park, Brunel Road, Theale, Reading, RG7 4AB, United Kingdom.

35. **Mars Communications Ltd,** whose registered company number is 06478834 and registered address is Forest House, Forest Road, Ilford, Essex, IG6 3HJ, United Kingdom.

36. **Moonshado Inc,** whose registered entity number is E0392882008-9 and registered address is 500 N Rainbow Blvd STE 300A, Las Vegas, NV 89107, USA.

37. **Mundio Mobile Ltd,** whose registered company number is 04553934 and registered address is 54 Marsh Wall, London, E14 9TP, United Kingdom.

38. **Nationwide Telephone Assistance Ltd,** whose registered company number is 04315226 and registered address is Ivy Lodge Farm, 179 Shepherds Hill, Harold Wood, Romford, Essex, RM3 0NR, United Kingdom.

39. **Netfuse Telecom Ltd,** whose registered company number is 07923863 and registered address is Unit 11, Hove Business Centre, Fonthill Road, Hove, East Sussex, BN3 6HA, United Kingdom.

40. **Nodemax Ltd,** whose registered company number is 06127089 and registered address is 75 Springfield Road, Chelmsford, Essex, CM2 6JB, United Kingdom.

41. **Oxygen8 Communications UK Ltd,** whose registered company number is 03383285 and registered address is 12th Floor Lyndon House, 58-62 Hagley Road, Birmingham, B16 8PE, United Kingdom.

42. **Premium O Ltd,** whose registered company number is 06762329 and registered address is Beacon House, Ibstone Road, Stokenchurch, High Wycombe, Buckinghamshire, HP14 3FE, United Kingdom.

43. **Premium Routing GmbH,** whose registered company number is CHE-113.847.561 and registered address is Neue Winterthurerstrasse 77a, 8304 Wallisellen, Switzerland.

44. **Proton Telecom Ltd,** whose registered company number is 05570915 and registered address is Barclays House, Gatehouse Way, Aylesbury, Buckinghamshire, HP19 8DB, United Kingdom.

45. **QX Telecom Ltd,** whose registered company number is 03820728 and registered address is 2 Glenmore Close, Thatcham, Berkshire, RG19 3XR, United Kingdom.

46. **Resilient Plc** (previously called Resilient Networks Ltd), whose registered company number is 01403177 and registered address is 25/27 Shaftesbury Avenue, London, W1D 7EQ, United Kingdom.

47. **Rexcom Tech Ltd,** whose registered company number is 06693961 and registered address is Basilica House, 334 Southend Road, Wickford, Essex, SS11 8QS, United Kingdom.

48. **Simwood eSMS Ltd,** whose registered company number is 03379831 and registered address is c/o HW Chartered Accountants Keepers Lane, The Wergs, Wolverhampton, WV6 8UA, United Kingdom.

49. **Sound Advertising Ltd,** whose registered company number is 03218628 and registered address is Aston House, Cornwall Avenue, London, N3 1LF, United Kingdom.

50. **Spacetel UK Ltd,** whose registered company number is 03036383 and registered address is 75 Westow Hill, London, SE19 1TX, United Kingdom.

51. **Stour Marine Ltd,** whose registered company number is 05914603 and registered address is Good Easter House, Good Easter, Chelmsford, Essex, CM1 4RS, United Kingdom.

52. **Swiftnet Ltd,** whose registered company number is 02469394 and registered address is Britannia House, 958-964 High Road, London, N12 9RY, United Kingdom.

53. **Synectiv Ltd,** whose registered company number is 03706138 and registered address is 2 Spring Villa Park, Spring Villa Road, Edgware, Middlesex, HA8 7EB, United Kingdom.

54. **TalkTalk Communications Ltd,** whose registered company number is 03849133 and registered address is Stanford House, Garrett Field, Birchwood, Warrington, WA3 7BH, United Kingdom.

55. **Telecom North America Mobile Inc,** whose registered entity number is C11057-1999 and registered address is 311 West Third St., Carson City, NV 89703, USA .

56. **Telecom2 Ltd,** whose registered company number is 06926334 and registered address is 29th Floor, 1 Canada Square, London, E14 5AA, United Kingdom.

57. **Telecom 10 Ltd** (previously called Sky Telecom Ltd)**,** whose registered company number is 06974505 and registered address is 3A Station Road, Cippenham, Slough, SL1 6JJ, United Kingdom.

58. **Teleena UK Ltd,** whose registered company number is 07069424 and registered address is New Derwent House, 69-73 Theobalds Road, London, WC1X 8TA, United Kingdom.

59. **TG Support Ltd,** whose registered company number is 05370731 and registered address is c/o Antony Batty & Co LLP, 3rd Floor, 3 Field Court, Gray's Inn, London, WC1R 5EF, United Kingdom.

60. **Tismi BV,** whose registered company number is 32081827 and registered address is Catharijnesingel 30 G, 3511 GB, Utrecht, The Netherlands.

61. **Titanium Ltd,** whose registered company number is 06952284 and registered address is 10 Kenyon Street, Hockley, Birmingham, West Midlands, B18 6AR, United Kingdom.

62. **Truphone Ltd,** whose registered company number is 04187081 and registered address is 25 Canada Square, Canary Wharf, London, E14 5LQ, United Kingdom.

63. **UK Broadband Ltd,** whose registered company number is 04713634 and registered address is 20-22 Bedford Row, London, WC1R 4JS, United Kingdom.

64. **Virgin Mobile Telecoms Ltd,** whose registered company number is 03707664 and registered address is Media House, Bartley Wood Business Park, Hook, Hampshire, RG27 9UP, United Kingdom.

65. **Voicetec Systems Ltd,** whose registered company number is 03948745 and registered address is 75 Westow Hill, London, SE19 1TX, United Kingdom.

66. **Vortex Telecom Ltd,** whose registered company number is 06107494 and registered address is The Apex, 2 Sheriffs Orchard, Coventry, CV1 3PP, United Kingdom.

67. **Voxbone SA,** whose registered company number is BE 0478.928.788 and registered address is Avenue Louise 489, 1050 Brussels, Belgium.

68. **Wavecrest (UK) Ltd,** whose registered company number is 03042254 and registered address is 1st Floor Bishopsgate Court, 4-12 Norton Folgate, London, E1 6DB, United Kingdom.

## Part 2

**For each of the persons identified below, the SMP designation holds with respect to the registered company identified and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 1159 of the Companies Act 2006, in so far as they operate in the relevant market.**

1. **EE Ltd,** whose registered company number is 02382161 and registered address is Trident Place, Mosquito Way, Hatfield, Hertfordshire, AL10 9BW, United Kingdom.

2. **Hutchison 3G UK Ltd,** whose registered company number is 03885486 and registered address is Star House, 20 Grenfell Road, Maidenhead, Berkshire, SL6 1EH, United Kingdom.

3. **Telefonica UK Ltd**, whose registered company number is 01743099 and registered address is 260 Bath Road, Slough, Berkshire, SL1 4DX, United Kingdom.

4. **Vodafone Ltd**, whose registered company number is 01471587 and registered address is Vodafone House, The Connection, Newbury, Berkshire, RG14 2FN, United Kingdom.

# SCHEDULE 2

## The SMP Conditions

**Part 1: Commencement**

1. The SMP conditions in Part 3 of this Schedule 2, except where specified otherwise, apply from **1 April 2015**.

**Part 2: Definitions and interpretation**

1. In this Schedule -

"Call" means a voice call which originates on a public electronic communications network (whether fixed or mobile) and is terminated to a mobile number within a number range allocated to the dominant provider by Ofcom, for which the dominant provider is able to set the call termination charge;

"call termination charge**"** means either a fixed-to-mobile call termination charge or a mobile-to-mobile call termination charge.

"controlling percentage" means-

(i) in relation to the Second Relevant Period, the amount of change in the Consumer Prices Index in the period of 12 months ending on the 31 December immediately before the beginning of that relevant period, expressed as a percentage (rounded to one decimal place) of that Consumer Prices Index as at the beginning of that period; reduced by 26.3%; and

(ii) in relation to the Third Relevant Period, the amount of change in the Consumer Prices Index in the period of 12 months ending on the 31 December immediately before the beginning of that relevant period, expressed as a percentage (rounded to one decimal place) of that Consumer Prices Index as at the beginning of that period; reduced by 3.1%.

"Consumer Prices Index" means the index of consumer prices compiled by an agency or a public body on behalf of Her Majesty's Government or a governmental department (which is the Office for National Statistics at the time of publication of this Notification) from time to time in respect of all items;

"dominant provider" is separately defined in each of the SMP conditions in this Schedule;

"fixed-to-mobile call" means a Call originating on a fixed public electronic communications network;

"fixed-to-mobile call termination charge" means the charge made by the dominant provider to terminate a fixed-to-mobile call;

"mobile number" means a UK telephone number that is: (a) adopted or otherwise used to identify apparatus designed or adapted to be capable of being used while in motion; and, (b) designated under the National Telephone Numbering Plan (NTNP) for use in connection with Mobile Services (as that term is defined in the NTNP);

"mobile-to-mobile call" means a Call originating on a mobile public electronic communications network of another mobile communications provider;

“mobile-to-mobile call termination charge” means the charge made by the dominant provider to terminate a mobile-to-mobile call;

“network access” means the provision of interconnection to the public electronic communications network provided by the dominant provider, together with any services, facilities or arrangements which are necessary for the provision of electronic communications services over that interconnection;

**“**Ofcom**”** means the Office of Communications;

“pence per minute” means the sum in pence charged for a minute of a Call;

“relevant period” means any of the following -

(i) the period of eleven months beginning on 1 May 2015 and ending on 31 March 2016 (the “First Relevant Period”);

(ii) the period of twelve months beginning on 1 April 2016 and ending on 31 March 2017 (the “Second Relevant Period”);

(iii) the period of twelve months beginning on 1 April 2017 and ending on 31 March 2018 (the “Third Relevant Period”);

and

"third party" means a person operating a public electronic communications network.

2. For the purpose of interpreting the conditions in Part 3 of this Schedule -

(a) Except in so far as the context otherwise requires, words or expressions shall have the meaning ascribed to them in paragraph 1 of this Part above and otherwise any word or expression shall have the same meaning as it has in the Communications Act 2003;

(b) the Interpretation Act 1978 shall apply as if each of the SMP conditions were an Act of Parliament (c. 30); and

(c) headings and titles shall be disregarded.

**Part 3: SMP conditions**

**Condition M1 – Requirement to provide network access on reasonable request**

**M1.1** Where a third party reasonably requests in writing network access, the dominant provider shall provide that network access.

**M1.2** The dominant provider shall provide network access in accordance with condition M1.1 as soon as reasonably practicable and on fair and reasonable terms and conditions and on such terms and conditions as Ofcom may from time to time direct.

**M1.3** In relation to charges, the dominant provider shall comply with condition M3 below.

**M1.4** The dominant provider shall comply with any direction Ofcom may make from time to time under this condition.

**M1.5** This condition M1 applies to the persons named in Part 1 and Part 2 of Schedule 1. In this condition M1, the term “dominant provider” means each of those persons.

**Condition M2 – Requirement not to unduly discriminate**

**M2.1** The dominant provider shall not unduly discriminate against particular persons or against a particular description of persons, in relation to matters connected with network access.

**M2.2** This condition M2 applies to the persons named in Part 2 of Schedule 1. In this condition M2, the term "dominant provider" means each of those persons.

**Condition M3 – Control of call termination charges**

**M3.1** Each of the persons named in Part 2 of Schedule 1 shall ensure that for each Call on any day during the period beginning on 1 April 2015 and ending on 30 April 2015, the call termination charge (which shall be expressed in pence per minute) does not exceed **0.845** pence per minute.

**M3.2** The dominant provider shall ensure that for each Call on any day, during any relevant period, the call termination charge (which shall be expressed in pence per minute) does not exceed the charge ceiling.

**M3.3** The charge ceiling is –

(a) for any Call on a day in the First Relevant Period, **0.680** pence per minute;

(b) for any Call on a day in the Second Relevant Period and Third Relevant Period-

   a. an amount equal to -

      i. the charge ceiling, expressed in pence per minute (rounded to three decimal places), in the relevant period preceding the relevant period in which the Call was made; multiplied by,

      ii. the sum of 100 per cent and the controlling percentage for the relevant period in which the Call was made, and is

   b. expressed as being pence per minute and rounded to three decimal places.

**M3.4** Without prejudice to Ofcom's statutory information gathering powers, the dominant provider shall provide to Ofcom in writing any information reasonably required by Ofcom for the dominant provider to demonstrate compliance with this condition at any time upon reasonable notice.

**M3.5** The dominant provider shall comply with any direction Ofcom may make from time to time under this condition.

**M3.6** This condition M3 applies to the persons named in Part 1 and Part 2 of Schedule 1, except for M3.1, which applies only to the persons named in Part 2 of Schedule 1. In this condition M3, the term "dominant provider" means each of the persons named in Part 1 and Part 2 of Schedule 1.

**Condition M4 – Requirement to publish charges**

**M4.1** Unless Ofcom otherwise consents in writing, the dominant provider shall publish its call termination charges, and do so separately from any of its other interconnection charges (including other termination charges).

**M4.2** The dominant provider shall publish the call termination charges which will apply after 1 April 2015, before that date.

**M4.3** The dominant provider shall publish any proposed amendment to the call termination charges (a “change notice”) not less than twenty eight days before the date that any such amendment comes into effect.

**M4.4** Publication shall be effected by -

(a) sending a copy of such information or any appropriate parts of it to any person who may reasonably request such a copy; and

(b) placing a readily accessible copy of such information on a relevant and publicly accessible website operated or controlled by the dominant provider, or on behalf of the dominant provider.

**M4.5** The dominant provider shall ensure that a change notice includes -

(a) a description of the proposed new charge for the network access in question;

(b) where applicable, the current charge for the network access in question; and

(c) the date that the amendment(s) come into effect.

**M4.6** This condition M4 applies to the persons named in Part 1 and Part 2 of Schedule 1. In this condition M4, the term “dominant provider” means each of those persons.

**Annex 4**

# Smaller MCPs

A4.1 In our June 2014 Consultation, we proposed to designate 78 smaller MCPs as having SMP on the basis of an analysis of the smaller MCPs to whom Ofcom had allocated mobile number ranges.[39] This analysis included checking Companies House records and BT's Carrier Price List (CPL).[40] We also gathered information from smaller MCPs using our statutory powers under section 135 of the Act. In the information requests we asked each company:

- to list the mobile number ranges currently used for mobile call services, distinguishing between those allocated to them by Ofcom and any other mobile number ranges that have been allocated to another MCP by Ofcom but where their use has been authorised by that other MCP;

- to confirm whether the named MCP provided MCT services on the number ranges mentioned in the preceding bullet;

- for details of the total number of minutes of inbound calls to the relevant number ranges and the number of minutes of voice calls originated by the customers of the named MCP;

- to list the CPs which the named MCP interconnected with;

- the ppm MTR they charged at the time, including any time-of-day variations and any variations by interconnecting CPs, and where these MTRs are published;

- how MTRs are set and what proportion of the MTR revenues they received;

- details of the technologies which the named MCP uses to deliver voice calls to its customers, including any network infrastructure or equipment operated directly by the MCP and/or wholesale services purchased from other companies, and the proportion of mobile voice call minutes terminated using each of these different technologies;

- a brief description of the network infrastructure, including the network equipment involved in termination and a network diagram;

- a brief overview of the business conducted by the named MCP, including the number of employees and active customers and the type of services offered by the named MCP on each of the relevant number ranges; and

[39] June 2014 Consultation, Annex 8 Smaller MCPs. 96 MCPs were identified on the basis that Ofcom had allocated them UK mobile number ranges (i.e. 071xx to 075xx and 077xx to 079xx numbers). This number reflects smaller MCPs, excluding Vodafone, Telefonica, EE (the previously separate T-Mobile and Orange), and H3G.

[40] Available at http://www.companieshouse.gov.uk/ and https://www.btwholesale.com/pages/static/Library/Pricing_and_Contractual_Information/carrier_price_list/cpl_sectionb1telephony.htm, respectively.

- financial information related to the named MCP, including revenues and wholesale charges paid to other communication providers in relation to MCT services.

A4.2 Following the June 2014 Consultation, we have updated our analysis in light of the latest available information. As part of this process, we required smaller MCPs to update the information provided in response to our previous information request to ensure that it reflected the latest available information (including information relating to the latest financial year). We also required them to provide some additional clarificatory information, such as whether they plan to provide mobile call termination to their customers before March 2015, or during the period from April 2015 to March 2018, if they do not currently do so.

A4.3 We set out the results of our analysis below, specifying where we have decided to make changes to our proposals.

A4.4 In the June 2014 Consultation, we excluded from our proposed market analysis six MCPs which had been allocated UK mobile numbers but were dissolved, in liquidation, or had informed us that they had returned, or intended to return, their numbers to Ofcom.[41] We continue to exclude those companies from our market analysis. In addition, we have also excluded Globecom International Ltd and Subhan Universal Ltd as these companies have now been dissolved. Another MCP, Switch Services Ltd, is in administration and its appointed administrators have informed us that it is not presently using the mobile number ranges allocated to it. We have therefore decided to exclude it from our market analysis.

A4.5 Seven smaller MCPs are registered in the Channel Islands or the Isle of Man and are licensed to provide mobile services in their country of registration. In the June 2014 Consultation, we proposed to exclude from our proposed set of focal products calls to UK mobile number ranges allocated to MCPs based in the Channel Islands and Isle of Man where their MTRs are already subject to regulation imposed by their respective national regulatory authorities.[42] For the reasons outlined in paragraphs 3.17 – 3.19 of this statement, we remain of the view that these companies should be excluded from our market analysis (including from market definition, designation of SMP, and imposition of remedies).

A4.6 In the June 2014 Consultation, we proposed to include in our market analysis two further companies registered in the Isle of Man and Jersey. First, Manx Telecom Trading Ltd ('Manx Telecom') is registered in the Isle of Man and holds a mobile licence for the provision of mobile services in the Isle of Man. In the June 2014 Consultation, we noted that Manx Telecom uses all the UK mobile number ranges allocated to it worldwide, including in the UK, but not in the Isle of Man.[43] We proposed to provisionally include the company in our market analysis, since it did

[41] These were Awayphone Ltd (dissolved), UPA Telecom Ltd (dissolved), and Interact Solutions Ltd (in liquidation). Lifecycle Software Ltd, Teledesign Ltd, and Zap Communications Ltd informed us that they had returned, or intended to return, their numbers to Ofcom.

[42] These MCPs were: Guernsey Airtel Ltd, Jersey Airtel Ltd, JT (Guernsey) Ltd, JT (Jersey) Ltd, Sure (Guernsey) Ltd, Sure (Isle of Man) Ltd, and Sure (Jersey) Ltd.

[43] Manx Telecom Trading Ltd also holds an allocation of 07624 number ranges, which are designated in the National Telephone Numbering Plan as for Radiopaging Service and Mobile Services (Isle of Man Communications Commission). Calls to these numbers do not fall within our market definition, which relates to calls to UK mobile numbers (i.e. 071xx to 075xx and 077xx to 079xx numbers) and not 076xx (or 070xx).

not appear that its MTRs were subject to local regulation.[44] However, based on the information the Isle of Man Communications Commission and Manx Telecom have provided to us since the June 2014 Consultation, we are satisfied that the MTRs set in relation to these UK mobile number ranges are currently subject to local regulation.[45] We have therefore decided to exclude Manx Telecom from our market analysis. Second, in the June 2014 Consultation, we proposed to include Marathon Telecom Ltd, which is registered in Jersey, because we understood that its MTRs were not subject to local regulation. However, as outlined in paragraph 3.19 of this statement, we now understand that the communication regulator in the Channel Islands intends to consider regulating Marathon's MTRs as part of a review of the MCT market in Jersey and Guernsey. On this basis, we do not consider it necessary to include Marathon in our market analysis.

A4.7 In the June 2014 Consultation, we provisionally excluded from our proposed market analysis four smaller MCPs which said that they were not providing mobile voice call termination services and that they did not have plans to do so before March 2015 or during the period April 2015 – March 2018.[46] These four companies have since confirmed that this remains the case. Consequently, we remain of the view that it is appropriate to exclude these companies from our market analysis.

A4.8 We have also decided to exclude five further companies – Callax Ltd, JSC Ingenium (UK) Ltd, Telesign Mobile Ltd,Test2Date BV and SSE Energy Supply Ltd – on the same basis. Their responses to our information requests following the June 2014 Consultation indicate that these MCPs do not provide mobile voice call termination services and do not currently plan to provide such services before March 2015 or during the period April 2015 – March 2018.

A4.9 In the June 2014 Consultation, we proposed to include in our market analysis those MCPs who submitted that they provided mobile voice call termination services. Following the June 2014 Consultation, 46 smaller MCPs responded to our information requests that they currently provide such services on number ranges allocated to them. We have therefore included these MCPs in our market analysis.

A4.10 Some of these smaller MCPs providing mobile voice call termination services on the numbers allocated to them indicated that they did not operate their own access networks and had chosen to purchase some or all of the network elements required to physically terminate the call from other companies ('hosting CPs'). The responses to our information requests following the June 2014 Consultation indicate that this is still the case. In the June 2014 Consultation, we proposed to include these companies in our market analysis. We remain of the view that it is appropriate to include these MCPs in our market analysis for the reasons outlined in paragraphs 3.22-3.24 of this statement.

A4.11 In the June 2014 Consultation, we proposed to include in our market analysis 23 smaller MCPs which said that they did not currently provide mobile voice call termination services on the number ranges allocated to them, but planned to do so

[44] June 2014 Consultation, A8.12.

[45] See http://stakeholders.ofcom.org.uk/binaries/consultations/mobile-call-termination-14/responses/Isle_of_Man_Communications_Commission.pdf and http://stakeholders.ofcom.org.uk/binaries/consultations/mobile-call-termination-14/responses/Manx_Telecom_Trading.pdf

[46] Lleidanetworks Serveis Telematics Ltd, Nextgen Mobile Ltd, Fogg Mobile AB, and Teleware Plc stated that they use the mobile number ranges allocated to them to provide SMS or data services only.

in the near future.[47] According to information they have provided in response to our information request following the June 2014 Consultation, 16 MCPs presently plan to provide mobile voice call termination services in the period covered by this review, i.e. April 2015 – March 2018.[48] We remain of the view that it is appropriate to include these MCPs in our market analysis on this basis. In addition, (AQ) Ltd told us that it no longer provides mobile voice call termination services but that it could potentially offer mobile voice call termination services in future and would keep its mobile number range interconnected with BT in case it decided to do so. Based on these submissions and considering that the company remains interconnected with BT for telephony, we consider that it is appropriate to include this company in our market analysis.

A4.12 Three smaller MCPs, Alliance Technologies LLC, LegendTel LLC, and Moonshado Inc, did not respond to our information requests or to our further attempts to contact them prior to and following the June 2014 Consultation. We proposed to include them in our market analysis on the basis of information gathered from alternative sources of evidence on whether these MCPs offer MCT on the mobile number ranges allocated to them by Ofcom. In particular, we looked at whether their company name and the number ranges allocated to them were listed on BT's CPL.[49] We also followed-up with their hosting CPs.

A4.13 Following the June 2014 Consultation, we checked these alternative sources of evidence again and found that:

- The mobile number range allocated to Alliance Technologies LLC is still listed on BT's CPL Part no. B1.02 against Core Telecom Ltd (who we understand to be the hosting CP). Core Telecom Ltd confirmed that it hosts this number range and that the range is active.

- The mobile number ranges allocated to LegendTel LLC and Moonshado Inc are still listed on BT's CPL Part no. B1.02 against Telecom 2 Ltd (who we understand to be the hosting CP). Telecom 2 Ltd confirmed that it hosts these number ranges and that the ranges are active.

A4.14 Based on the above information and the information that these MCPs provided to Ofcom in their statement of intended use of the mobile ranges in their numbering applications, we remain of the view that it is appropriate to include these three MCPs in our market analysis.

A4.15 In the June 2014 Consultation, we proposed to include in our market analysis Telecom North America Mobile Inc ('Telecom North America') and Euro Thai Exchange Process Company Ltd, trading as Yim Siam Telecom ('Euro Thai'), as these MCPs responded to our information requests that they provided mobile call termination services on their mobile number ranges. These companies did not

[47] See June 2014 Consultation, table 4 pages 48-53.

[48] These MCPs are: Compatel Ltd, Edge Telecom Ltd, Esendex Ltd, Flextel Ltd, Fonix Mobile Ltd (previously Orca Digital Ltd), Limitless Mobile Ltd, Netfuse Telecom Ltd, Nodemax Ltd, Premium Routing GmbH, Resilient Plc (previously Resilient Networks Plc), Simwood eSMS Ltd, Synectiv Ltd, TalkTalk Communications Ltd, Test2date BV, UK Broadband Ltd, Virgin Mobile Telecoms Ltd, and Wavecrest (UK) Ltd.

[49] We considered Section B1 (Telephony) Part no. 1.02 and Part no. 1.06. Both sections can be found at:
https://www.btwholesale.com/pages/static/Library/Pricing_and_Contractual_Information/carrier_price_list/cpl_sectionb1telephony.htm

respond to the information requests we sent following the June 2014 Consultation or to our further attempts to contact them. We therefore considered information from alternative sources of evidence on whether these MCPs offer MCT on the mobile number ranges allocated to them. We found that:

- The mobile number range allocated to Telecom North America is listed on BT's CPL Part no. B1.02 against Magrathea Telecom Ltd (who we understand to be the hosting CP). Magrathea Telecom Ltd confirmed that it hosts this number range and that the range is active.

- The mobile number ranges allocated to Euro Thai are listed on BT's CPL Part no. B1.02 against Core Telecom Ltd (who we understand to be the hosting CP). Core Telecom Ltd confirmed that it hosts these number ranges and that the ranges are active.

A4.16 Based on the above information, we remain of the view that it is appropriate to include these two MCPs in our market analysis.

## Annex 5

# Analysis of the effects of the cost standard on consumer prices and usage

## Introduction

A5.1 In this annex, we discuss the effects of the choice of cost standard used for the charge control on retail prices for mobile services and also for retail fixed-to-mobile ('F2M') calls.

A5.2 In the June 2014 Consultation, we considered what the impacts might be in principle and the empirical evidence based on the market developments in the retail mobile sector since our decision in 2011 to adopt LRIC-based MTRs.

A5.3 We recognised that the evidence on retail pricing and usage may have been affected by other factors such as changes in consumer preferences (e.g. greater use of data) and reductions in costs.[50] The effects of the change in termination rate may also have been muted by the fact that MTRs were moved to LRIC over a glide path. Nonetheless, we found no evidence which suggested that overall there have been any significant adverse effects on prices, subscription levels or usage from the move to cap MTRs at LRIC; indeed there appeared to have been some positive effects, particularly for high usage consumers (i.e. post-pay in general and high usage pre-pay consumers).

A5.4 In response to the June 2014 Consultation, stakeholders provided comments on our empirical assessment, in relation to both methodological issues and the evidence presented. EE, Vodafone and Telefonica criticised our methodology and disagreed with some of our findings, particularly in relation to the impact of LRIC MTRs on pre-pay customers and on F2M prices. Telefonica argued that the positive developments in relation to pre-pay are difficult to disentangle from the general decreasing trend in mobile prices over time while there was clear evidence of the negative impacts of LRIC MTRs on pre-pay and of no or little pass-through of MTR reductions in the pricing of F2M calls. Vodafone made similar arguments to Telefonica, adding that, to the extent that positive developments can be attributed to MTRs, the impact of moving to LRIC is small compared to if LRIC+ had continued to be the cost standard because MTRs would still have decreased significantly even under LRIC+. EE believed the effect of LRIC on fixed and mobile retail prices was ambiguous.

A5.5 We summarise and address below other specific comments from stakeholders. Where possible, we have also updated market data to show the latest developments, where the information is available.

A5.6 This annex is structured as follows:

- We first discuss the potential impact of the cost standard on mobile retail prices from first principles and, given their particular relevance to these impacts, the

[50] As shown in Figure A5.8, MCPs' average unit cost have decreased between 2009 and 2013.

available evidence on the ratios of outbound traffic incurring MTR payments to inbound traffic generating termination revenues;

- We then consider the evidence on prices that has emerged since the last review;
- We then look at the effects on mobile usage; and
- Finally, we then look at the effects on fixed to mobile prices and usage.

## Potential impact of the cost standard on retail pricing and usage

A5.7 In this sub-section we consider how the choice of cost standard could affect the pricing of retail mobile services. The discussion is framed in terms of the choice between LRIC and LRIC+, but the comparison between these cost standards is similar to that for a comparison between LRIC and any other MTR greater than LRIC by a non-negligible amount.

A5.8 This sub-section is structured as follows:

- We first consider the interplay between MTRs and retail pricing, including the "waterbed effect"; and
- We then look at how changes in cost standard might, in theory, affect prices in different segments of the mobile retail market.

### Impact of MTRs on overall retail mobile prices

A5.9 Within the UK mobile industry (i.e. considering only calls between MCPs within the UK), call termination is a 'zero-sum game' in static terms.[51] In other words, were it not for calls from fixed and international CPs, MTRs would represent transfers amongst MCPs, and an increase in MTRs would not directly lead to increased revenue being paid into the mobile industry.

A5.10 However, FCPs in the UK and overseas CPs do pay MTRs in the UK, as their customers call UK mobile numbers. Any decrease in MTRs will lead to lower payments from these CPs. UK MCPs might try to recover this 'lost' revenue (and margin) by raising various retail prices. Therefore, we might expect some retail prices to increase – or to decrease less than they would otherwise if other factors (such as falling unit costs) caused a general trend of falling prices. Conversely if MTRs increase, there is less need to recover common costs from the retail side of the market, and competitive pressure may force these prices down. This is known as the waterbed effect.[52]

A5.11 A waterbed effect is said to be incomplete if the impact on prices and revenues on the retail side does not fully offset the impact from changes in MTRs. Section 6 (subsection on 'dynamic efficiency) discuss the waterbed effect in more detail.

[51] By "static terms" we mean ignoring effects that MTRs may have on competition among MCPs. Where MTRs have dynamic effects, particularly affecting the intensity of competition among MCPs, then changes in MTRs will affect mobile industry revenues and profits.

[52] The waterbed effect is where a change in one set of prices (e.g. MTRs) leads to changes in prices in a different part of the market (e.g. on the mobile retail side).

A5.12 As discussed in Section 6 (in particular the subsection 'Ofcom's analysis of competitive effects') lower MTRs should also increase competition, particularly in the post-pay segment, which should also act to reduce prices. This may counteract the waterbed effect to some extent.

## Impact of MTRs on retail prices in different customer segments

A5.13 While the presence of a waterbed effect implies that, overall, retail prices would increase if MTRs are reduced, this may not impact all customer segments equally. This is because different customer segments may have different calling patterns and volumes of MTR affected calls made and received. All else being equal, MTRs would be expected to affect the profitability of customer segments in different ways depending on their calling patterns and call volumes.

A5.14 In particular, some customer groups may tend to be net receivers of MTR-affected calls, and so MCPs are net recipients of MTRs in relation to these customers. The net MTR revenue for these customers will be higher under LRIC+ compared to LRIC. Other customer segments may be net makers of MTR-affected calls, and so MCPs are net payers of MTRs in relation to these customers. These net MTR payments will be higher under LRIC+ than LRIC.

A5.15 We expect that MCPs may change retail prices in order to counterbalance, to some extent, changes in termination revenues and margins. In principle, this means that, under LRIC, we would expect lower prices for customer segments that are net makers of MTR-affected calls (these are, on the outbound-side, off-net calls to mobile and, on the inbound-side, all incoming calls excluding calls from on-net). This is because, for these customers, the net balance of MTR payments results in an outpayment, which will be lower under LRIC compared to LRIC+. Likewise, we would expect higher prices for customer segments that are net receivers of MTR-affected calls since they will generate lower net MTR revenue for their MCPs under LRIC compared to LRIC+.

A5.16 At the time of the previous market review (and up to the 2012 CC Determination), the evidence suggested that:

- pre-pay customers as a whole were net receivers of MTR-affected calls and so earn their MCPs positive net termination revenues; and
- post-pay customers as a whole were either roughly neutral or net makers of MTR-affected calls and so provide their MCPs with zero or negative net termination revenues.[53]

A5.17 However, there was variation within both groups, and the ratio of outbound to inbound calls tended to be larger for heavy users (i.e. those who make most outgoing calls and who have the greatest monthly expenditure). Indeed, further investigation into the broad trends outlined above, suggested that low-use post-pay users had net inbound MTR-affected calls and high-use pre-pay users were either net makers of MTR-affected calls or roughly balanced.[54]

[53] See 2012 CC Determination, paragraphs 2.34 and 2.625. Note that the CC considered the ratio of calls involving MCT: so it included off-net MTM calls, FTM calls and 'other to mobile' calls, but did not include on-net MTM, MTF or 'mobile to other' calls. See paragraph 2.27.
[54] Ibid, paragraph 2.35.

A5.18 In the June 2014 Consultation, we sought to establish whether these patterns still hold true by requesting traffic data from MCPs. However, as explained at paragraph 6.63 in Section 6 of the consultation, the data provided in response to our formal information requests did not allow us to draw strong conclusions about the current balance of calls for different customer segments. Following the consultation, we have asked again for information from MCPs in order to establish calling patterns and have received data which allows us to do so. Data from EE was not available, but using the data from H3G, Vodafone and O2, we have calculated for each MCP the ratio of outbound traffic incurring MTR payments (i.e. off-net traffic to mobile) to inbound traffic generating termination revenues (all inbound traffic excluding on-net), both for pre-pay subscribers and for different customer spend segments for post-pay.[55]

A5.19 We recognise that there might be limitations to this data. For example, while the outbound traffic data supplied by MCPs is expected to be reasonably accurate (because it is extracted from customer billing systems), MCPs have explained that their inbound traffic is obtained from wholesale interconnect systems and the allocation of this traffic to customer segments is subject to adjustments and might not be accurate. We also note that any generalisation across the market as a whole is difficult since we are missing the largest MCP (EE) and a number of smaller MCPs were not sampled (so in all we do not have data on c.40% of subscribers) We consider however that the data provides a reasonable basis on which to estimate the ratios.

A5.20 For a given segment of subscribers, a ratio larger than one means that subscribers in that segment cause their MCP to make net MTR out-payments on average. In line with our analysis above, we would therefore expect MCPs to offer lower prices to customers in that segment under LRIC given that their MCPs would make lower net out-payments than under LRIC+. A ratio lower than one implies net MTR revenues for the MCP and, all else equal, customers with an MTR-affected call ratio less than one may face higher prices under LRIC given that their MCPs would receive less MTR revenues than under LRIC+. (Although as described in Section 6, we would not expect all else to remain equal – in particular, we would expect competition to increase under a LRIC cost standard.) Figure A5.1 to Figure A5.4 below show these ratios for pre-pay and post-pay subscribers respectively, with post-pay broken down into different thresholds based on expenditure.[56]

**Figure A5.1: Ratios of outbound to inbound calls for MTR-affected traffic for pre-pay subscribers in 2014**

**[✂]**

*Source: Source: S135 data submitted by H3G, Telefonica and Vodafone to Ofcom*[57]

[55] The exact ratio for a given customer may also depend on the serving MCP's market share, as smaller MCPs are likely to have more off-net M2M traffic for any given customer, but the same amount of F2M traffic for that customer. Therefore we would expect the ratio of outbound to inbound traffic subject to MTRs (i.e. outbound off-net M2M traffic divided by the sum of inbound off-net M2M traffic plus inbound fixed and international traffic) to be higher for smaller MCPs.

[56] MCPs were requested to provide details of expenditure defined as total contractual monthly charge, including any handset payment and VAT, but excluding out-of-bundle charges. However, one MCP ([✂]) could only provide the data with expenditure being based on total amounts invoiced.

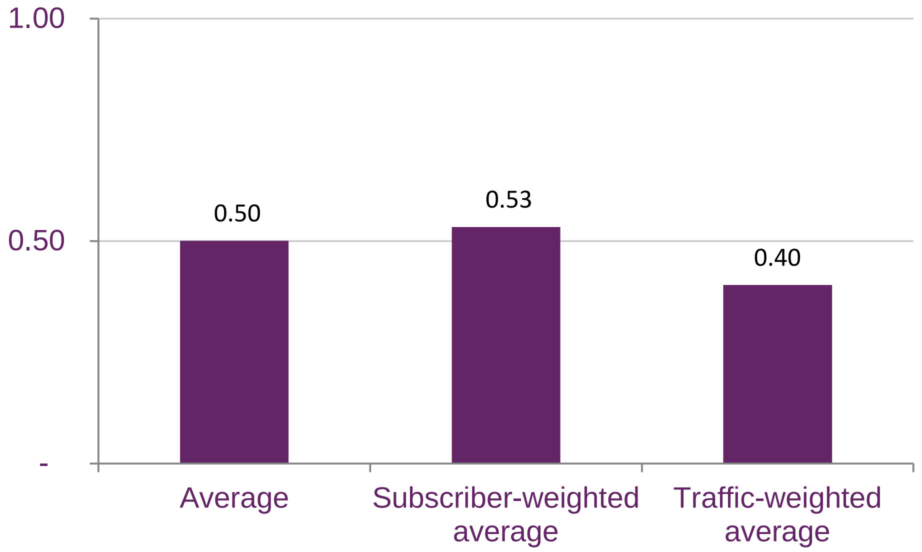
[57] EE (which is the largest MCP) was unable to provide the data requested by Ofcom.

**Figure A5.2: Ratios of outbound to inbound calls for MTR-affected traffic for post-pay subscribers in 2014**

**[✂]**

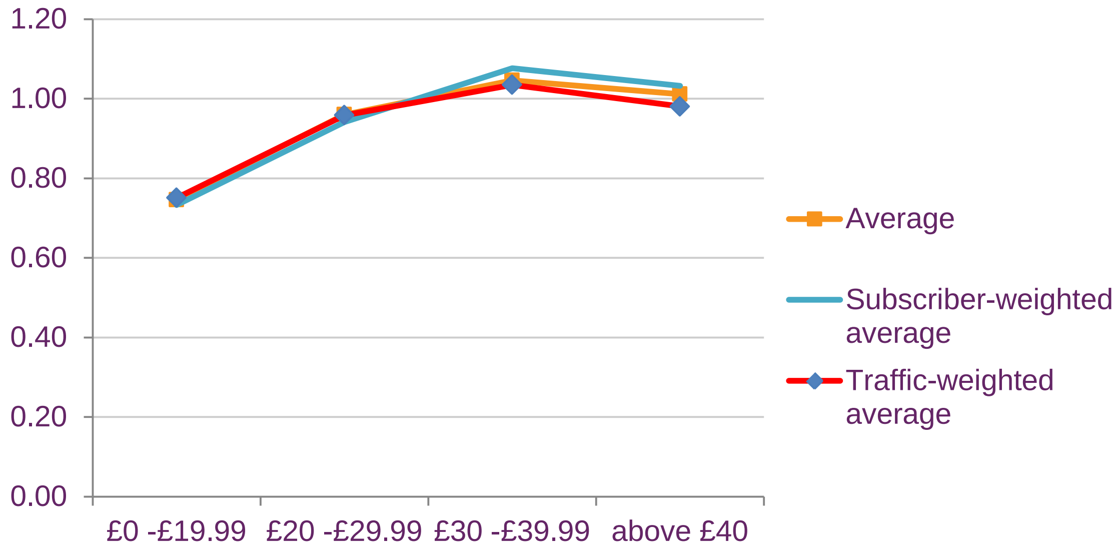
*Source: s135 data submitted by H3G, Telefonica and Vodafone to Ofcom*[58]

**Figure A5.3: Average ratios of outbound to inbound calls for MTR-affected traffic for pre-pay subscribers in 2014**[59]




*Source: s135 data submitted by MCPs to Ofcom. Average taken across H3G, O2, and Vodafone*[60]

**Figure A5.4: Average ratio of outbound to inbound calls for MTR-affected traffic for post-pay subscribers in 2014**




*Source: s135 data submitted by MCPs to Ofcom. Average taken across H3G, O2, and Vodafone*[61]

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[58] See footnote 57.

[59] The subscriber-weighted average ratio is calculated as an average with each MCP's ratio being weighted by its share of subscribers. The traffic-weighted average is calculated as an average with each MCP's ratio being weighted by its share of the total MTR-affected inbound traffic.

[60] See footnote 57.

A5.21 The above ratios show that:

- On average, pre-pay subscribers are net receivers of MTR-affected calls, hence generate net termination revenues for their MCPs as in 2011. The ratio is below 1 for all MCPs (see Figure A5.1 and Figure A5.3).The simple average ratio for pre-pay subscribers (across H3G, Telefonica and Vodafone) is 0.50 and the subscriber-weighted and traffic-weighted average ratios are 0.53 and 0.40 respectively.[62]

- Low usage post-pay subscribers (i.e. with an average monthly spend below £20) are more typically net receivers of MTR-affected calls, and hence would be expected to generate net termination revenues for their MCPs (see Figure A5.2 and Figure A5.4);

- With the exception of [✂]'s customers, high usage post-pay subscribers (i.e. with an average monthly spend of £20 or above) are net makers of MTR-affected calls, hence would be expected to generate net termination out-payments for their MCPs (see Figure A5.2).

- The post-pay charts show the ratios are increasing in customer spend. This pattern holds true for spend levels up to £40, at which point the ratio broadly flattens. This could possibly be explained by the fact that certain customers in those segments could be particularly interested in services other than voice calls, such as data or that they are frequent international travellers who do not necessarily make a lot of outbound calls but incur higher roaming charges when they do make such calls.

A5.22 Below, we consider market developments and find that they are consistent with our expectations about the impact of LRIC and LRIC+ on various customer segments.

## Evidence of the impact of the cost standard on retail pricing

### Introduction and summary

A5.23 This sub-section sets out the empirical evidence on retail pricing. It explains that:

- Overall, there does not appear to have been a significant increase in average mobile retail prices as a result of the move to LRIC based MTRs.

- Post-pay consumers seem to benefit from lower prices now than in 2011 in accordance with the CC's expectations in 2012 about the impact on customers with a ratio of outbound to inbound MTR-affected traffic higher than one. In particular:

  - 3G post-pay bundles which existed in 2011 and before still exist today and their subscription prices appear to be much lower today;

  - Whilst 4G offers have appeared since 2012, and are generally more expensive than the 3G contracts available today, these are offered alongside rather than in place of the latter. Recently, some MCPs have started to upgrade customers on 3G contracts to 4G at no extra charge to the customer.

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[61] See footnote 57.
[62] See footnote 59.

- High-usage pre-pay customers also appear to benefit from lower prices now than in 2011, which is consistent with these customers being potentially net makers of MTR-affected calls.

- In relation to low-usage pre-pay customers:

  - Two of the largest MCPs (EE and Vodafone) have increased their entry-level pre-pay call charges. However, O2 has maintained its charges constant since 2011 and Telefonica (which owns O2) offers lower prices through its associated brands (e.g. Giffgaff which it owns and Tesco Mobile which is a joint-venture with Tesco) and H3G has reduced all its call charges substantially;

  - Overall, there is still a wide range of MCPs, covering half of the pre-pay market (including Telefonica, H3G and many of the main smaller MCPs), offering tariffs for basic pre-pay plans at the same or similar prices as in 2011.

A5.24 The evidence presented below is based on a comparison of the prices of similar tariffs or bundles of mobile services offered in 2011 – the year of the previous MCT Statement when we made the decision to set MTRs at LRIC– and 2014.

A5.25 In response to the June 2014 Consultation, Telefonica, Vodafone and EE argued that Ofcom should have compared 2013 prices with the prices that would have prevailed in 2013 if LRIC+ MTRs continued to apply. EE added that while we acknowledged the limitations of our comparison, we did not make any adjustments to account for this.[63]

A5.26 We consider there would be significant challenges in controlling for other changes in the market and isolating developments that are solely attributed to MTRs.[64] This is in particular because MTRs are not only likely to affect pricing directly but also indirectly through the impact on competition. Therefore, we believe that it is appropriate to consider changes since 2011 to see if they are in line with our expectations arising from the regulation of MTRs at LRIC, recognising other factors are also likely to have influenced pricing developments.

A5.27 Vodafone considered that our comparison failed to recognise that most of the reduction in MTRs over the last four years was unrelated to the transition from LRIC+ to LRIC.[65] Under a LRIC+ cost standard, Vodafone argued, MTRs would have fallen by more than 50% anyway between 2011 and 2014 and that the reductions under the LRIC+ standard would have been larger than the difference between the LRIC+ and LRIC rates at the date LRIC was effectively in place for the first time. This, it argued, meant that any inference must be made carefully to disentangle the impact of the reduction that would have resulted had LRIC+ been maintained from the further reduction from switching between LRIC+ and LRIC.

A5.28 The expected retail price impacts resulting from MTRs at LRIC+ and LRIC for various segments of customers (as presented in paragraphs A5.7 to A5.15) would also apply to any comparison of a higher or lower MTR margin (at least in direction,

[63] EE response to the June 2014 Consultation, Section 5.2, pages 42-43.
[64] This was recognized by Vodafone. See Vodafone response to the June 2014 Consultation, pages 15-16.
[65] Vodafone response to the June 2014 Consultation, see e.g. page 4 (first paragraph) and pages 8-10.

if not in magnitude). It is therefore not relevant that MTR margins were lowered from above LRIC+ levels in 2011. The conclusions in this annex are focused on the direction of retail price changes rather than on the absolute changes.

## Overall developments in average mobile retail prices

A5.29 In the June 2014 Consultation, we presented data which suggested that overall prices had fallen each year, including since 2011 when we made the decision for MTRs to converge to LRIC.

A5.30 Figure A5.5 shows the real price of a representative basket of mobile services. It is broken down into metered (i.e. out of bundle) messaging and voice, and "line rental" which refers to subscription fees. The overall price has fallen each year, including since 2011, despite the move to LRIC based MTRs.

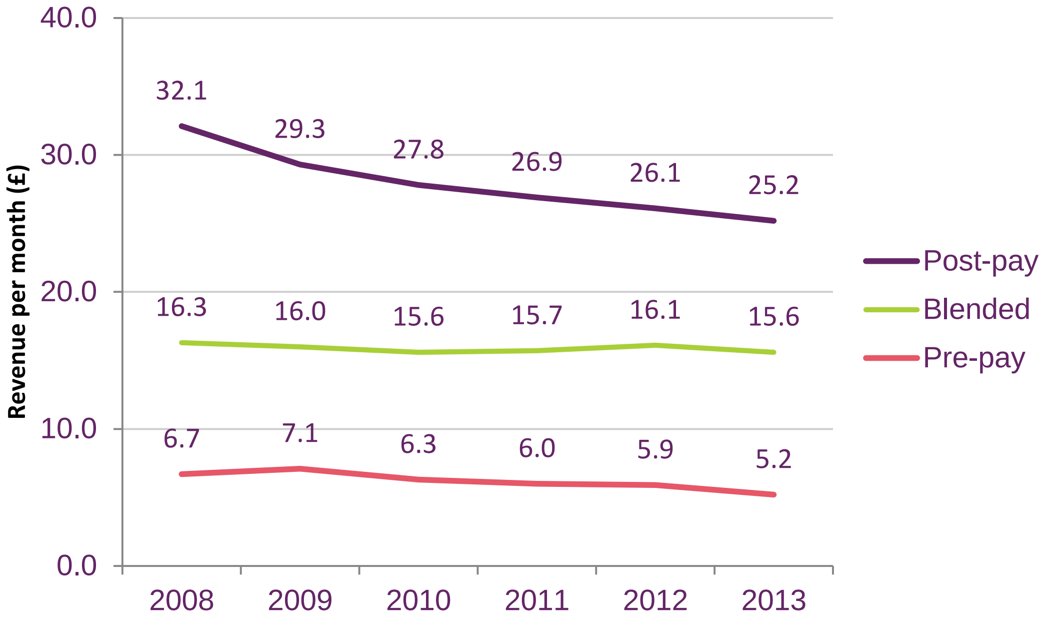
**Figure A5.5: Real price of a basket of mobile services (£ per month, 2013 prices)[66]**


*Source: Ofcom / MCPs*
*Includes estimates where Ofcom does not receive data from MCPs; excludes non-geographic voice calls; adjusted for CPI; includes VAT. "Line rental" is the price of mobile service packages that include some voice, text and/or data. "Metered" is the out-of-bundle consumption, charged on a per unit basis.*

A5.31 Figure A5.6 below shows that nominal average revenues per user (ARPU) across the market as a whole have been broadly flat in recent years, although they have been declining gradually in real terms (see Figure A5.7). However, since total usage has been growing (for both voice and data – see Figure A5.24 for the voice usage profile over time and Figure A7.19 in Annex 7 for the data volumes), this suggests that prices per unit of usage have decreased. Figure A5.6 also shows a clear decrease in ARPU for both post-pay and pre-pay and Figure A5.7 shows an even more pronounced trend in real terms.

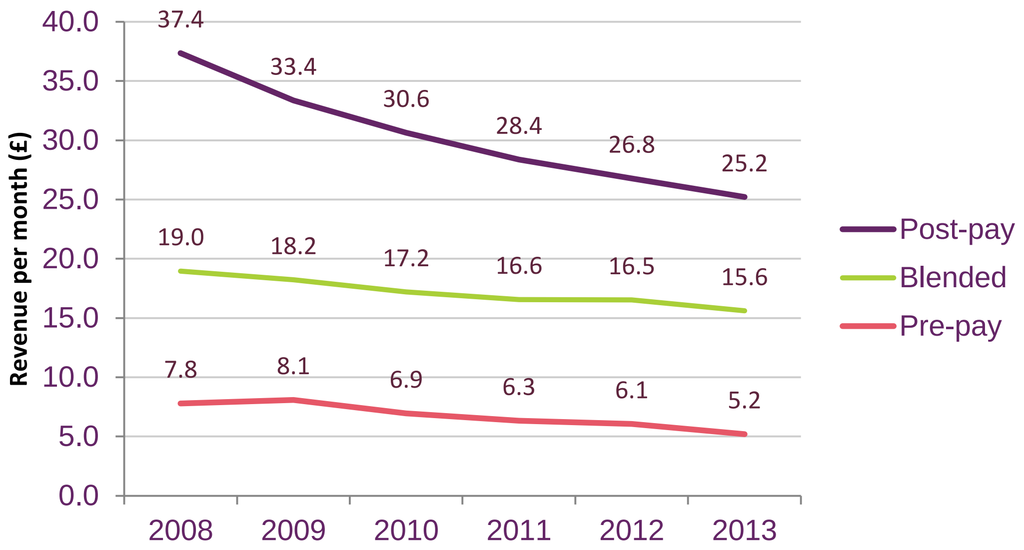
[66] We do not have a full year data for 2014 to include in the chart. However, partial data show the decreasing trend in prices continuing into 2014.

**Figure A5.6: Mobile average retail revenue per user, pre-pay and post-pay (nominal)[67]**




*Source: Ofcom/MCPs*
*'Blended' refers to all subscribers: pre-pay and post-pay.*

**Figure A5.7: Mobile average retail revenue per user, pre-pay and post-pay (real)**




*Source: Ofcom/MCPs*
*'Blended' refers to all subscribers: pre-pay and post-pay.*

A5.32 EE argued that the transition to LRIC has been associated with the end of a long-term trend of significant annual falls in mobile retail prices during a period of ongoing falls in unit costs. Moreover, EE said the fact that real prices fell by 25%

[67] See Footnote 66.

between 2008 and 2010 but only by 5% between 2011 and 2013 suggest that prices may be higher under LRIC than they would have been under LRIC+.[68]

A5.33 Firstly, we note that the 25% decrease in the basket price in the period pre-2011 which EE refers to is mainly driven by the substantial decrease which occurred between 2008 and 2009, i.e. two years before our decision to set the cost standard to LRIC. Since then, annual price decreases have become less significant although they were somewhat higher pre-2011 compared to post-2011.

A5.34 Secondly, as we explained in the June 2014 Consultation (Annex 9, footnote 17), it is likely that prices for voice and SMS in the period after 2011 have fallen more than Figure A5.6 in that consultation (Figure A5.5 in this statement) suggested. This is because the reported prices of the baskets are the average market prices of the services that most closely match the basket specifications. In 2011, data was typically purchased as a separate “add-on” to voice and SMS services whereas it is increasingly bundled with voice and SMS and this is likely to be reflected in the slightly higher ‘line rental fees’ (defined as the price of mobile service packages that include some voice, text and/or data).[69] Secondly, handset prices in the 2013 plans might be higher than those in the 2011 plans due to differences in the types of handsets rather than genuine price increases (for example, there far fewer smartphones in 2011 than in 2013).

A5.35 Nevertheless, we acknowledge that cost reductions would also be expected to contribute to the decrease in retail prices. However, as Figure A5.8 below shows, average costs (network plus retail) per subscription have fallen more significantly in the four years to 2009 than in the four years after (28.4% vs 17.6%).[70] All else being the same, we would expect retail prices to follow a similar pattern, i.e. with less pronounced price decreases after 2009 than before.

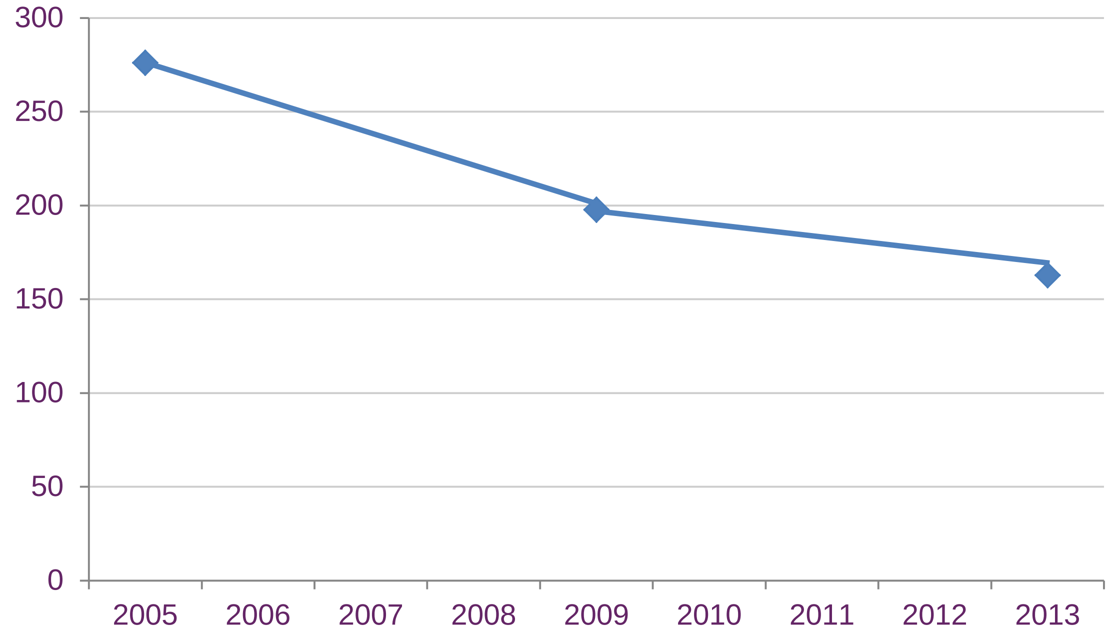
A5.36 It is difficult to be definitive on the impact of the choice of cost standard on overall retail prices, but it does not seem to have had a significant impact. While the waterbed effect from reducing fixed to mobile and international to mobile MTR payments alone would imply increasing retail prices, the evidence indicates that this has been offset by other factors. What is difficult to surmise is the balance of offsetting pressures from increasing competition (and the extent to which that is due to MTRs at LRIC) and reductions in the costs of MCPs.

[68] EE response to the June 2014 Consultation, Annex 1, page 64.

[69] For instance, comparing the 2011 and 2013 baskets in the 2011 and 2014 CER, we note the following differences: The profiles in the 2011 basket excluded data except for the three ‘advanced’ profiles which included 30 MB, 30MB and 100MB of data respectively. The 2013 baskets include data for all profiles except the two basic profiles and the data requirements for profiles 4 to 8 ranged from 200MB to 1GB. The profiles are numbered from 1 (‘basic’) to 8 (‘advanced’).

[70] We could not calculate these costs for the period before and after 2011. We could only calculate them for the years in which new charge controls needed to be determined, i.e. 2005, 2009, and 2013.

**Figure A5.8: Average costs (retail plus network) per subscription (£ p.a., 2013 prices)[71]**




*Source: Ofcom calculations.*

### Post-pay consumers

A5.37 In the June 2014 Consultation, we considered post-pay plans available in 2011 and compared their (nominal) prices with plans in 2013 that offered at least as many calls, SMS and data. We considered SIM-only plans in order to exclude the effect of changes in handset prices.

A5.38 The comparisons indicated that, for a number of post-pay plans, consumers got significantly more bundle allowance in 2013 for the same price (or less) than at the time of the previous market review. We recognised the analysis was not comprehensive but nevertheless, in our view, provided a good indication of the trends in retail mobile pricing.

A5.39 In assessing price developments, we considered top-end and mid-range SIM-only plans for 12 months and 1 month contracts respectively. By top-end we mean tariffs that, in each comparison year, are at the highest band in terms of call minute allowances and targeting heavy users. Mid-range plans are those between the top end and 'entry-levels' post-pay plans (with entry-level plans defined as being in the lowest band in terms of call minutes). In 2011, top-end plans would generally attract the highest prices, entry-level plans the lowest prices, and mid-range plans prices in between. However, with large amounts of data being increasingly bundled in plans, it is possible that it is no longer the case that our top-end plans are generally in the

[71] Average costs are calculated as the sum of network and retail costs as reported in the 2007, 2011 and 2015 MCT Statements, divided by subscription numbers from the 2015 MCT model. The figures are expressed in 2013 prices using CPI inflation also from the 2015 MCT model.

highest price bands which might now include plans with large data allowances and/or 4G.[72]

A5.40 For each MCP we picked one such tariff in 2011 from Pure Pricing reports (which contain mobile retail offers from MCPs in the UK) and considered how much it would have cost consumers in 2013. Where an exact comparison was not possible, we picked packages in 2013 which had greater bundle allowances (for every component of the bundle) and gave details of the additional features of those packages.

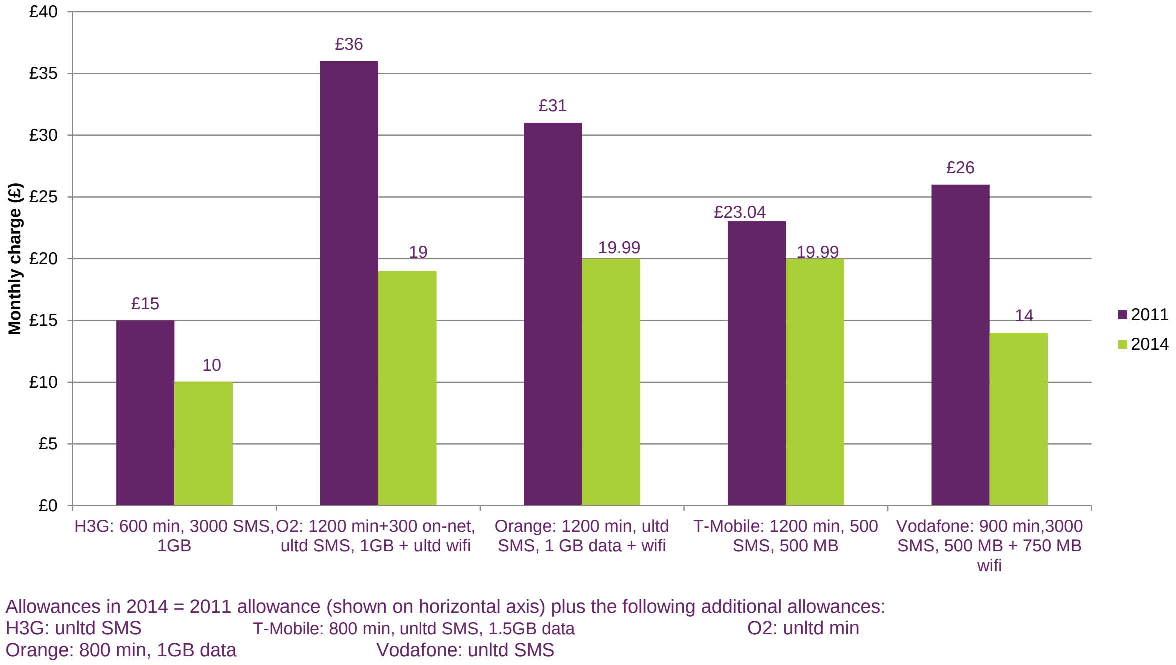
A5.41 We have updated the comparisons which we made in the June 2014 Consultation, namely by comparing the December 2011 plans with the latest available plans (September 2014).[73]

A5.42 Figure A5.9 to Figure A5.12 show these comparisons. The charts should be read as follow: the horizontal axis show the allowances of the 2011 plans, for each of the sampled MCPS. The allowances in the 2014 plans correspond to the 2011 allowance *plus* the 'additional allowances in 2014' shown at the bottom of the charts.

[72] For example, in 2011, O2 had five 12-month SIM-only contracts which were as follows: O2 300 at £10.5 per month, O2 600 at £15.5, O2 900 at £21, O2 1200 at £26 and O2 Unlimited at £41. These 2011 tariffs had no data allowanced bundled in (but data could be purchased separately for an additional fixed fee per month). In 2014,O2 had four 12-month SIM-only contracts with unlimited call minutes and their prices ranged from £19 to £30, with data allowance being the key differentiator. So although the £19 contract has the highest call allowance (unlimited minutes), it is not the most expensive plan. (Sources: Pure Pricing reports, UK mobile pricing updates, December 2011 and September 2014).

[73] These were the latest available at the time we conducted the analysis.

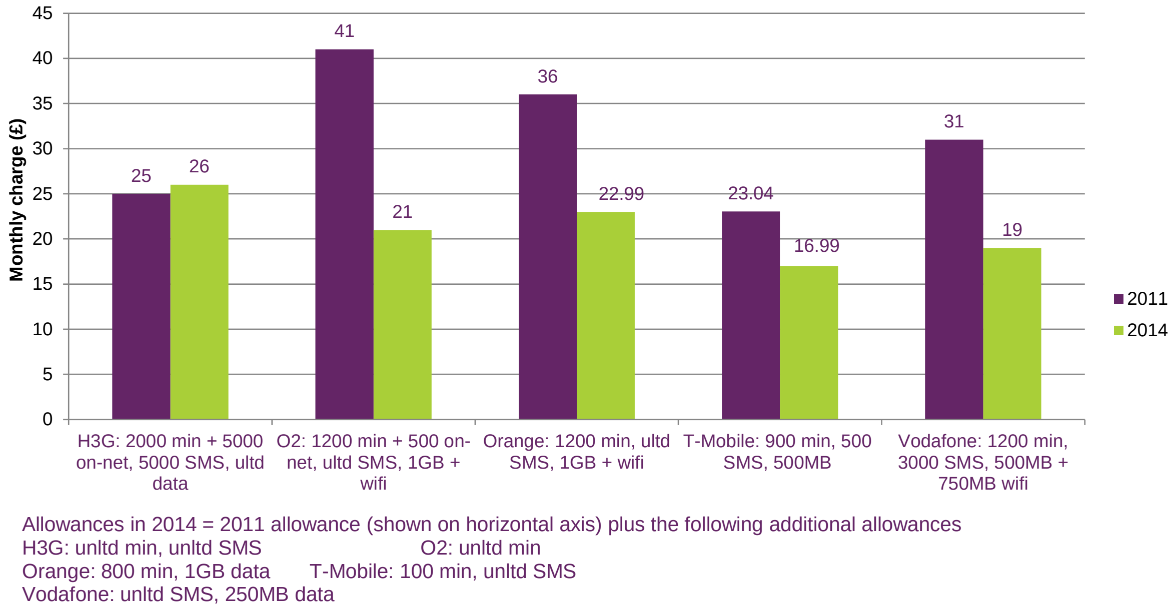
**Figure A5.9: Tariff offers in 2011 and 2014: top-end SIM-only plans, 12 months contract (£ per month)**




*Source: Pure Pricing reports, December 2011 and September 2014.*[74]
*Orange and T-Mobile tariffs in 2014 are EE's as there are no reported tariffs for them in the Pure Pricing reports (the only reported tariffs are "on the basis of advertisements in store brochure").*
*WiFi offered in plans generally refers to WiFi offered by the MCP to its customers and available in some geographic locations (e.g. parts of cities or specific venues)*

[74] Details: H3G 2011 tariff 'Sim 600' and 2014 tariff '600, 1GB'; O2 2011 tariff 'O2 1200' (£26) with 'The Works' add-on (1 GB data + unlimited WiFi and 20 picture messages - £10) and 2014 tariff 'On & On 1 GB'; Orange 2011 tariff 'iPhone 31' and 2014 tariff '4GEE 2GB' (from EE); T-Mobile 2011 tariff 'Pay monthly 25' (includes a free booster worth £5.10, which we have assumed to be the 'Internet Booster') and 2014 tariff '4GEE 2GB' (from EE); Vodafone 2011 tariff 'Smartphone sim only' and 2014 tariff 'Vodafone 900'. All tariffs are 12 month duration, exclude online-only and are 4G enabled for 2014 except for the Vodafone 900 plan.

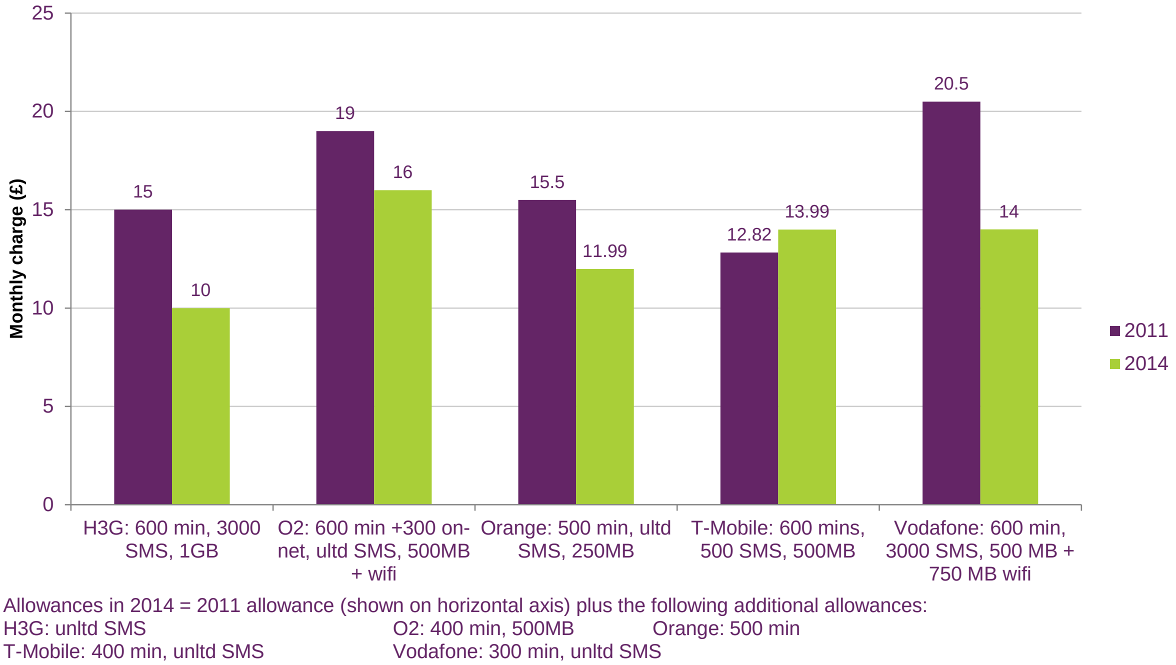
**Figure A5.10: Tariff offers in 2011 and 2014: Top-end SIM-only plans, 1 month contract (£ per month)**




*Sources: Pure Pricing reports, December 2011 and September 2014.*[75]
*Orange and T-Mobile tariffs in 2014 are EE's as there are no reported tariffs for them in the Pure Pricing reports (the only reported tariffs are "on the basis of advertisements in store brochure"). H3G offers a plan at £21 per month, which includes unlimited minutes, unlimited SMS, and 4GB of data.*

[75] Details: H3G 2011 tariff 'The One plan' and 2014 'Unltd, unltd'; O2 2011 tariff 'O2 1200' (£31) with 'The Works' add-on (1 GB data + unlimited WiFi and 20 picture messages - £10) and 2014 tariff 'On & On 1 GB'; Orange 2011 tariff 'iPhone 36' and 2014 tariff '4GEE 2GB' (from EE); T-Mobile 2011 tariff 'Pay monthly 25' (includes a free booster worth £5.10, which we have assumed to be the 'Internet Booster') and 2014 tariff '4GEE 500MB' (from EE); Vodafone 2011 tariff 'Sim only £31' and 2014 tariff 'Vodafone 1200'. All tariffs are 1 month duration, exclude online-only and are 4G enabled for 2014 except for the Vodafone 1200 plan.

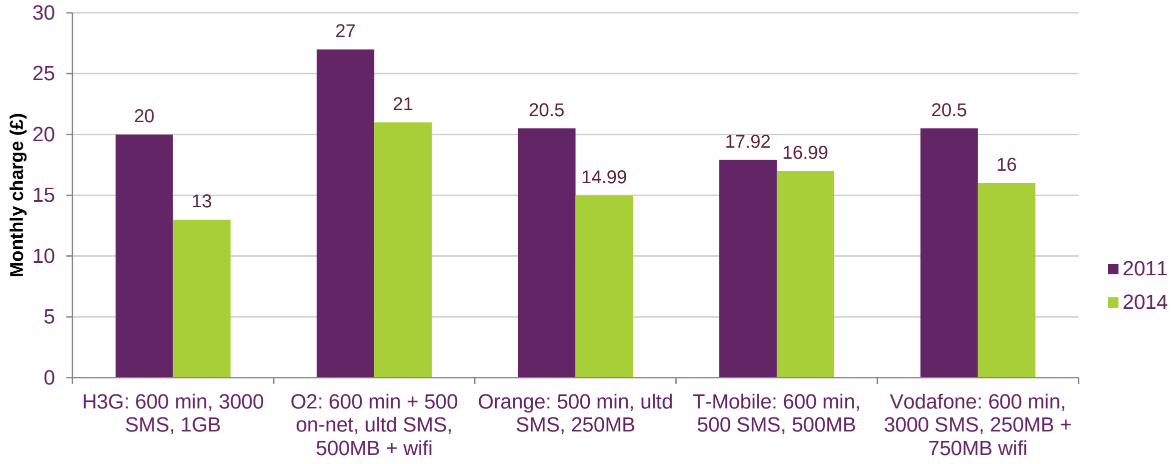
**Figure A5.11: Tariff offers in 2011 and 2014: Mid-range SIM Only plans, 12 months contract (£ per month)**




*Source: Pure Pricing reports, December 2011 and September 2014.*[76]
*Orange and T-Mobile tariffs in 2014 are EE's as there are no reported tariffs for them in the Pure Pricing reports (the only reported tariffs are "on the basis of advertisements in store brochure")*

[76] Details: H3G 2011 tariff 'SIM 600' and 2014 '600, 1GB'; O2 2011 tariff 'O2 600' (£15.50) with 'The All Rounder' add-on (500 MB, ultd WiFi + 20 picture messages - £6) and £5 off for the first 6 months discount, and 2014 tariff 'On & On 1GB'; Orange 2011 tariff 'Dolphin 15.5' and 2014 tariff EE's '4GEE 250MB'; 2011 T-Mobile tariff 'Pay monthly 15' (includes a free booster worth £5.10, which we have assumed to be the 'Internet Booster') and 2014 tariff EE's '4GEE 500 MB'; Vodafone 2011 tariff 'Smartphone Sim only £20.5' and 2014 tariff 'Vodafone 900'. All tariffs are 12 month duration, exclude online-only tariffs and are 4G-enabled for 2014 except for the Vodafone 900 plan.

**Figure A5.12: Tariff offers in 2011 and 2014: Mid-range SIM-only plans, 1 month contract (£ per month)**




Allowances in 2014 = 2011 allowance (shown on horizontal axis) plus the following additional allowances
H3G: unltd SMS O2: unltd min, 500MB Orange: 500 min
T-Mobile: 400 min, unltd SMS Vodafone: 300 min, unltd SMS, 250MB

*Sources: Pure Pricing reports, December 2011 and September 2014*[77]
*Orange and T-Mobile tariffs in 2014 are EE's as there are no reported tariffs for them in the Pure Pricing reports (the only reported tariffs are "on the basis of advertisements in store brochure")*

A5.43 The comparisons between the updated 2014 tariffs and the 2011 tariffs confirm the findings we reported in the June 2014 Consultation. For all but two of top-end and mid-range post-pay plans sampled, consumers get significantly more in terms of bundle allowance in 2014 for a lower price than at the time of the previous market review. Moreover, the Pure Pricing data is in nominal terms and the general trend of decreasing prices is re-enforced once inflation is taken into account. The two exceptions (the one month H3G top-end plan and the T-Mobile 12 month mid-range plan) are each £1 per month more expensive compared to their equivalent 2011 tariffs but we consider that the 2014 plans are not directly comparable to the 2011 plans because they include (sometime significantly) larger allowances for one or more of the bundle components than in 2011.[78]

[77] Details: H3G 2011 tariff 'SIM 600' and 2014 tariff '600, 1GB'; O2 2011 tariff 'O2 600' (£21) with 'The All Rounder" add-on (500 MB, ultd WiFi + 20 picture messages - £6) and 2014 tariff 'On & On 1GB'; Orange 2011 tariff 'Dolphin £20.5' and 2014 tariff EE's '4GEE 250MB'; T-Mobile 2011 tariff 'Pay Monthly 20' (includes a free booster worth £5.10, which we have assumed to be the 'Internet Booster') and 2014 tariff EE's '4GEE 500MB'; Vodafone 2011 tariff 'SIM only £20.5' and 2014 tariff 'Vodafone 900'. All tariffs are 1 month duration, exclude online-only tariffs and are 4G-enabled for 2014 except for the Vodafone 900 plan.

[78] The 2014 T-Mobile plan offers 400 min and unlimited SMS more than the 2011 tariff, for an extra £1 per month. The H3G 2014 top-end plan offers unlimited minutes and SMS, (compared to 2000 min and 5000 SMS in the 2011 plan, for £1 per month more than the 2011 H3G top-end plan. Furthermore, in 2014 H3G also offers a top-end plan at £21 per month (the 'Unltd, 4GB') which includes unlimited minutes, unlimited SMS and 4GB of data (this plan is not presented in the above charts, with the £26 plan being instead presented to be consistent with the other plans (from other MCPs) shown in the charts in offering at least as much of each component of the bundle as in 2011). This is significantly more minutes and SMS than their 2011 plan and a significant data allowance (albeit less data than H3G's 2011 top-end plan). It is indeed not clear whether in 2011 (when data speeds were lower), consumers with unlimited data generally consumed more than 4GB of data.

A5.44 Telefonica accepted that there have been decreases in retail prices for high-usage customers but said it is difficult to disentangle this from the general decreasing trend in mobile prices over time.[79] It argued that given the falls in unit costs of providing retail mobile services, it would be expected that prices would have fallen irrespective of the changes in MTRs.

A5.45 We accept that MTRs are one of many factors that impact market developments and retail prices in particular, and it is difficult to separate the impact of MTRs from other factors. However, our expectations, based on economic principles and in line with the 2012 CC Determination, are that lowering MTRs would lead to lower prices for post-pay subscribers, especially high-usage ones. While we are not able to say with certainty that the lower prices we currently observe for high-usage customers are caused by MTRs having converged to LRIC, we consider that they are certainly consistent with our expectations.

A5.46 EE argued that our choice of tariffs is not representative of the experience of its average SIM-only customers who generally incur the same or higher costs as in 2011.[80] EE said that it has generally increased pay monthly prices in line with RPI rather than decrease them, but has decreased prices on some mid- and high-level SIM only tariffs [✂]. EE illustrated this with an entry-level plan from Orange UK (‘OUK’), which it says constitutes a significant proportion ([✂]) of all OUK SIM-only, for which it said it has increased prices.

A5.47 We consider that EE’s account of the way prices have varied for its top and mid-range SIM-only customers is consistent with the trends suggested by Figure A5.9 to Figure A5.12. These show clear price decreases for mid and high range SIM-only post pay plans, as reported by EE for its own customers. All the 2014 plans have the same or higher allowance with respect to all three components of the bundle (voice minutes, SMS, and data).

A5.48 We agree with EE that entry level SIM-only plans have generally increased in price since 2011. This is shown in Figure A5.14 and, to a much lesser extent, Figure A5.13 below which compares entry-level plans in 2011 with similar plans in 2014. While these plans appear at first to be more expensive (in nominal terms) today than in 2011, the higher charge generally comes with a greater allowance in voice usage and/or especially data.[81] Therefore, whether consumers buying entry-level plans are better or worse off than in 2011, depends on their preferences for the additional voice and data services on offer in 2014.

A5.49 Moreover, some of what we have described as “entry-level” plans in 2014 now have allowances which in one or more respect resemble the 2011 tariffs described as “mid-range”, yet are typically far less expensive than the 2011 mid-range plans. We defined the entry-level plans as those plans which, in 2011 (the starting year of the

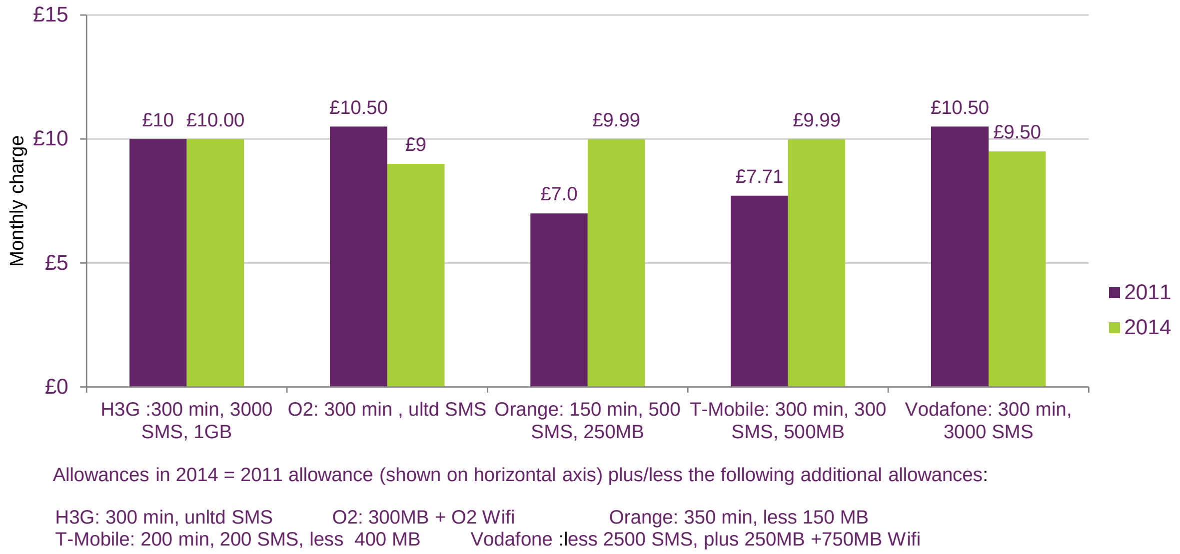
[79] Alix Partners UK LLP, *Response to Ofcom Consultation on Mobile Termination Rates*, Final Report Prepared For Telefonica UK, 15 August 2014 (‘Alix Partners Report’). http://stakeholders.ofcom.org.uk/binaries/consultations/mobile-call-termination-14/responses/Telefonica_AlixPartners_report.pdf, paragraphs 5.3, 5.37.

[80] [✂]

[81] Ofcom, *The Consumer Experience of 2013*, January 2014 (http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/tce-13/TCE_Research_final.pdf), page 94, states that the majority of post-pay tariffs now include an element of bundled data use as internet access on mobile devices becomes more widespread. In contrast, in 2011, many of these plans were offered with data priced as an ‘add-on’ for an extra fixed monthly fee (with different fees for different data allowances).

comparison period), were in the band with the lowest call minute allowances. For example, the H3G 2014 entry-level one month tariff at £13 per month (see Figure A5.14) offers 600mins, unlimited SMS and 1GB of data which is the same or more in terms of allowances than the 2011 “mid-range” plans (see Figure A5.12), yet is about £5 per month less expensive than the cheapest of the one month mid-range plans on offer in 2011 (T-Mobile at £17.92 per month). Therefore, consumers purchasing mid-level plans in 2011, but who never expected to exceed mid-level usage, could now pay considerably less for the same levels of usage.

**Figure A5.13: Tariff offers in 2011 and 2014: Entry-level SIM-only plans, 12 month contract (£ per month)**




*Sources: Pure Pricing reports, December 2011 and September 2014*[82]
*Orange and T-Mobile tariffs in 2014 are EE’s as there are no reported tariffs for them in the Pure Pricing reports (the only reported tariffs are “on the basis of advertisements in store brochure”)*

[82] Details: H3G’s 2011 tariff ‘Sim300’ and in 2014 ‘600, 1GB’ tariff. O2’s 2011 and 2014 tariff ‘O2 300’. Orange’s 2011 tariff ‘Dolphin 7’ and 2014 tariff EE’s ‘4GEE 100MB’. T-Mobile’s 2011 tariff ‘Pay monthly 10’ with a free booster worth £5.10, which we have assumed to be the "Internet Booster" and in 2014 ‘4GEE 100MB’ EE’s tariff. Vodafone’s 2011 tariff ‘SIM only £10.5’ and 2014 tariff ‘Vodafone 300’. All tariffs are 12 month duration, exclude online-only tariffs and are 4G-enabled for 2014 except the O2 300 and Vodafone 300 plan.

**Figure A5.14: Tariff offers in 2011 and 2014: Entry-level SIM-only plans, 1 month contract (£ per month)**


*Sources: Pure Pricing reports, December 2011 and September 2014*[83]
*Orange and T-Mobile tariffs in 2014 are EE's as there are no reported tariffs for them in the Pure Pricing reports (the only reported tariffs are "on the basis of advertisements in store brochure").*

A5.50 We first discuss the entry-level one-month contract plans displayed in Figure A5.14. Closer examination of these plans reveals the following:

- H3G's one-month SIM-only entry level plan in December 2011 ('SIM 100', with 100 min, 3000 SMS and 1GB of data) was priced at £10 per month. In September 2014, the cheapest one-month SIM contract was priced at £13 per month, but included 600 min, unlimited SMS, and 1GB of data. While this was £3 per month more expensive (in nominal terms), it included 500 more minutes and significantly more SMS than the 2011 plan. Whether customers subscribing to these plans are better or worse off depends on whether their willingness to pay for the additional minutes and SMS is higher or lower than £3 per month.
- O2's one-month SIM-only entry level plan in December 2011 ('O2 100', with 100 min + 100 on-net, unlimited SMS and no data) was priced at £10.50 per month. In September 2014, O2's cheapest one-month SIM contract ('O2 100') was priced at £9 per month. It no longer included the 100 on-net minutes available in 2011 but did include 100 MB of data and O2 Wifi. In this case, although there was a price decrease of £1.50 per month (in nominal terms) and with data now being offered, whether a customer would be better or worse off with the 2014 plan compared to the 2011 plan would depend on how much the customer value

[83] Details: H3G's 2011 tariff 'Sim100' and in 2014 '600, 1GB' tariff. O2's 2011 and 2014 tariff 'O2 100'. Orange's 2011 tariff 'Canary 10.5' and 2014 tariff EE's '4GEE 100MB'. T-Mobile's 2011 tariff 'Pay monthly 10' with a free booster worth £5.10, which we have assumed to be the "Internet Booster" and in 2014, EE's tariff '4GEE 100MB'. Vodafone's 2011 tariff 'SIM only £10.5' and 2014 tariff 'Vodafone 300'. All tariffs are 1 month duration, exclude online-only tariffs and are 4G-enabled for 2014 except the O2 100 and Vodafone 300 plan.

having 100 on-net minutes, relative to 100MB data and free wifi, for an additional £1.50 per month.

- The price of T-Mobile's 2014 one-month SIM-only entry level plan has increased by £5.28 relative to the comparable 2011 plan. However, some allowances in this plan were also increased, including 400 additional minutes and 400 additional SMS, while data allowance decreased by 400MB. A customer with a willingness to pay for the net allowance of more than £5.28 (e.g. a customer with a high value for voice and/or SMS usage relative to mobile data) would be better off in 2014, compared to 2011.
- Vodafone's one-month SIM-only entry level plan in December 2011 ('SIM only 10.5', with 100 min, 500 SMS and no data) was priced at £10.50 per month. In September 2014, the cheapest one-month SIM contract ('Vodafone 300') was priced at £11.50 per month, but included 300 min, 500 SMS, and 250 MB of data +750 MB of Wifi).[84] While this was £1 per month more expensive (in nominal terms), it included 200 more minutes and 250 MB of data +750 MB of Wifi more than in 2011.

A5.51 In contrast to the one-month entry-level contract plans, the twelve-month entry-level plans in Figure A5.13 show a trend which is more similar to the top-end and mid-range plans (Figure A5.9 to Figure A5.12), with only EE having increased its prices (although its twelve-month entry level tariffs in 2014 include more voice and SMS than in 2011, they include a lower data allowance).[85]

A5.52 In summary, unlike top-end and mid-range post-pay plans, prices for some of the entry-level plans for the largest MCPs have increased between 2011 and 2014 (mainly for one-month contracts, and in nominal terms). However, it is important to note that, generally, this has been accompanied by a significant enhancement in the bundle allowances. Moreover, there are still entry-level SIM-only plans available at similar or lower prices than some of those that prevailed in 2011. Excluding T-Mobile (which offered an entry level tariff of £7.71 per month), the average price of the 2011 entry-level tariffs presented in Figure A5.14 above was £10.50 and it was still possible to buy post-pay SIM-only tariffs in 2014 below this price (e.g. the O2 tariff at £9 per month).

A5.53 EE criticised Ofcom's choice of SIM-only plans, saying that a small proportion ([✂]) of its customers are SIM-only.[86] It said the level of handset subsidies was an important part of the pricing analysis and these were reduced under LRIC MTRs.[87]

A5.54 We continue to consider that comparing plans that include handsets is potentially misleading for making inferences about the level of retail pricing. Given the rate of technological change in mobile devices, the handsets included in the plans are likely to differ (at least in functionality and, we would expect, in wholesale cost). Furthermore, this assessment could be made more difficult by differences in the level of handset subsidies.

A5.55 We do not consider the fact that SIM-only constitute [✂] of subscriptions affects our conclusion. Firstly, price variations on SIM-only plans are likely to reflect variations in other similar post-pay plans with handsets (although it might be difficult to see this easily because of variation in handset prices and functionality). We would

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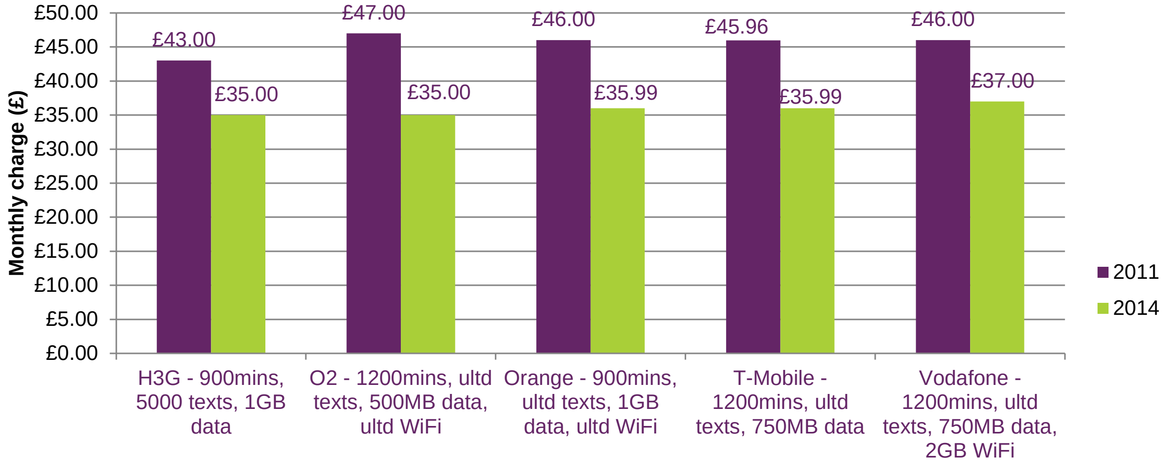
[84] As already explained above, wifi in plans generally refers to public access wifi offered by the MCP to its customers and available in some geographic locations (e.g. parts of cities or specific venues).
[85] The T-Mobile and Orange prices in 2014 are EE's.
[86] EE response to the June 2014 Consultation, Annex 1, pages 66-67.
[87] Ibid, page 65.

expect a chain of substitution between pricing plans meaning that the price of SIM-only plans is unlikely to vary independently of the price of post-pay plans including handsets. In particular, we would expect that a significant decrease in the price of SIM-only plans (relative to plans with a handset) would lead to consumers who would otherwise take a plan with a handset to be incentivised to switch to SIM-only plans and either delay the renewal of their handset or purchase it on a standalone basis. Secondly, we consider the [✂]% share of subscriptions that are SIM-only to be a non-negligible proportion of the market.

A5.56 Notwithstanding the above, we have presented below a plan which includes a handset, i.e. the iPhone 4S in 2011 with the iPhone 5C in 2014.[88] We chose an iPhone plan because of the relatively better comparability of the handset over the period, compared to other handsets.

**Figure A5.15: Tariff offers in 2011 and 2014: iPhone post-pay plans, 24 months contract (£ per month)**




Allowances in 2014 = 2011 allowance plus the following additional allowances:
H3G: ultd min, ultd texts and ultd data
O2: ultd min and 1.5GB data
Orange: ultd min, 1GB data
T-Mobile: ultd min and 1.25GB data
Vodafone: ultd min, 250MB data

*Sources: Pure Pricing reports, December 2011 and September 2014*[89]
*iPhone 4s (16GB) in 2011 at standalone price of £499; iPhone 5c (16GB) at standalone price of £469. Plans used are the lowest priced tariffs that include a handset.*

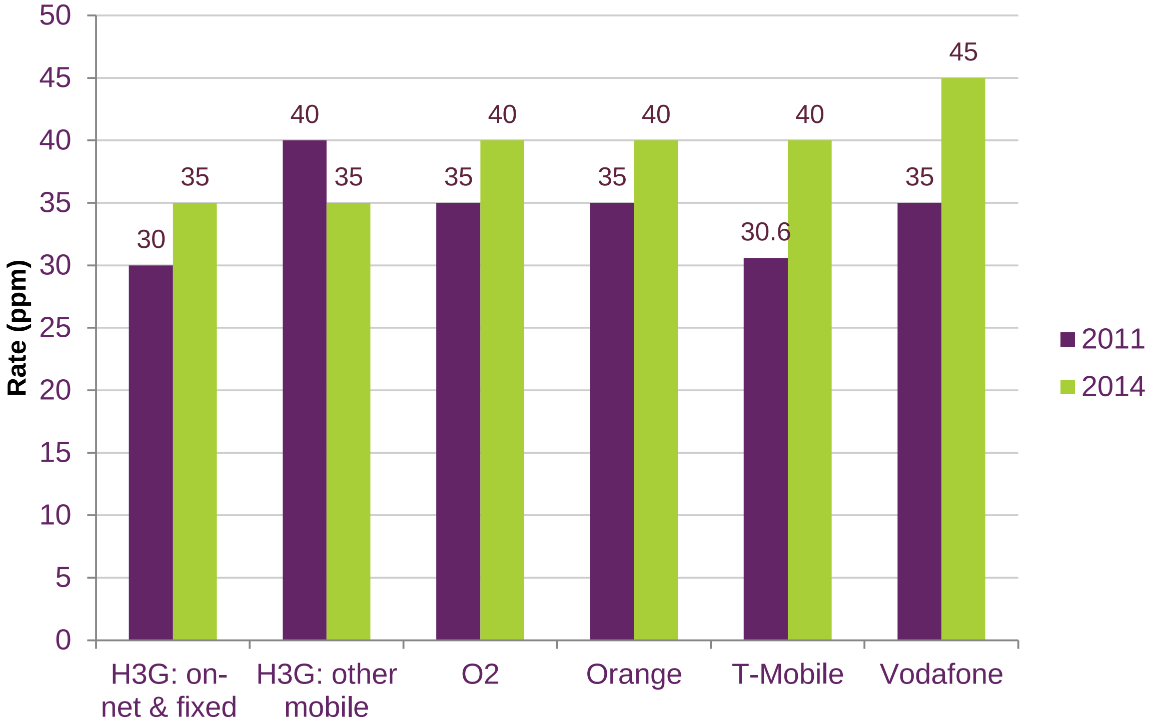
A5.57 As with the SIM-only top-end and mid-range plans, the sampled iPhone plans also show significant price reductions. While the iPhone 5C in 2014 is cheaper than the iPhone 4S in 2011 by £30 in nominal terms, we do not consider this to be the main factor contributing to the fact that the relevant plans are less expensive in 2014. Spreading the £30 difference over the 24 months of the contract represents a saving of £1.25 per month. Even when this is taken into account, the 2014 tariffs are still significantly less expensive relative to the comparable 2011 tariffs.

[88] The iPhone 4 was no longer on offer after 2012 in the plans reported in the Pure Pricing reports. There is a £30 difference in the price of these two handsets, with the iPhone 5C being cheaper in nominal terms.
[89] Details: H3G: 'Text 900' for 2011 and 'Unlimited Unlimited' for 2014. O2: 'O2 1200' for 2011 and '4G On & On 2GB Refresh' for 2014. Orange: 'i-Phone 46' for 2011 and EE's '4GEE 2GB' for 2014. T-Mobile: '£45 plan' for 2011 and EE's '4GEE 2GB' for 2014. Vodafone: 'Anytime 1200' for 2011 and 'Red' for 2014.

A5.58 EE also argued that our analysis ignored many out-of-bundle charges for calls to mobiles, geographically rated calls and calls to 080 and 08x which have increased [✂] for SIM-only customers.[90] EE said that ARPU levels for these customers are still the same or higher and that post-pay plans with handsets, which generally have smaller allowances, have also had [✂] increases in out-of-bundle charges.

A5.59 Figure A5.16 below shows out-of-bundles charges for mobile and geographically-rated calls for the plans presented in Figure A5.9 to Figure A5.14.

**Figure A5.16: Out-of bundle call charges (to mobile and fixed numbers) for the mobile plans in Figure A5.9 to Figure A5.12**




*Source: Pure Pricing reports, December 2011 and September 2014*[91]
*The Orange and T-Mobile charges were taken from EE's website.*

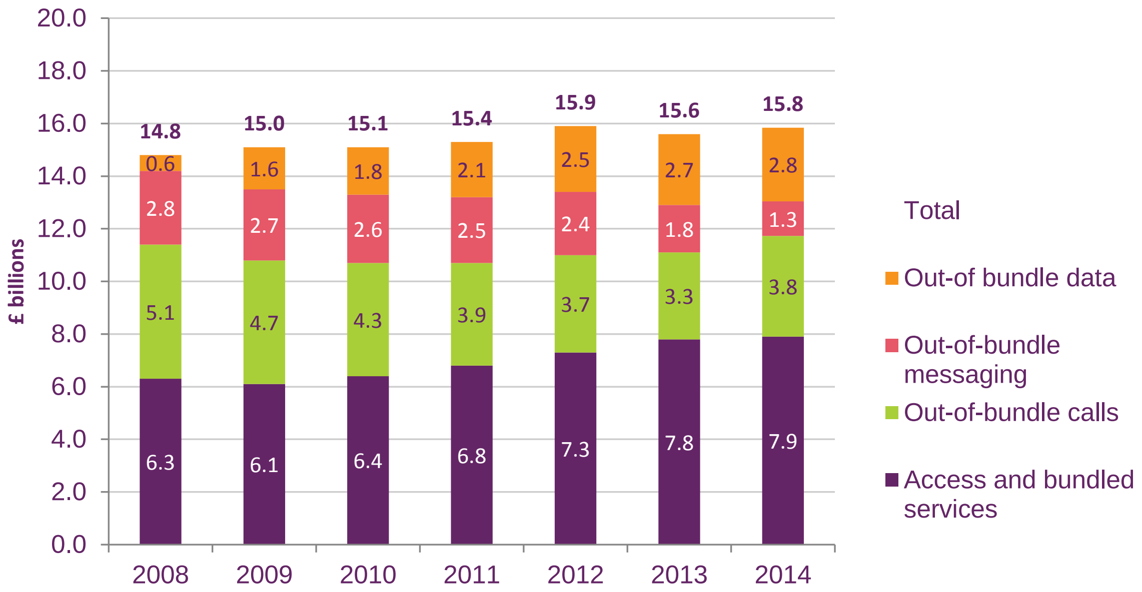
A5.60 The figure above shows that, as argued by EE, out-of-bundle call charges for mobile and geographic calls have increased for all MCPs for all the plans, except H3G's off-net charges. Notwithstanding this, we consider that the relevant issue for consumers is more likely to be the impact on overall expenditure. Given the general trend of increasing bundle allowances, which is shown in the Figures A5.9 to A5.12, Figure A5.15 and in some of the plans in Figures A5.13 and A5.14 above, the likelihood of incurring out-of-bundle charges is lower, which offsets to some extent (possibly entirely) the average price increase for out-of-bundle calls.[92]

A5.61 This is confirmed in Figure A5.17 below which shows mobile retail revenue, per service. It shows that out-of-bundle retail call revenues (including calls to 08x

[90] EE response to the June 2014 Consultation, page 66.
[91] For 2011, the H3G charge is for SIM-only plans and the Orange charge is for all plans except 'Panther Extra'.
[92] Moreover, call volumes have increased. As the latest Telecoms Data Tables (Q2 2014) show, mobile-to-fixed call volumes for post-pay subscribers increased from 20bn minutes in 2011 to 30bn minutes in 2013. See Ofcom, *Telecommunications market data tables Q2 2014*, published 20 November 2014. http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/tables

numbers) continued their decreasing trend after 2011, falling by 15% between 2011 and 2013. This decrease in out-of-bundle retail call revenues occurred despite an increase in the same period in mobile ownership (see Figure A5.28), total outgoing mobile call volumes (see Figure A5.24) and total revenues from access and bundled services. Although between 2013 and 2014 out-of-bundle retail call revenues appear to have increased, the data for 2014 is an estimate (based only on part-year actuals) and remains below the levels in 2011 and earlier.

**Figure A5.17: Mobile retail revenue, by service**




*Source: Ofcom/Operators. Corresponds to Figure 5.40 in the 2014 CMR*[93]
*2014 figures are based on data from first half of the year and scaled up to the year by applying the average ratio of H2 to H1 for the years 2012 and 2013*

A5.62 Finally, another noticeable development in the post-pay segment is the appearance of '4G' plans. These often offer unlimited calls and SMS, with data being the main variable of price differentiation. These bundles are in general offered at a higher subscription price than 3G plans available in 2011. However, they are offered alongside 3G plans as an alternative rather than in place of the latter. Thus the existence of more expensive 4G plans cannot imply consumers are worse off – it simply means that consumers have more choice now than in 2011. Furthermore, some MCPs have started to upgrade customers on 3G contracts to 4G at no extra charge to the customer.

## 'High usage' pre-pay customers

A5.63 Pre-pay plans have evolved since 2011 and some pre-pay plans now resemble post-pay plans. In some cases, for example, consumers can use their credit (top-up) to purchase 'packages' which, similar to post-pay plans, offer inclusive allowances for calls, SMS, and/or data that expire at the end of a given period (usually 30 days). There may also be rewards for pre-pay customers to incentivise them to top-up regularly.[94]

[93] Note that out-of-bundle revenues refer to all out-of-bundle revenues, not just e.g. out-of bundle for post-pay/contract. Hence they include, e.g. some pre-pay revenues.
[94] For example, Telefonica doubles the allowances on its O2 'Pay & Go Go Go' tariffs after three months, and adds unlimited SMS after 9 months. Available at: http://www.o2.co.uk/help/pay-and-go/pay-and-go-go-go, correct as of 29 May 2014.

A5.64 For the same top-up amount (in nominal terms), pre-pay plans generally appear to offer higher usage today than pre-pay plans at the time of the previous review (and are less expensive if inflation is taken into account). Table A5.1 below provides examples of usage available for a £10 top-up in 2011 and compares this with the usage available for a £10 pre-pay top-up today. Higher allowances are shown in bold. It shows that consumers buying these plans today are able to achieve the same or higher usage than in 2011.

**Table A5.1: Bundles available for a £10 pre-pay monthly package, 2011 and 2014[95]**

| | Dec 2011 | | | Sep 2014 | | |
|---|---|---|---|---|---|---|
| **O2** | 40 min | 300 SMS | 500 MB | **100 min** | **1000 SMS** | 500 MB |
| **H3G** | 100 min | 3000 SMS | 650 MB | 100 min | 3000 SMS | 650 MB |
| **Orange** | 40 min | 400 SMS | 100 MB | **500 min** | 400 SMS | **1 GB** |
| **T-Mobile** | 100 min | 41 SMS | 500 MB | 100 min | **400 SMS** | **1 GB** |
| **Vodafone** | 100 min | 300 SMS | 50 MB | **150 min** | **Ultd SMS** | **500 MB** |
| **Tesco** | 50 min | 5000 SMS | 33 MB | **150 min** | 5000 SMS | **200 MB** |
| **Virgin** | 19 min | 300 SMS | 1 GB | **28 min** | **3000 SMS** | 1 GB |

*Source: Pure Pricing reports[96]*
*Increased allowances are shown in **bold***

[95] This is calculated assuming a consecutive monthly £10 top-up throughout an entire year. Where 2014 packages with at least as much of each component are not readily available, we have constructed comparable packages at £10 using the following process. We first consider packages with at least as much of two components (usually SMS and data). Then, using per-unit prices, we calculate how much of the third component (usually calls) could be purchased with the money remaining (out of £10) after purchasing the package. For example, the table shows that in Dec 2011 £10 on Orange bought a package of 40 minutes of calls, 400 SMS and 100 MB of data. In September 2014, a £10 top-up with Orange provided a package with 400 SMS and 1GB, and an allowance of additional £10 to spend at pre-pay add-on prices. Spending this allowance on minutes alone would provide 500 minutes, 400 SMS and 1GB.

[96] Details: O2 'Text and Web' rewards plan with £10 top-up balance spent on other network calls (charged at 25ppm) in 2011. O2 £10 'Big Bundle' in 2014, note that this will also include benefits from O2 Priority Moments, O2 Rewards and free unlimited WiFi. H3G 'All in one 10' add-on plus 150MB free data reward for every top-up, in 2011 and in 2014. Orange 'Dolphin' rewards plan with £10 top-up balance spent on calls (charged at 25ppm) in 2011. Orange 'Dolphin' rewards and EE add-on with credit spent on a '500 minutes, 1 month' add-on (£10) in 2014. T-Mobile 'Talk Plan' rewards plan with a £5 'Internet Booster' (unlimited browsing and email + 500 MB allowance for downloading, uploading and streaming) and remaining £5 top-up balance spent on SMS (charged at 12p) in 2011. The 'Talk Plan' gives 100 any network anytime minutes the following month when you top-up £10 (+25 minutes with first £10 top up). T-Mobile 'Smart pack 1GB' add-on in 2014. Vodafone 'Freedom Freebee' add-on in 2011 and 'Freedom Freebee' £10 add-on bundle in 2014. Tesco Mobile £30 credit when you top up £10 reward, with £10 top-up credit used to purchase 50 minute call bundle (£5) and 5000 text bundle ( £5), and free credit spent on data (charged at 60p per MB) in 2011. Tesco Mobile £20 free credit when you top up £10 reward, with £10 top-up credit used to purchase 150 minute call bundle (£5) and 5000 text bundle (£5), and free credit spent on data charged at 10p per MB in 2014. Virgin 'Addict' tariff with 300 texts reward and 'Mobile internet add-on' (1 GB - £5), with remaining £5 top-up balance spent on calls (charged at 26 ppm) in 2011. Note the 'Addict Extra' tariff offers richer rewards (100 min and ultd SMS), but has been excluded as it is available only to Virgin Media customers. Virgin 3000 SMS and 1 GB when you top up £10 reward, with £10 top-up balance spent on calls (charged at 35ppm) in 2014.

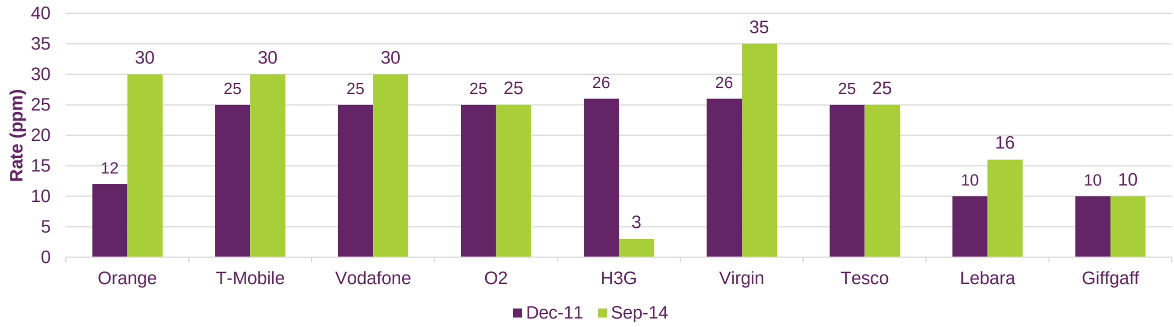
## Basic pre-pay

A5.65 Above, we have discussed how some pre-pay plans are sold as "packages" resembling post-pay plans, and shown in Table A5.1 how such plans compare to 2011 offers. However, other pre-pay plans are still priced on a more traditional pay-as-you-go (PAYG) basis, i.e. are charged on the basis of usage according to per-unit charges. These generally have higher per unit prices as they do not include discounts given in return for spending commitments.

A5.66 In the June 2014 Consultation, we presented data showing that while EE (T-Mobile/Orange) and Vodafone had increased their pre-pay charges for calls to mobile and geographic numbers, Telefonica and H3G had not (with H3G significantly cutting its charges) and that, with the exception of Virgin Media and Lebara, all the smaller MCPs we considered had maintained or reduced their charges.

A5.67 We have updated the figures presented in the June 2014 Consultation by comparing 2011 pre-pay charges with 2014 charges. Figure A5.18 to Figure A5.23 provide nominal per-usage prices for PAYG pre-pay for off-net and on-net calls, SMS and data for 2011 and 2014.[97]

**Figure A5.18: Pre-pay off-net call prices, excluding "rewards", 2011 and 2014**

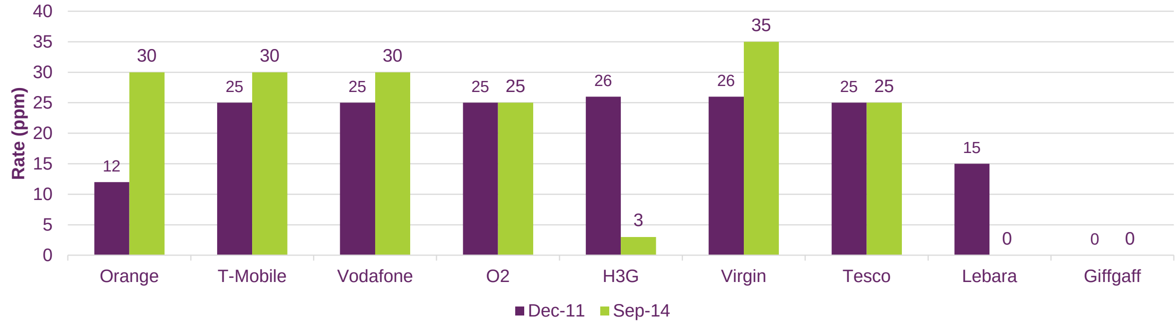



*Source: Pure Pricing reports, December 2011 and September 2014*[98]

[97] SMS and data are relevant because the pricing of calls, SMS and data could be linked. For example, on-net and off-net call prices for pre-pay could go up because MCPs decide to reduce the pre-pay charges for SMS and/or data.

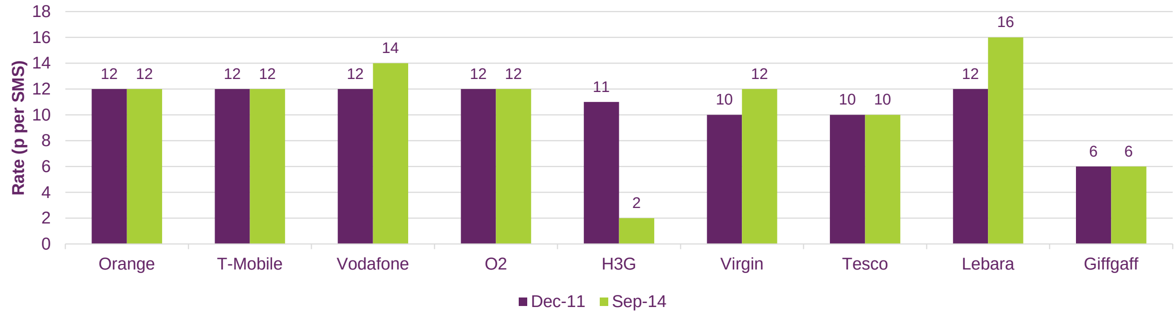
[98] Multiple call prices were listed for some operators. For Orange, we have used the 'Racoon' tariff for 2011 but note alternate tariffs such as 'Camel' (20ppm in 2011) and 'Dolphin', 'Canary' and 'Monkey' (25ppm in 2011). For T-Mobile, we have used the 'Everyday' plan with a rate of 25ppm for 2011 but note that the 'Talk plan' had a rate of 20ppm in 2011. In 2014, for both Orange and T-Mobile we have used EE's rates. For Vodafone, in 2014 there was a different rate of 35ppm if out of bundle on a 'Freedom Freebee' package. For O2, the alternative 'Simplicity on Pay & Go' tariff in 2011 and the monthly charge plans (i.e. Big Bundles) in 2014 were charged at 35ppm. For Virgin, we have used the 'Addict tariff'; in 2011 the 'Simply 8p' tariff had a rate of 8ppm but was exclusive to Virgin Media customers.

**Figure A5.19: Pre-pay on-net call prices, excluding "rewards", 2011 and 2014**




*Source: Pure Pricing reports, December 2011 and September 2014*[99]

**Figure A5.20: Pre-pay off-net SMS prices, excluding "rewards", 2011 and 2014**

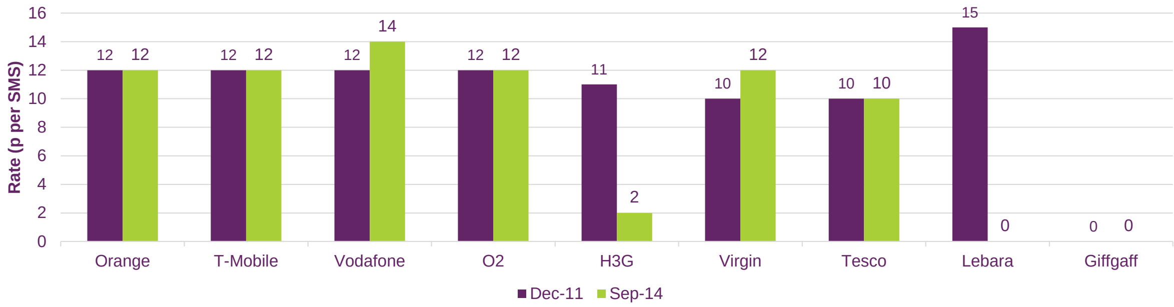



*Source: Pure Pricing reports, December 2011 and September 2014*[100]

[99] The O2 rate of 25ppm in 2011 applies for the first three minutes of the day, after which the rate is 5ppm. In 2014, the 25ppm rate applies to all minutes. On Lebara, free on-net calls are subject to minimum £5 top-up, valid for 30 days. Fair use of 3000 minutes applies. On Giffgaff, free on-net calls are subject to top-up every three months and maximum 60 minutes per call. Multiple call prices were listed for some operators. For Orange, we have used the 'Racoon' tariff for 2011; alternate tariffs are 'Camel' (20ppm in 2011) and 'Dolphin', 'Canary' and 'Monkey' (25ppm in 2011). For T-Mobile, we have used the 'Everyday' plan for 2011; in 2011 the 'Talk plan' had a rate of 20ppm. In 2014, for both Orange and T-Mobile we have used EE's rates. For Vodafone, in 2014 there was a different rate of 35ppm if out of bundle on a 'Freedom Freebee' package. For O2, the alternative 'Simplicity on Pay & Go' tariff in 2011 and the monthly charge plans (i.e. Big Bundles) in 2014 were charged at 35ppm. For Virgin, we have used the 'Addict tariff'; in 2011 the 'Simply 8p' tariff had a rate of 8ppm but was exclusive to Virgin Media customers.

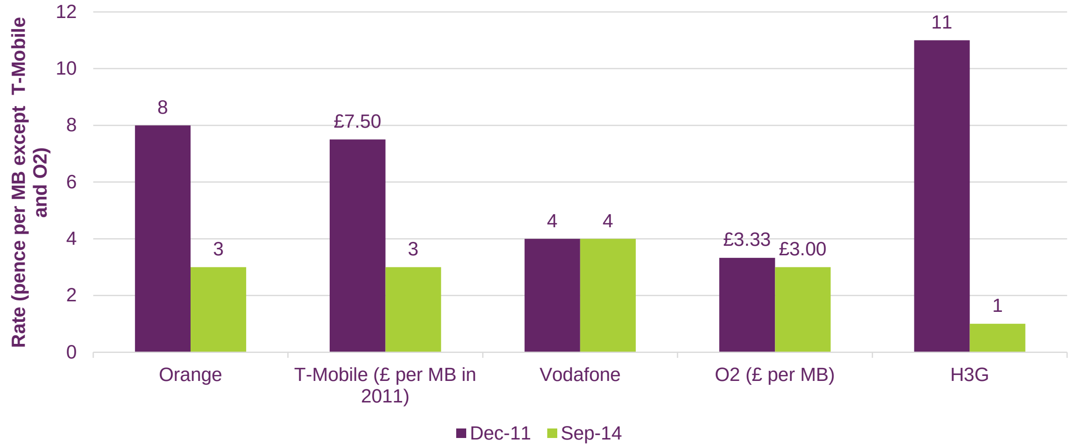
[100] Multiple SMS prices were listed for some operators. For Orange, we have used the 'Racoon' tariff in 2011; alternate tariffs are 'Camel' (10p per SMS in 2011) and 'Dolphin', 'Canary' and 'Monkey' (12p per SMS in 2011). For T-Mobile, we have used the 'Everyday' plan in 2011 (which charges 12p per SMS) and note that the 'Text plan' had a rate of 10p per SMS but requires a monthly top-up of £10. For both T-Mobile and Orange we have used the EE rate for 2014. For Virgin, we have used the 'Addict tariff'; and note that in 2011 the 'Simply 8p' tariff had a rate of 8ppm but was exclusive to Virgin Media customers.

**Figure A5.21: Pre-pay on-net SMS prices, excluding "rewards", 2011 and 2014**




*Source: Pure Pricing reports, December 2011 and September 2014*[101]

**Figure A5.22: Pre-pay data prices, excluding "rewards", 2011 and 2014**

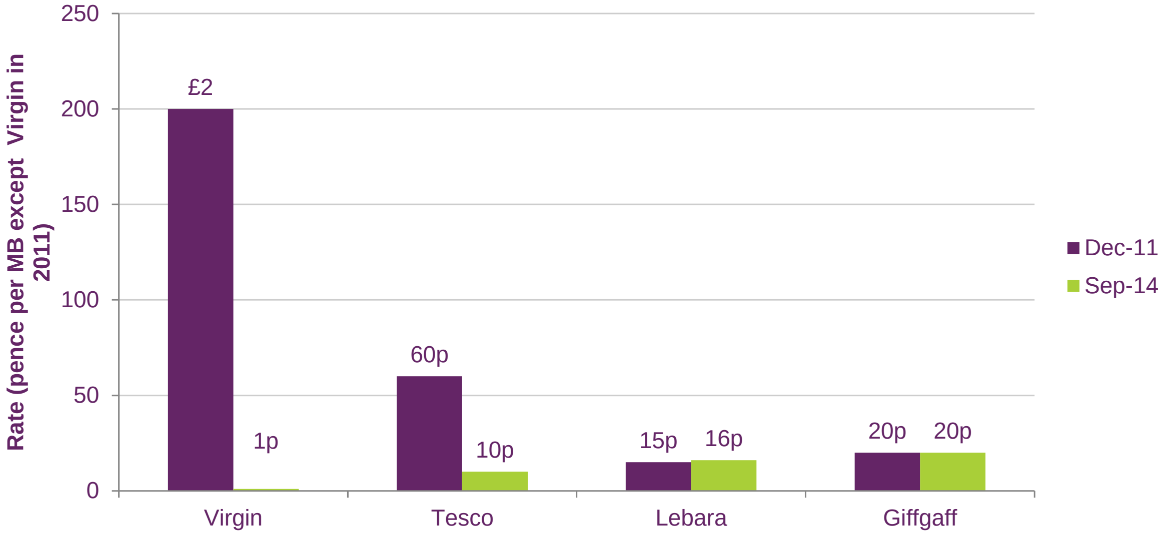



*Source: Pure Pricing reports, December 2011 and September 2014*[102]

[101] See previous footnote. On Lebara, the free on-net SMS in 2014 is subject to a minimum £5 top-up, which is valid for 30 days with a fair use policy of 3000 texts applies. On Giffgaff, free on-net SMS are subject to a top-up every three months.

[102] In 2011, T-Mobile charged £7.50 per MB, capped at £1 per day, subject to fair use of 500MB per month. For both Orange and T-Mobile in 2014 data we have used EE data - EE requires the purchase of an add-on and the minimum priced EE data add-on is £3 and provided 100MB. In 2014, Vodafone charged £2 per 50MB per day, then charged 10p per MB after the 50MB daily cap. In 2011, O2 charged 1p per 3kb, capped at £1 per day (max of 50MB per day).

**Figure A5.23: Pre-pay data prices, excluding "rewards", 2011 and 2014**




*Source: Pure Pricing reports, December 2011 and September 2014*[103]

A5.68 Figure A5.18 shows that, among the larger MCPs, Vodafone and EE (Orange/T-Mobile) have increased their basic pre-pay charges for off-net calls (by 20% and 150%/20% respectively) whilst O2 has maintained it charges constant and H3G reduced them significantly (by 88%). Among the smaller MCPs, Virgin Media increased its charges by 35% and Lebara by 60%. Figure A5.18 and Figure A5.19 show that for all MCPs except Lebara and Giffgaff, the on-net and off-net charges are identical both in 2011 and 2014.

A5.69 In contrast, Figure A5.20 and Figure A5.21 show that SMS charges have generally not increased, although Vodafone's and Virgin Media's charges have increased by 20% overall, i.e. by 2 pence per SMS). Lebara increased its off-net charge by 4 pence per SMS but decreased its on-net one by 15 pence per SMS. H3G reduced its charges by 9 pence per SMS. All other MCPs kept their charges constant. In relation to data prices, Figure A5.22 and Figure A5.23 show that all the sampled MCPs (except Lebara) have either decreased prices significantly or maintained them broadly flat.

A5.70 This suggests there are still a large number of MCPs that have maintained or reduced their basic pre-pay charges. These MCPs (O2, H3G, Tesco Mobile, Giffgaff, and Lebara) cover about 50% of the pre-pay segment of the market.[104] The lowest pre-pay charges that we have seen are at 3 pence per minute (H3G-see Figure A5.18 and Figure A5.19) and we are not aware of any MCP having offered similar prices previously (including at the time of the previous market review).[105] All

[103] In 2011, Virgin charged 50p per day for 25MB but when the 25MB daily usage was reached it charged £2 per MB. In 2011, for Lebara data was free for up to 10MB data, then it charged 15p per MB thereafter. In 2011 and 2014, Giffgaff charged 20p per day for up to 20MB data then charged 20p per MB thereafter.
[104] The figures are 50% at the end of 2013, based on s135 data, about 48% in 2014 Q1 based on Alix Partners figures (100% minus the combined market share in Figure 10 of the MCPs which increased their charges i.e. EE, Vodafone and VM) submitted as part of Telefonica's response to the June 2014 Consultation. See Alix Partners Report.
[105] We note that if minimum top-ups had increased, this might not necessarily be seen as a price increase for very low usage consumers, as long as the top-up does not expire after a 'too short'

this means that customers who want to pay on a per-unit basis (rather than purchasing pre-pay “packages”) still have access to a range of MCPs offering the same call prices as in 2011.

A5.71 Telefonica argued there was a material impact on low usage subscribers.[106] It referred to findings in the 2014 CER which showed that while the weighted average price of the basket of 8 usage profiles fell by 22.6%, there were annual price increases for 3 usage profiles (the two basic usage profiles and one Intermediate usage profile)[107] corresponding to the lowest usage of outgoing calls with the lowest one showing a 13.5% price increase.[108]

A5.72 Firstly, it is important to repeat some caveats to the findings in the 2014 CER. Specifically, it states that the reported tariffs are restricted to those available from the three largest retail MCPs (EE, O2 and Vodafone) and are not necessarily the cheapest available to UK consumers.[109]

A5.73 Secondly, the eight usage profiles in the Ofcom basket are ‘packages’ of voice calls, SMS and, in some cases, data. This implies that, when searching for the least expensive plans that best match these profiles, the results can return post-pay plans or pre-pay ‘packages’. None of the two basic profiles (out of a total of eight) explicitly include data and only one includes SMS (just 25 SMS per month). In 2011, a search for the plans that best match these profiles was likely to return plans that closely matched the profiles and, especially, that included no data (hence a zero price for data). However, in 2013, a similar search is highly likely to return plans that would have a higher allowance, but more importantly, that also include data. This is because, nowadays, data is almost always bundled in mobile plans. This is illustrated by the fact that none of the one-month entry-level post-pay plans of the three largest MCPs in 2011 (Orange, O2, Vodafone) included data whereas they all do today and also generally include higher voice allowances (see Figure A5.14) and the higher data allowances in Table A5.1 for pre-pay.

A5.74 Notwithstanding the above, we note that according to the latest Consumer Experience Report (2015 CER), those connections for which prices increased between 2012 and 2013 and referred to by Telefonica had the largest price decreases between 2013 and 2014 (8.3% for each of the two basic connections and 17% for one of the intermediate connection compared with a 2.4% decrease in the weighted average price of the basket of 8 usage profiles).[110] These latest

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period. It might however raise other issues, e.g. if the consumer is budget-constrained and would like to spread mobile expenditures over a certain period rather than incur them once at the beginning of the period. However, our understanding is that only Telefonica discontinued £5 top ups in 2011. EE has submitted in its response to the June 2014 Consultation that between 2011 and 2013, it has removed *one of its* lowest priced pay as you go plans, its £5 Monkey top-up plan; it is however not clear if this was the only £5 plan. Therefore, £5 and £10 top-ups are still prevalent and some MCPs even offer top-ups starting from 10p. This was the case earlier in 2014 with Orange SIM cards, in EE shops (available at: http://more-from.orange.co.uk/activate/tiny-top-ups/ accessed on 30 May 2014).

[106] Alix Partners Report, paragraphs 5.8-5.9.

[107] The basket includes two basic profiles, three intermediate profiles, and three advanced profiles. The details of these profiles can be found in Ofcom, *The Consumer Experience of 2013*, January 2014, Figure 110.

[108] See Ofcom, *The Consumer Experience of 2013*, January 2014, Figure 110, page 106.

[109] In particular, footnote 56 reports that the price of the basket for the three cheapest services in the entire market was 32% lower than the price based on the three largest providers’ tariffs in 2013.

[110] See page 143, Ofcom, *The Consumer Experience of 2014*, Research document, 28 January 2015. http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/tce-14/TCE14_research_report.pdf

figures suggest that the price increases for the lower usage baskets reported in the 2014 CER might have been at best temporary.

A5.75 Telefonica argued that those MCPs which, according to Ofcom, had decreased or kept constant their pre-pay prices (H3G, Tesco and Giffgaff) had only 17% of the pre-pay market in Q1 2014.[111] It also argued that Ofcom has not undertaken an analysis of the extent to which consumers have switched to these alternatives.[112] Telefonica said that an important fact for Ofcom to consider is that, despite reducing its pre-pay charges, H3G had not increased its pre-pay market share substantially and that limited switching by customers to the cheaper tariffs would imply that the availability of smaller MCPs with more advantageous terms becomes largely irrelevant.[113] Telefonica and EE both suggested that H3G's pre-pay pricing may be a loss-making strategy to build a customer base and EE suggested that the services offered by H3G and the smaller MCPs that did not increase their charges might not constitute (good) substitutes to those of the larger MCPs.[114]

A5.76 We believe that MCPs that have not increased their pre-pay charges account for about half of the pre-pay market.[115] This very significantly mitigates the impact on vulnerable consumers, who still have low price options available to them (even if, as is suggested, the lower prices for pre-pay offered by H3G compared to 2011 were only offered in the hope of upgrading the customer to post-pay). However, it is possible that some pre-pay consumers may pay slightly higher prices now – this would be in line with our expectations about the impact of MTRs reducing to LRIC when they have previously been a long way above LRIC.

### Assessment of the impact of the cost standard on retail pricing

A5.77 Compared to 2011, prices for post-pay customers and high-usage pre-pay customers appear lower. The basic pre-pay prices of some MCPs (e.g. H3G) also appear to be lower than in 2011 or at the same level (as in the case of O2 and most smaller MCPs), while low usage pre-pay tariffs of other MCPs (in particular Vodafone and EE) appear to be more expensive.

A5.78 Although these trends may also be affected by other factors, such as falling costs and broader trends in the provision of mobile services generally, the evidence suggests that the choice of cost standard does not seem to have resulted in significantly higher retail prices overall.

A5.79 We would expect that, going forward, segments that are net makers of MTR-affected calls would be better off under LRIC than under LRIC+. For segments that are net receivers of MTR-affected calls, prices may be slightly higher under LRIC, although this may be counteracted by an increase in competition (or more generally falling costs of provision). However, it seems likely that any impact that did occur would be more limited in this review period because the difference between the projected LRIC+ and projected LRIC is now around 0.4 ppm (in 2015/16 and reducing slightly over the control period), whereas between the last financial year before the glide path to LRIC (2010/11) and the first financial year with MTRs at LRIC (2013/14), MTRs fell nearly 4ppm (in 2012/13 prices).

[111] Alix Partners Report, paragraph 5.15.
[112] Ibid, paragraph 5.11.
[113] Ibid, paragraph 5.12 and 5.19.
[114] Ibid, paragraph 5.19 and EE response to the June 2014 Consultation, page 67, 3rd bullet point.
[115] See footnote 104.

## Impact of the cost standard on mobile usage and subscription

### Impact on mobile usage

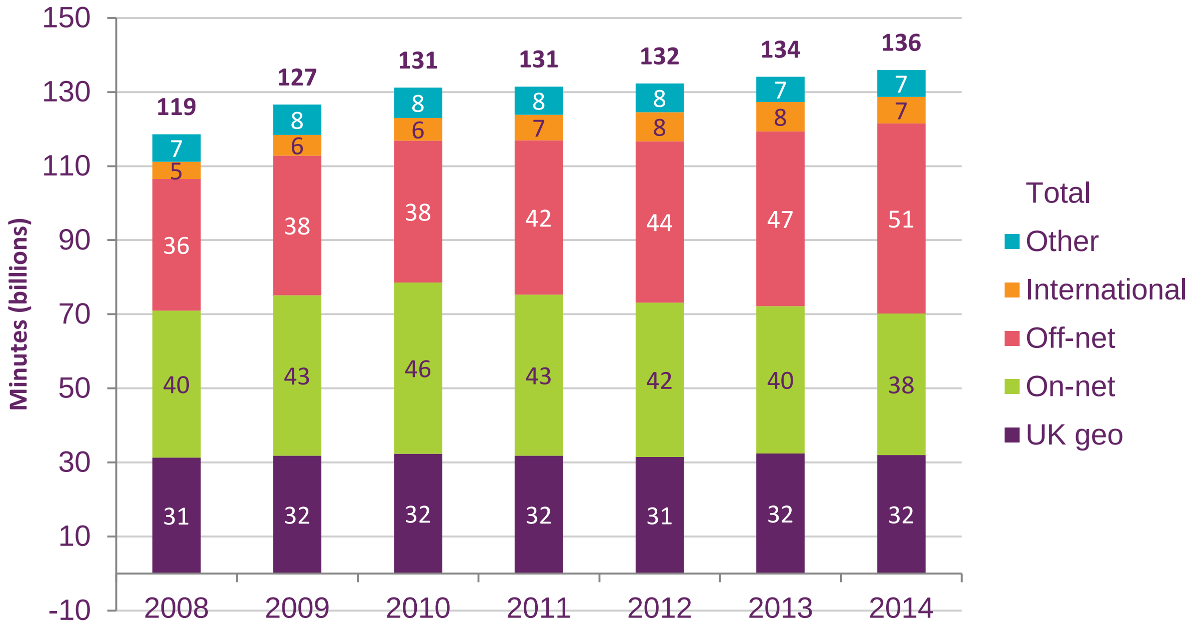
A5.80 There are two conflicting impacts on overall mobile usage under each cost standard. Under a LRIC cost standard (relative to LRIC+), those customers who face reduced prices for usage (or larger call allowances for the same price) would be expected to increase their usage. On the other hand, those consumers who might face an increase in usage prices under LRIC relative to LRIC+ would be expected to reduce their usage. Overall, the net effect is difficult to predict. In the 2012 CC Determination, the CC said it found it difficult to be confident of the effects on mobile usage of moving from LRIC+ to LRIC for these same reasons but did not see any strong evidence that usage would decrease.[116]

A5.81 As Figure A5.24 shows, overall, mobile voice call usage has increased since 2011. In addition, outgoing off-net mobile to mobile calls (which are those calls subject to MTRs) have grown year on year and have also grown as a proportion of both total outgoing mobile to mobile calls (from 49% in 2011 to 57% in 2014) and total outgoing calls (from 32% in 2011 to 38% in 2014).[117]

[116] See paragraphs 2.759 and 2.765.

[117] The volumes shown in Figure A5.24 differ from those used in Section 6 (see for example volumes used in paragraph 6.37 and related footnote). For the assessment in Section 6, we have used traffic volumes provided by the largest MCPs in response to our s135 requests which include traffic carried on behalf of, or for, MVNOs or other third parties. Figure A5.24 displays the volumes from the 2014 Ofcom Communication Market Report (CMR). CMR volumes are generally higher than those from the s135 responses, e.g. they report 51m of M2M off-net traffic versus the 43m used in Section 6. We note that CMR volumes are collected in a different way, for example by contacting directly some of the major MVNOs. Although we have extensively investigated such discrepancy between the two data sets, we have not been able to resolve it. This, however, does not affect our assessment because both data sets show the same trends but at different absolute levels.

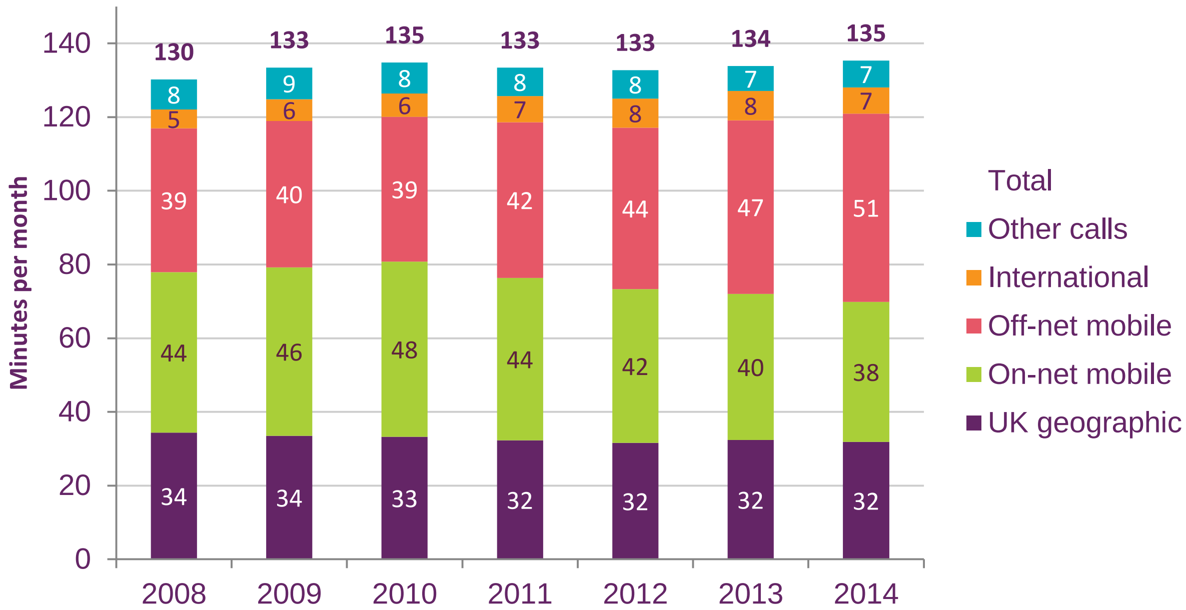
**Figure A5.24: Volume of outgoing mobile calls, by type of call**




*Source: Ofcom Telecoms Tables compiled using data from Ofcom / Operators*
*2014 figures based on data from first half of the year and scaled up to the year by applying the average ratio of H2 to H1 for years 2012 and 2013*

A5.82 A similar pattern holds for voice usage per subscription, as shown in Figure A5.25 below.

**Figure A5.25: Volume of average monthly outgoing mobile calls per subscription, by type of call**

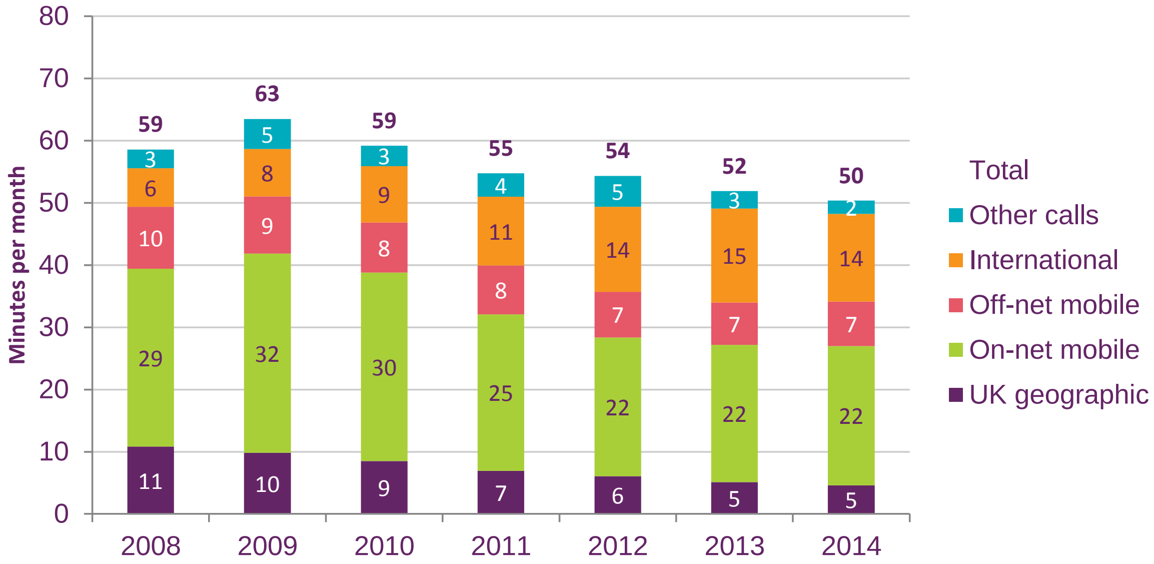



*Source: Ofcom / MCPs*
*2014 figures based on data from first half of the year and scaled up to the year by applying the average ratio of H2 to H1 for years 2012 and 2013*

A5.83 Figure A5.26 and Figure A5.27 show average monthly use of pre-pay and post-pay per subscription have declined. Set against this, the fact that overall voice usage per subscription was flat between 2011 and 2014 (see Figure A5.25) is likely to have been driven by migration from pre-pay to post-pay - the proportion of mobile users who are on a post-pay contract has grown substantially in the past three years and is at a significantly higher level of 58% compared to 49% in 2011.[118] This may, in part, have been a response to retail price changes under LRIC MTRs.

A5.84 It seems likely that higher-use pre-pay customers migrated to post-pay, leaving lower volume users on pre-pay. These new post-pay customers also appear to make fewer calls than the existing post-pay base, dragging down the average post-pay usage.

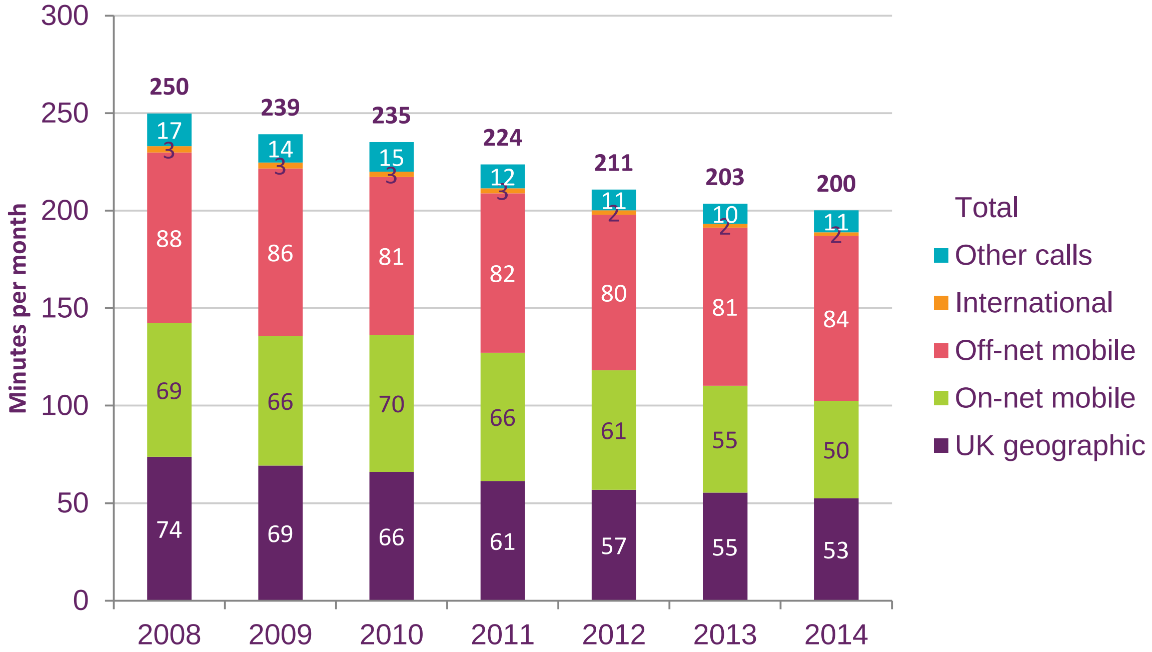
**Figure A5.26: Volume of average monthly outgoing mobile calls per pre-pay subscription, by type of call**




*Source: Ofcom / Operators*
*2014 figures based on data from first half of the year and scaled up to the year by applying the average ratio of H2 to H1 for years 2012 and 2013*

[118] 2012 CMR (Page 319) for 2011 figure; Ofcom Telecom Data Updates (relied upon for figures in CMR– http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/tables/ ), 2014 Q2 for 2014 figure. See Ofcom, *Telecommunications market data tables Q2 2014*, published 20 November 2014, http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/tables. We note that, according to *Ofcom Technology Tracker,* these figures are 49% for 2011 and 65% for 2014. See Ofcom, *Ofcom Technology Tracker Wave 1 2011 – Main Set*, published 5 May 2011(at http://www.ofcom.org.uk/static/marketdataresearch/statistics/main_set.pdf) and Ofcom, *Ofcom Technology Tracker Wave 2 2014*, published September 2014 (at http://stakeholders.ofcom.org.uk/binaries/research/statistics/2014apr/2014w1.pdf). The Telecom Data Tables are based on MCPs data. The Technology Trackers are based on consumer surveys.

**Figure A5.27: Volume of average monthly outgoing mobile calls per post-pay subscription, by type of call**




*Source: Ofcom / Operators*
*2014 figures based on data from first half of the year and scaled up to the year by applying the average ratio of H2 to H1 for years 2012 and 2013*

A5.85 EE argued that Ofcom's claim that overall mobile voice usage has increased since 2011 is not consistent with data reported in the Bank of America/Merrill Lynch Global Wireless Matrix Q4 2013.[119] This, EE said, shows that minutes of use per subscriber in the UK were growing up to 2010 (including a growth rate of 3.8% in 2010) but fell across 2011 and 2012, and were 6% lower by September 2013 than in 2010. We acknowledge the Bank of America/Merrill Lynch Global Wireless Matrix Q4 2013 report. However, firstly, the data in that report appears to be based on the five larger MCPs only (four if we count Orange and T-Mobile as EE) and, hence might exclude MVNOs traffic.[120] Secondly, we consider it appropriate to use our data since it is based on the most up-to-date information obtained by Ofcom from the operators and is consistent with similar data obtained from the same operators (and including MVNOs traffic) in the exercise of Ofcom's information gathering powers under section 135 of the Act.

A5.86 Overall, the data suggests that the move to LRIC has not adversely affected overall usage. It may have led to a substitution from on-net to off-net calls across all subscribers (i.e. both pre-pay and post-pay), and may have contributed to the migration from pre-pay to post-pay. For the review period to 2018, we might expect similar effects from MTRs at LRIC on usage.

[119] EE response to the June 2014 Consultation, page 67, last paragraph.
[120] See Tables 178 and 179 on pages 298-99 in that report. All the indicators provided in these two tables refer to the larger MCPs only, and it is not specified whether the mobile usage reported (e.g. minutes of use ('MoU') per subscriber) relates to total usage on their network or to their subscribers' usage only. To the extent that it excludes MVNOs, this might explain the higher MoU per subscriber per month shown in the report (compared to those shown in Figure A5.25 above).

## Evolution of mobile subscription and ownership

A5.87 It is important to distinguish between numbers of mobile subscriptions and mobile ownership. Mobile subscription rates are higher than mobile ownership in the UK (and across Europe) because some consumers choose to have multiple subscriptions.

A5.88 We would be more concerned if consumers are unable to afford or use mobile services at all than if they rationalise multiple subscriptions.

A5.89 As noted above, it appears that prices for post-pay customers have fallen overall under LRIC compared to those that applied in 2011. It therefore seems unlikely that post-pay customers would give up their mobile devices if LRIC MTRs are maintained. Indeed, the proportion of consumers who are on a post-pay contract has grown substantially in the past three years under LRIC MTRs and is at a significantly higher level of 58% compared to 49% in 2011.[121] We also consider that, even if there were an increase in post-pay prices as a result of MTRs at LRIC (which we do not consider has been the case so far as discussed above), post-pay customers are unlikely to give up owning a mobile device (although if prices rose, some might trade-down to a package with a cheaper handset or smaller bundle).

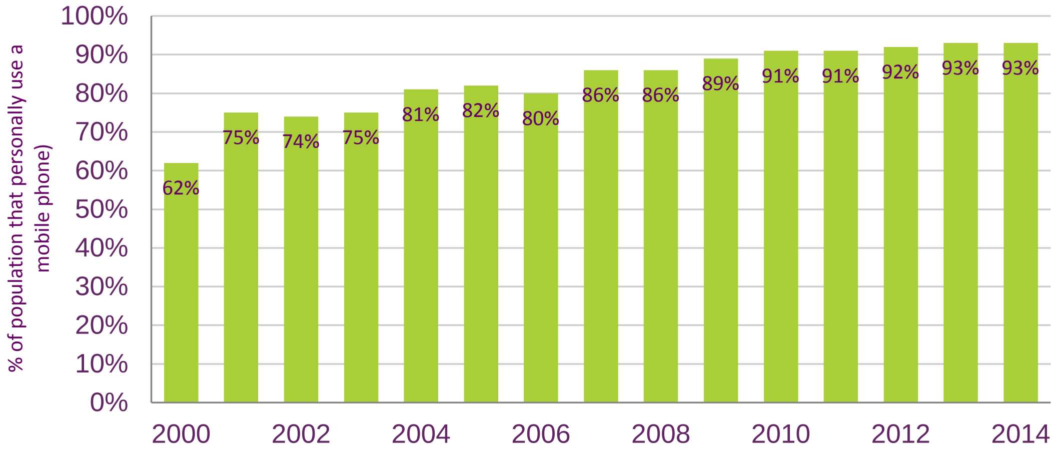
A5.90 As discussed above (paragraph A5.13 to A5.22), keeping MTRs at LRIC could potentially lead to some pre-pay prices being higher relative to if MTRs were set at LRIC+, particularly for low usage customers. This could influence subscription decisions if these customers are particularly price-sensitive. However, we believe this impact is unlikely to be significant. First, to the extent that prices are higher for these consumers under MTRs at LRIC compared to LRIC+, the difference is likely to be very modest. For example, a number of pre-pay packages are still available at the same or similar prices to those on offer in 2011 (when MTRs were well above LRIC) – see paragraphs A5.65 - A5.76. Second, as any impact from retail price changes is most likely to affect usage prices, we consider that it is unlikely that there would be any significant difference in the number of subscribers for the pre-pay segment under LRIC compared to LRIC+ – instead pre-pay consumers might be expected to make fewer calls. This is in line with the CC's views in 2012.[122] Therefore, it seems unlikely that ownership levels would be significantly different under the two cost standards, if at all.

A5.91 Ownership amongst pre-pay subscribers is also likely to be influenced by the price of handsets, not just prices for usage. As shown in Table 13 of Section 6, the price of basic handsets in 2013 appears to be no more than it was in 2011 – and indeed generally appear to be cheaper now.

A5.92 The above is supported by Figure A5.28 which shows mobile ownership. The percentage of mobile subscribers among the UK adult population was 93% in 2014, an increase of two percentage points compared to the 2011 levels of 91%, although ownership could be tapering off.[123]

[121] See paragraph A5.83, in particular footnote 118.
[122] 2012 CC Determination, paragraph 2.742.
[123] Ofcom, *The Consumer Experience of 2011,* published 6 December 2011. http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/tce-11/research_report_of511a.pdf, Figure 15 for the 2011 figure; the 2014 figure is as at the end of the second quarter of 2014, Ofcom, *Ofcom Technology Tracker Wave 2 2014*, published September 2014, http://stakeholders.ofcom.org.uk/binaries/research/statistics/2014apr/2014w1.pdf

**Figure A5.28: Mobile ownership**




*Source: Ofcom / Operators*
*2014 Figure as at end of second quarter*

A5.93 EE said that Ofcom's Telecom data tables Q4 2013 shows that number of active mobile subscriptions fell by 0.4% in the year to Q4 2013 and that, while this was only one year of data, it is possible that the impact of the transition to LRIC on subscriber numbers could have been hidden until now by the falls in costs (including handset costs), as well as the glide path approach, helping to absorb the impact on prices.[124]

A5.94 As discussed above, we consider ownership to be more relevant than subscription. Nevertheless, even looking at subscriptions, the latest Telecom Data Tables (Q2 2014) shows that mobile subscriptions actually increased in the year to Q4 2013 (from 83.4m in Q4 2012 to 83.6m in Q4 2013 instead of the 83.05m reported in the Q4 2013 Telecom Data Table). We consider the latest Telecom Data Tables to contain more accurate figures.[125] This trend continued into 2014, with subscriptions having increased in the year to Q2 2014 (from 82.9m in Q2 2013 to 83.8m).

A5.95 Based on the above, the data does not suggest the move to MTRs at LRIC had a significant impact on ownership levels.

A5.96 We believe that this is also likely to hold true over the next review period. As noted in paragraph A5.79 above the difference between the MTR in the financial years 2010/11 and 2013/14 (nearly 4ppm in 2012/13 prices) was greater than the difference between LRIC+ and LRIC now projected for this control period (around 0.4ppm in 2015/16 expressed in 2012/13 prices). Since there did not appear to be a significant impact on ownership between 2011 and 2014, it seems unlikely that the choice of cost standard will lead to any significant impact on ownership over the next review period.

## Impact of the cost standard on Fixed to Mobile (F2M) prices and usage

A5.97 As noted in Section 6, if MTRs fall, we would expect this to be reflected in lower prices for F2M calls, bundles including F2M calls or fixed tariffs more generally. We

[124] EE response to the June 2014 Consultation, page 68, second paragraph.
[125] This is because the Ofcom figures are generally restated to reflect more accurate data.

would therefore expect fixed line consumers to benefit to some extent from MTRs at LRIC rather than LRIC+.

A5.98 In our June 2014 Consultation, we presented data showing that the average price of F2M voice calls has been decreasing since 2010. We also estimated that, although MTR reductions were not fully passed through into retail prices, the level of pass-through suggested by the figures was significant (47%).

A5.99 BT said that it has passed 100% of the most significant MTR cut in May 2011 and has passed further subsequent cuts in the form of not increasing F2M call prices despite inflation, when the prices of other fixed line services were being increased.[126] BT reiterated this point in a further response to the June 2014 Consultation in November 2014, adding that the price of packages that include half-price F2M calls has reduced by a quarter since the beginning of the current MTR charge control. BT also said that the decreasing trend in fixed revenues both from overall packages and from F2M calls (shown in the 2014 CMR, Figure 5.64) shows that the benefits of lower MTRs are being passed to consumers, driven by competitive retail markets.[127] We do not consider that decreasing revenues from fixed to mobile calls are, on their own, the most relevant factor, because F2M call volumes are on a significantly decreasing trend, which partly explains the decrease in revenues.[128] We therefore focus on price per minute.

A5.100 Telefonica estimated that, based on its own MTR data, the entire decrease in MTRs between 2007 and 2013 has been retained by FCPs for fixed residential customers whilst half the MTR decrease was also retained for fixed business customers.[129]

A5.101 Vodafone did its own calculation using the actual quarterly data reported by Ofcom in its Communications Data Updates.[130] Vodafone said that its own calculation showed that:

- Overall (across business & residential), a 3.58ppm reduction in MTRs between Q1 2011 and Q4 2013 (from 4.43ppm to 0.85ppm) has been matched with a 1.13p fall in retail charges (from 12.24ppm to 11.11ppm). In terms of the percentage of F2M call revenue retained by FCPs, this means an increase from 64% in Q1 2011 to 92% in Q4 2013.

- For residential customers, the data show the 3.58ppm reduction in MTRs between Q1 2011 and Q4 2013 has been matched with a 0.29ppm fall in retail charges (from 15.19ppm to 14.90ppm). In terms of the percentage of F2M call revenue retained by FCPs, this means an increase from 71% in Q1 2011, when mobile wholesale cost were 29% of retail revenues, to 94% in Q4 2013 where these costs are just 6% of retail revenues.

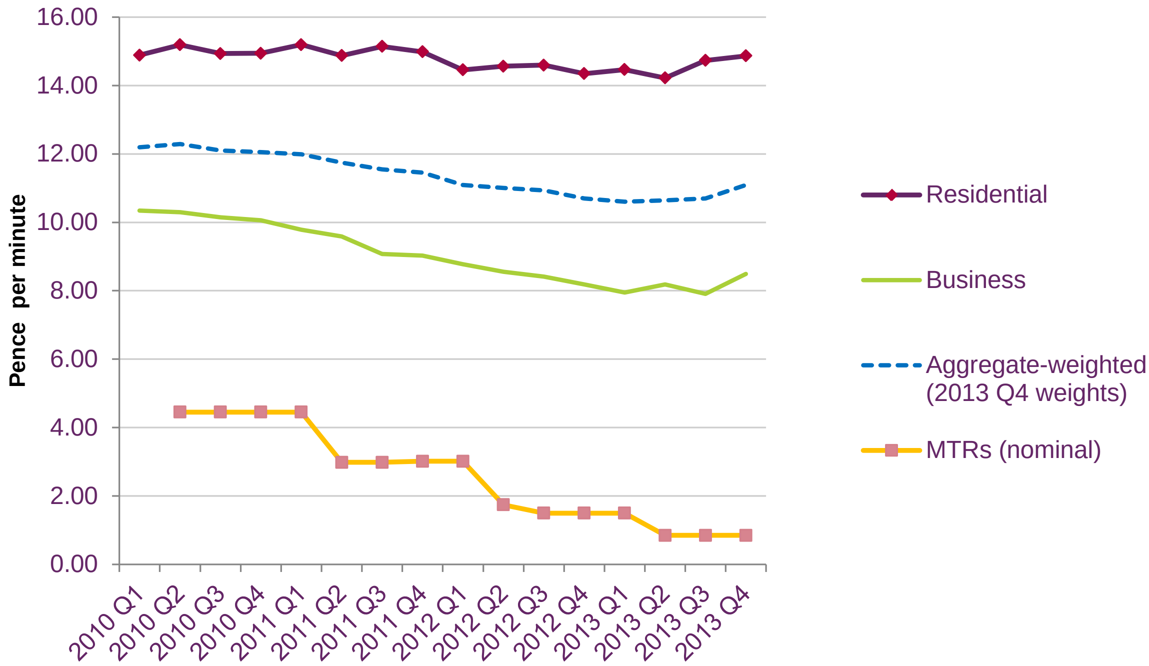
A5.102 Firstly, it is important to note that our analysis in the June 2014 Consultation compared yearly average retail prices in 2011 with 2013 whereas Vodafone compares retail prices in a quarter in 2011 (when MTRs were very high) with prices in a quarter in 2013 (when MTRs were very low). This quarterly analysis led to the

126 BT response to the June 2014 Consultation, August 2014, paragraph 3.25.
127 Further BT response to the June 2014 Consultation, November 2014.
128 See Ofcom's Communications Data Updates, published on a regular (quarterly) basis at http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/tables/
129 Alix Partners Report, paragraph 5.31, and 5.28 to 5.33 for more details.
130 Vodafone response to the June 2014 Consultation, pages 21-24.

high 'retained revenue' in Q4 2013 reported by Vodafone. We consider our analysis to be more appropriate when estimating pass-through levels, given it is unclear whether MTR reductions in a given quarter will be passed to retail consumers within that period, in anticipation before that period, or with a delay after that period. Taking aggregate prices over the year may better capture the potential effects on retail prices of the MTR reductions.

A5.103 We have replicated Vodafone's analysis using the same data (i.e. from the Communications Data Updates). Figure A5.29 below shows quarterly F2M prices for residential and business customers, along with MTRs.[131] It also shows the 'aggregate' market prices, i.e. the prices of a combination of residential and business calls. Because the proportion of residential and business calls vary from quarter to quarter, we have anchored it to the most recent quarter in the series (Q4 2013) by fixing the proportion of business and residential call volumes in all quarters to that in Q4 2013.[132] This allows us to measure the pure price effect in the aggregate prices by eliminating the effects due to variations in the proportion of residential/business calls over the quarters.

**Figure A5.29: Quarterly revenue per minute of fixed-to-mobile calls and MTRs (nominal)**




*Source: Ofcom*

A5.104 Figure A5.29 shows a generally decreasing trend in nominal retail prices at an aggregate level. It also shows F2M prices for residential customers declined between 2011 and 2012 and were then relatively flat until the later quarters of 2013

[131] Quarterly residential prices are derived by dividing retail revenues from residential F2M calls by volume of F2M calls in a given quarter, and similarly for quarterly business prices. These data are available from the Ofcom Communications Data Updates Tables. The MTRs are obtained from Table 2 in the June 2014 Consultation.

[132] That is, the adjusted aggregate price in each quarter was calculated as a weighted average of residential and business prices in that quarter, where the weights were the proportions of residential and business calls in Q4 2013.

when they increased slightly (although at this time the MTR was flat and we note that other fixed line services have been subject to retail price increases – see below).

A5.105 To estimate annual pass-through levels, we have first calculated the annual average retail prices and MTRs in a calendar year by taking their average over the 4 quarters of the year. We then calculated the pass-through between two consecutive calendar years by dividing the difference in the average annual retail prices between these two years by the difference in the average annual MTRs in that same period. This is the same methodology which we used in the June 2014 Consultation, with the difference that the pass-through is now calculated at a weighted aggregate level and also disaggregated between the business and residential segments. Table A5.2 below presents the results.[133]

**Table A5.2: Percentage pass-through of MTR reductions to retail prices of F2M calls**

| | 2010-2011 | 2011-2012 | 2012-2013 |
|---|---|---|---|
| **Aggregate** | 43% | 53% | 19% |
| **Residential** | -6% | 39% | -9% |
| **Business** | 77% | 62% | 38% |

*Note: negative percentages indicates that prices increased despite an MTR reduction*

A5.106 The figures in Table A5.2 suggest significant aggregate levels of pass-through between 2010 and 2011, and between 2011 and 2012. It also shows significant (but decreasing) levels of pass-through for business customers in all three periods, and pass-through to residential customers only between 2011 and 2012, with residential retail prices otherwise increasing slightly despite MTR reductions.

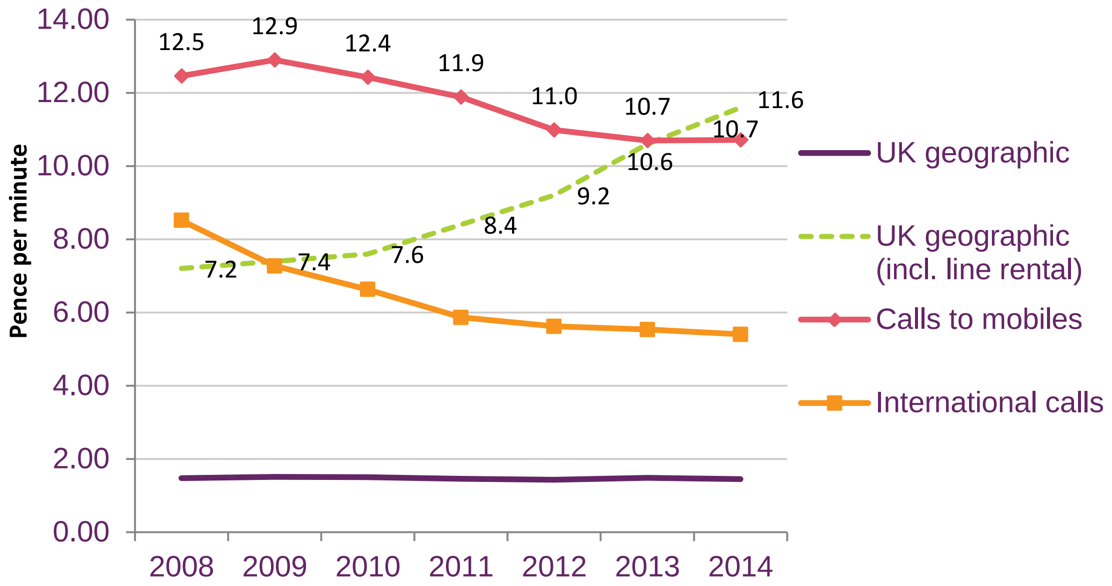
A5.107 These findings appear to be consistent with little pass-through for residential customers, suggested by Vodafone's analysis. They also appear to be consistent with BT's response to the June 2014 Consultation that, since the 2011 MCT Statement, it has decreased F2M call prices to residential customers only once, i.e. in May 2011.[134]

[133] We recognise that there are various ways in which the pass-through over a year could be calculated. First, we could take the aggregate pass-through using annual retail price changes, rather than calculate the annual figure based on the arithmetic average of quarterly price changes over the year (which is the basis used in Table A5.2). In this case, using annual price changes rather than averages of quarterly price changes, hardly affects the estimated pass-through (if anything the pass-through appears very slightly greater using annual changes). Second, rather than fix the relative weighting of business and residential prices, we could have allowed the weights to vary between years consistent with the underlying data. Doing this produces a noticeably greater degree of pass-through than shown in Table A5.2 (by 10 percentage points or more in each year). Third, we could calculate annual pass-through on a financial year basis (although in Table A5.2 we have shown pass-through on a calendar year basis). Looking at the results on a calendar year basis affects the magnitude of the effects but not the overall conclusions – i.e. pass-through remains much greater for business than for residential customers, and aggregate pass-through appears significant in the first two years and is much less in the most recent year (and could even be slightly negative in that year depending on the approach to aggregating residential and business prices)."

[134] Note that the figures in Table A5.2 are based on average industry figures, not just BT's.

A5.108 Whether BT maintaining its prices unchanged after May 2011 constitutes a pass-through (as BT claims) depends on the counterfactual, i.e. whether those prices would have otherwise gone up, had LRIC+ MTRs continued. Given the otherwise upwards trend in retail call pricing by FCPs (Figure A5.30 below), it is possible that fixed to mobile call prices would have been higher than observed had MTRs remained capped on a LRIC+ basis.[135]

**Figure A5.30: Average revenue per fixed voice call minute**




*Source: 2014 CMR, Figure 5.64 (UK geographic and 2014 figures added)*
*2014 figures based on Quarters 1 and 2*

A5.109 As also noted in Section 6, it is possible that fixed line consumers have benefited by other means. In theory, FCPs could have decreased line rental charges or other components of fixed tariffs to attract more customers given the gross margins on calls to mobiles have increased (given the less than 100% pass-through). As Figure A5.31 shows, retail ARPU per fixed line has fallen steadily in nominal terms (even more so in real terms) in each of the last six years and continued in the period after 2011 (i.e. following the decision to reduce MTRs to LRIC). While expenditure on line rental appears to have increased in nominal terms since 2011, it is roughly flat after 2011 in real terms and there has also been a trend towards the bundling of calls with the line rental. Indeed, as noted in the 2013 Communications Market Report (and confirmed in the 2015 Consumer Experience Report),[136] line rental revenues per fixed line have been increasing since 2009 as these increasingly include a bundled call allowance or "bolt on".

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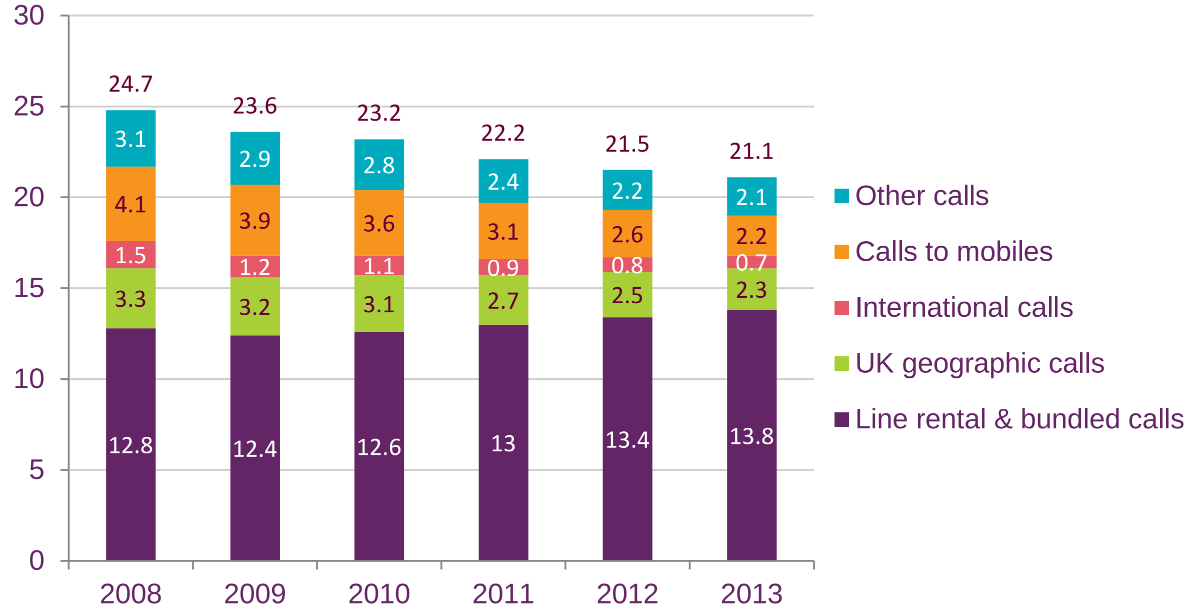
[135] For example, between 2013 (the first year MTRs were regulated at LRIC) and 2014, UK geographic prices (including line rental) rose by 1ppm, yet the fixed-to-mobile call price was unchanged. The estimated difference between LRIC+ and LRIC MTRs in those years was very close to the observed retail price increase for fixed geographic calls, implying that had MTRs been at LRIC+ we might have seen calls to mobiles increase by a similar level as UK geographic calls, rather than staying flat as they did.

[136] See first bullet point on page 135, Ofcom, *The Consumer Experience of 2014*, Research document, 28 January 2015. http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/tce-14/TCE14_research_report.pdf

A5.110 F2M calls are typically provided to consumers by the FCP who provides them with calls and line rentals. Moreover, for a significant part of the market, consumers purchase calls and line rental as a bundle together with broadband.[137] It would therefore be expected that the fixed line tariff (i.e. including the line rental price and subscription charges) would bear some relation with the overall revenues which FCPs would expect to get from consumers who purchase the bundle (i.e. including out-of bundle revenues such as, in some cases, calls to mobiles, non-geographic numbers, international, or even to geographic numbers at particular times of the day depending on the bundle specification). In sum, FCPs compete for customers' overall value (which includes bundled and non-bundled revenues) and, where subscription price or line rental is the access point to the customer, competition in the market might lead to a redistribution of out-of-bundle revenues (including from F2M) to consumers via the subscription fee. This implies that fixed line consumers could also gain from MTR reductions through bundles which do not necessarily include F2M calls within the call allowance, if the take-up of the bundle from a given FCP implies that consumers will purchase F2M calls from that FCP.

**Figure A5.31: Average retail revenue per fixed line**




*Source: Ofcom / operators*[138]

A5.111 Vodafone said it could not see any other benefits to fixed consumers, given that both BT and Virgin Media have increased the price of other call services, including line rental. However, it is particularly difficult to disentangle such indirect effects of reductions in MTRs from other factors that affect line rental charges. Vodafone also points out that the price of other services has increased. However, as noted earlier, the fact that there were price increases for many fixed voice call services but a decrease in the price of F2M suggests that the latter might otherwise have increased had MTRs not been set on a glide path to LRIC from 2011.

[137] As at Q1 2014, over 51% of UK consumers purchased fixed voices services as part of a bundle with broadband (See Figure 102, *The Consumer Experience of 2014, Ofcom, 28 January 2015, available at* [http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/tce-14/TCE14_research_report.pdf](http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/tce-14/TCE14_research_report.pdf)).

[138] Ofcom, *Communications Market Report 2014*, 7 August 2014, Figure 5.33 page 329.

A5.112 At the time of the 2011 MCT Statement, some FCPs had indicated their intention to include F2M calls in bundles following our proposals to set LRIC based MTRs.[139] Telefonica said that its investigations showed that none of the major FCPs had included F2M calls in the main bundles offered on their websites.[140] They are only offered as add-ons and in its view customers need to search specifically for these.

A5.113 Table A5.3 below shows that, although F2M calls are not usually included in basic bundles, a number of FCPs now offer add-ons that include calls to mobiles.

[139] MCT 2011 Statement, see paragraph 7.198.
[140] Alix Partners Report, paragraphs 5.25-5.26.

**Table A5.3: FCPs' bundles that include F2M calls in March 2011 and December 2014**

| | Inclusive mobile minutes | Monthly fee March 2011 | Monthly fee December 2014 |
|---|---|---|---|
| **Talk Talk** | 100 F2M add-on | £2.99 | NA |
| | 200 F2M add-on | £4.99 | N/A |
| | 'International call boost (calls to 58 international destinations, unlimited calls to UK landline and mobile) | NA | £5 |
| | 'Anytime UK calls boost' (unlimited calls to landline, mobile, and 0845/0870) | N/A | £7.50 |
| **Virgin** | XXL Talk Unlimited Extra (includes F2M, and other features) | N/A | £30.99 |
| **EE/Orange** | 1000 F2M add-on | N/A | £5 |
| **Plusnet** | 100 F2M add-on | N/A | £3 |
| **Post Office** | 100 F2M add-on | N/A | £2.50 |
| | 500 F2M add-on | N/A | £7.50 |
| | Unlimited weekend F2M calls (and other features) | £12.25 | £1.25 add-on |
| **BT** | Unlimited Anytime Calls Package (available to broadband customers only): benefits include a 50% discount on calls to mobile | N/A | £7.50 per month (on top of broadband and line rental fee) |
| | Home Phone Saver Package (available to all): benefits include a 50% discount on calls to mobile | N/A | £19.99 per month (the fee includes line rental) |

*Source: CPs' websites accessed December 2014. WayBack internet archive for 2011 bundles (except TalkTalk where we have used a 2011 press release from their website).[141] WayBack did not have a March 2011 entry for the Post Office - pricing is from a page archived on 27 December 2010.*

[141] 2014 details: Virgin XXL Talk Unlimited Extra - £30.99 unlimited calls to UK mobiles (Cost inclusive of line rental. Also provides unlimited calls to UK landlines, unlimited calls to Virgin Mobile and 0870 numbers, unlimited calls to 0845 numbers, free calls to Virgin Media Directory Enquiries on 118 180) http://store.virginmedia.com/phone/about-virgin-media-fibre-optic/index.html; EE 'Anytime Plus Mobile' - £5 more a month (available to broadband customers only) to call UK mobiles (1,000

A5.114 Telefonica argued that given the difficulty with finding information on these bundles, it is unlikely there has been significant take-up of these bundles. We do not agree that their take-up is unlikely to be significant. In its response to the consultation, BT said that [✂]% of its customers are on its Unlimited Anytime Calls package which, for £7.50 a month includes half-price F2M calls and expects this proportion to rise to [✂]% by the end of 2014/15.[142] While this package is available for broadband customers only, BT said in its November 2014 further response to the June 2014 Consultation that it is now offering a similar package to all customers. We consider that consumers who frequently make F2M calls are likely to shop around for bundles or add-ons and/or would be expected to seek such information from their existing FCP.

A5.115 In light of the above, we consider that prices for fixed-line consumers would be expected to be lower when MTRs are at LRIC rather than LRIC+, even if the direct pass-through to the retail price of F2M calls has in recent years been less than complete.

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minutes), unlimited 30 countries landlines, unlimited UK landlines and 0870/0845 numbers https://broadband.ee.co.uk/home.do; Plusnet 100 inclusive minutes to UK mobiles - £3 per month (for broadband packages taken on or after 8th May 2013) http://www.plus.net/home-broadband/tariffs/; Post Office 'Mobile 100' option (100 anytime minutes to UK mobiles) - £2.50 per month and 'Mobile 500' option (500 anytime minutes to UK mobiles) – £7.50 per month. Also Anytime Calls option (weekend calls to UK mobiles, as well as anytime calls to UK landlines and 0845/0870 numbers, and weekend calls to landlines in 40 international destinations) - £5.75 a month or Evening & Weekend Calls option (Weekend calls to UK mobiles as well as evening and weekend calls to UK landlines and 0845/0870 numbers, weekend calls to landlines in 40 international destinations) - £1.25 a month http://www.postoffice.co.uk/home-phone; BT http://www.productsandservices.bt.com/products/landline/packages, 2011 details: TalkTalk http://www.talktalkgroup.com/press/press-releases/2011/15-03-2011.aspx; Virgin Media http://web.archive.org/web/20110314162017/http://shop.virginmedia.com/phone.html [14 March 2011]; Orange http://web.archive.org/web/20110314133157/http://shop.orange.co.uk/broadband/# [14 March 2011]; Plusnet http://web.archive.org/web/20110308145537/http://www.plus.net/residential/bundles.shtml [8 March 2011]; Post Office http://web.archive.org/web/20101227005332/http://www2.postoffice.co.uk/broadband-phone/home-phone-broadband/home-phone [27 December 2010]; BT http://web.archive.org/web/20110322030855/http://www.productsandservices.bt.com/consumerProducts/displayTopic.do?topicId=31678 [22 March 2011].

[142] BT response to the June 2014 Consultation, page 18, response to Question 6.5 of the June 2014 Consultation.

## Annex 6

# Equality impact assessment

## Introduction

A6.1 Ofcom is required by statute to assess the potential impact of all our functions, policies, projects and practices on the following equality groups: age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation.[143] We refer to groups of people with these protected characteristics as Equality groups.

A6.2 We fulfil these obligations by carrying out an Equality Impact Assessment (EIA), which examines the potential impact our policy could have on different groups of people, depending on their personal circumstances. EIAs also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers, regardless of their background or identity.

A6.3 We have not considered it necessary to carry out separate EIAs in relation to the additional equality groups in Northern Ireland: political opinion and dependants. This is because we anticipate that our decision would not have a differential impact in Northern Ireland compared to consumers in general.

## The aim of our MCT market review

A6.4 The purpose of this market review is to analyse the state of competition in the provision of MCT and to consider the appropriate form of *ex ante* regulation, if any, that should be imposed in the relevant market to promote competition and to protect consumers.

A6.5 The main stages in developing the regulatory obligations include:

- research and data collection to inform our analysis;
- definition of the wholesale MCT markets;
- assessment of SMP in the relevant markets; and
- determination of the appropriate remedies to address the harm arising from SMP.

## Equality impact assessment

A6.6 We have set out our decisions to:

- Define 74 markets, each corresponding to an MCP able to set an MTR for calls to the UK mobile numbers allocated by Ofcom to that MCP.
- Designate each undertaking holding UK mobile numbers as having SMP with respect to the (wholesale) market for terminating calls to such numbers.

[143] As defined in the Equality Act 2010.

- Regulate the MTRs of all the MCPs with SMP by imposing a symmetric charge control capping the maximum MTR. This represents a change from the previous market review where the charge control only applied to the four largest MCPs.

- Impose on all MCPs an obligation to provide network access on fair and reasonable terms and an obligation of price transparency.

- Impose an additional obligation only on the four largest MCPs not to unduly discriminate in relation to the provision of network access for MCT.

- Use LRIC to set the charge control.

A6.7 These decisions would have an effect on consumers at the retail level. As part of this EIA, it is important to determine whether or not the impact of our decisions falls disproportionately on particular groups of consumers.

## What effect are these decisions likely to have on retail prices overall?

A6.8 Our decision to impose a charge control capping the maximum MTR based on the LRIC standard will reduce MTRs and this may impact on the prices of fixed and mobile calls. In particular, we would expect it to:

- decrease the costs of providing fixed to mobile calls, resulting in a decrease in the price of these calls or of subscription fees giving access to these calls;

- potentially increase retail prices to mobile users overall, depending on the extent of the waterbed effect. However, on the other hand, we would expect competition to be increased which would tend to mitigate this effect and also have a positive effect on other factors such as innovation and service quality;

- potentially result in price increases focused on those consumers that are net receivers of calls. As discussed in Section 6 and Annex 5, these consumers are more likely to be pre-pay consumers, or low use post-pay consumers. Those consumers that are net makers of calls (which may be higher-end post-pay customers) may experience price decreases.

A6.9 Our decision to charge control all MCPs, not just the four largest ones, also has implications for retail prices set by smaller MCPs. In Section 5 we explained how, with no charge control imposed, some smaller MCPs have set MTRs that are higher than the benchmark rate, and some larger MCPs have responded by excluding calls to these numbers from their retail bundles. This may lead to consumer harm through bill shock or from consumers avoiding calling smaller MCPs, as well as an uneven playing field which may distort competition as these smaller MCPs may subsidise their retail businesses with higher termination revenue (which may ultimately affect consumers). As discussed in Section 5 we believe that a charge control would be more effective than a condition on fair and reasonable charges in reducing the level of MTRs that smaller MCPs charge.

## Use of Mobile Phones amongst Equality Groups

A6.10 Table A6.1 below provides information about the mobile phone use of the wider UK population and in the equality groups for which we have data, namely older consumers (aged 65 or over), disabled consumers, minority and ethnic groups

(MEG) and females. We do not have data on the use of mobile phones by pregnant women or those on maternity leave so have instead relied on data for the female population more generally. We also do not have data on the use of mobile phones by those consumers whose gender has been reassigned or according to religion/belief or sexual orientation. However, we have no reason to believe that these equality groups are likely to be differentially affected by our decisions.

A6.11 Table A6.1 shows take-up rates of mobile phones, and the proportion of these that are post-pay and pre-pay. The table also shows the proportion of each group with a fixed-line, including those that also have a mobile, as well as those that are fixed only.

A6.12 The data shows older people and disabled people are less likely than average to own a mobile phone, in particular a post-pay phone. On the other hand they are more likely to own a pre-pay phone, use a fixed line or be fixed-only. Those in minority and ethnic groups are slightly less likely to own a fixed line or be fixed only. Women show very little difference from the wider population.

**Table A6.1: Proportion of equality groups falling within different customer groups**

| | UK | Aged 65+ | Disab. | MEG | Female |
|---|---|---|---|---|---|
| **Use a mobile** | 93% | 73% | 82% | 94% | 93% |
| **Post-pay** | 65% | 27% | 46% | 66% | 66% |
| **Pre-pay** | 34% | 72% | 53% | 34% | 34% |
| **Fixed** (household) | 84% | 94% | 86% | 80% | 84% |
| **Fixed-only** (household) | 5% | 19% | 13% | 2% | 5% |

*Source: Ofcom Technology Tracker, Q2 2014*

## Assessment

A6.13 We consider that, based on the evidence outlined above, it is difficult to draw any firm conclusions as to the likely impact on older people or disabled groups of our decision to impose a charge control on MTRs capped at LRIC on older people and disabled groups. These consumers appear to be more likely to own a fixed line, and so would be likely to experience lower fixed to mobile call prices (although as set out in Annex 5 the lower MTRs may not be reflected in full in the price of these calls). On the other hand, these equality groups appear to be more likely to use pre-pay mobiles, and prices to these consumers could, in theory, be higher under LRIC based MTRs. However, as discussed in Annex 5, it is not likely that the effect would be very significant.

A6.14 Minority and ethnic groups might be slightly less likely to benefit from lower fixed to mobile calls as only 80% subscribe to fixed voice compared to 84% of the UK population (household).

A6.15 It is possible that some equality groups may also be affected by our decision to impose a charge control on smaller MCPs as well as larger MCPs. This is because a number of smaller MCPs make the focus of their business proposition low-priced international calls to certain countries and target specific ethnic communities in the

UK. Others focus on pre-pay, which older and disabled people appear to be more likely to use.

A6.16 Therefore, any relevant equality groups subscribing to mobile services with these smaller MCPs may face higher retail prices from these MCPs as a result of these MCPs being unable to subsidise their retail business through higher MTRs than the benchmark MTR (or at least not to the same extent as today).

A6.17 However, we consider that customers potentially facing higher retail prices on their existing mobile subscriptions as a consequence of our decision would be able to choose alternative services from several providers offering similar services at similar prices. There are, for example, other MCPs, including the four largest ones, who offer pre-pay and international calls as bundles or add-ons on top of existing pre-pay and post-pay contracts.[144] In addition international calling card providers compete to provide international calls. We therefore believe that any relevant equality groups would not be unduly affected by our decision to extend the charge control to smaller MCPs.

A6.18 In any case, even if customers of smaller MCPs belonging to particular equality groups were to face price increases and could not obtain an equivalent deal from an alternative provider, we still consider that it would be appropriate to impose a charge control on smaller MCPs for the reasons set out in Section 5. In particular, we believe that a charge control would be more effective than a fair and reasonable condition in reducing the level of MTRs that smaller MCPs charge. As discussed above, where smaller MCPs charge MTRs above the benchmark MTR and their efficiently incurred costs, this may result in consumer harm. This would affect all consumers, including many consumers in equality groups and therefore, overall, we consider that consumers will benefit from our decision on the charge control, including those in equality groups.

A6.19 We also consider that reducing MTRs to LRIC would tend to encourage competition. This would be of benefit to all consumers, including those of equality groups that own a mobile phone, as it would tend to lower prices across the board, as well as increase choice and innovation.

A6.20 From the data in Table A6.1, women would not seem to be affected differently from the rest of the population. This could also be the case for pregnant women or those on maternity leave, although there could be some variation within this group.

## Conclusion

A6.21 Considering the available evidence, we do not believe that our decisions would have a material negative impact on the relevant equality groups.

[144] For example Telefonica's £5 monthly add-on for 60 minutes to Pakistan or £10 for 3000 minutes to India for both pre-pay and post-pay customers.