TELEFÓNICA O2 UK LIMITED'S RESPONSE TO OFCOM'S CONSULTATION: WHOLESALE MOBILE VOICE CALL TERMINATION, MARKET REVIEW

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A. Executive summary

1. Telefónica O2 UK Limited ("O2") is grateful for the opportunity to respond to Ofcom's review of wholesale mobile voice call termination.

2. O2 disagrees strongly with Ofcom's proposal to impose charge controls based on the pure long run incremental cost ("LRIC") of mobile call termination. In our view, it is based on Ofcom's misunderstanding of the relevant law, and the application of unsound economics. Pure LRIC based charge controls would have a profound, detrimental and irreversible impact on mobile consumers, particularly low usage customers, and Ofcom's failure properly to consider this is irresponsible. Any attempt to impose pure LRIC based charge controls on the evidence presented would, we believe, be in breach of Ofcom's statutory duties.

3. Nevertheless, this consultation document is not completely without merit. O2 is pleased that Ofcom now agrees that it should not reduce mobile termination rates *"as far and as fast as possible"* in order to engineer particular outcomes in retail markets, as it had suggested last summer. That approach would have been unlawful and acted against consumers' broader interests. Ofcom also acknowledges that there are good reasons to allocate some common and fixed costs to mobile termination rates – supporting a LRIC+ rather than pure LRIC approach to setting charge controls - and that there is no evidence of significant call externalities that would justify setting charges below these costs.

4. However, these welcome conclusions serve only to make Ofcom's ultimate proposal to adopt pure LRIC, despite the evidence, even more contrived.

Ofcom wrong in law

5. As we explain in this response, Ofcom's assertion that it ought to follow the European Commission's Recommendation to adopt pure LRIC unless there are good reasons not to, is simply wrong in law. In performing its duties Ofcom is obliged to have proper regard to the totality of its statutory duties under the Framework Directive, the Access Directive and the Communications Act 2003 and not to unduly narrow its focus. So Ofcom must, for example, be consistent in its regulatory interventions.

6. Of most concern to O2 is the way in which Ofcom has gone about making its proposals. When Ofcom wishes to change how it regulates, as it seeks to do here, it needs to compile cogent evidence to show that developments in the market place necessitate changes in regulation. That is what is meant by the statutory requirement for regulatory *consistency*.

7. In this case, Ofcom (and Oftel before it) and the Competition Commission have *always* set charge controls based on LRIC+ (or analogous) principles. Indeed, as recently as September 2009, Ofcom set a charge control for call termination on BT's network in this way, notwithstanding

that the European Commission had adopted its Recommendation and reminded Ofcom of that fact in an Article 7 letter.

8. Barely six months later, Ofcom suddenly proposes to switch horses, adopting pure LRIC for mobile and force rates down to 0.5ppm, less than 30% of the 1.7ppm that would be set under a LRIC+ approach. Yet Ofcom has offered no evidence of developments in the mobile sector or economic theory that justify its new policy.

Assertions rather than evidence

9. In this consultation, Ofcom has offered up a series of assumptions about mobile customers' preferences in order to justify its pure LRIC proposal. According to Ofcom, mobile customers are not sensitive to the cost of mobile ownership, but they are sensitive to the cost of making calls. Therefore, if mobile termination rates fell, mobile communication providers would look to make up the shortfall by increasing (or, in the case of pre-pay, introducing) fixed fees, like subscription charges, and reduce the cost of making calls, to stimulate usage. In this way, consumers would be better off – they would pay more for subscription, but they would use their mobiles to make more calls. Purchasers of wholesale call termination services would pay mobile operators less. Thus, according to Ofcom, we would have a win-win situation.

10. O2 objects to Ofcom's reasoning on a number of grounds.

11. First, the evidence that is presented in support of Ofcom's assertions, which are fundamental to supporting its case, is circumstantial. In order to deviate from longstanding regulatory norms, Ofcom must rely on solid and rigorously gathered evidence of change in the UK market, rather than mere assertion. With a base of over 11.5 million active pre-pay customers, O2 has some experience of customer behaviour. In this response, we provide evidence that many customers are sensitive to the cost of owning mobiles and would stop using them if O2 introduced fixed fees. Of those that remain, we provide evidence that many would not make additional calls, even if prices did fall. This evidence contradicts Ofcom's assumptions. Ofcom cannot, therefore, argue that a pure LRIC based charge control is more efficient than a LRIC+ based one.

12. Secondly, if Ofcom's assumptions about consumers' preferences were true, mobile operators would want to agree low termination rates amongst themselves, because it would be more profitable to force customers to pay larger subscription fees and set lower call charges. There would be no need for the regulation of termination rates at all. However, since Ofcom is arguing that there *is* a need for regulation, there is clearly an inconsistency. Ofcom cannot have its cake (in regard to a finding of SMP) and eat it (when it comes to remedies).

Mobile calls are not the staple diet of consumers

13. Ofcom appears to be suggesting that, under its proposal, mobile customers would have to pay more, but, in response, they would make more use of their mobiles. Ofcom says that mobile ownership wouldn't fall that much and more calls would be made. These assertions underpin Ofcom's case on welfare benefits.

14. However, that proposition is counter-intuitive. When prices go up, demand falls – except in very exceptional circumstances. There is a class of goods - "Giffen goods" – where demand goes up when prices rise. The conditions are rare. Consumers reliant on a Giffen good spend nearly all their income on it and cannot afford to buy many better quality substitutes. If the price of this cheap staple rises, they can no longer afford to purchase any substitute good at all, and so must consume more of the staple instead.

15. O2 believes that it is simply preposterous to suggest, as Ofcom appears to, that mobile is a Giffen good.

What this means for consumers

16. As we have set out above, Ofcom actually expects mobile operators to introduce fixed fees for their pre-pay customers; this is what Ofcom *wants* to achieve with its proposals, because, Ofcom says, it is more "efficient". **Ofcom wants to make lower income mobile pre-pay consumers pay more.**

17. Further, Ofcom is not particularly concerned that customers would stop using their mobiles in the face of these extra charges – it assumes that customers would, in the main, simply bear the extra cost. Our evidence suggests otherwise. We find Ofcom's ambivalence to such a negative impact on poorer households to be a shocking position for a regulator to adopt, especially given Ofcom's duty to have regard to the needs of low income consumers.

18. The prospect of increased charges and customers deciding to dispense with their mobiles is particularly worrying for the large and increasing number of mobile only households (ie those with no fixed phones).

19. As to Ofcom's assertion that fixed customers are bound to benefit from lower mobile termination rates, the evidence is, once again, weak. As we show in this response, over the last few years both BT and Virgin have *increased* their retail charges for calls to mobiles, even though termination rates have *fallen*. BT's average margin for a residential call to a mobile phone is now more than nine pence per minute, and rising. So Ofcom cannot assume that a reduction in mobile termination rates would lead to lower calls to mobiles prices.

20. Ofcom argues that households with only fixed phones and no mobiles are bound to be better off, possibly through lower subscription charges. But the number of fixed only households is small and falling and the majority are set to be on BT's social tariff, BT Basic, which is subject to Ofcom approved *increases* in subscription charges.

21. The pre-pay pricing model has delivered universal access to mobile and we are shocked that Ofcom is ambivalent to its demise. This comes at a time when policymakers are seeking to increase availability of mobile data to all – there is a clear inconsistency of approach here.

22. When regulators act inconsistently and unpredictably on the basis of assertion rather than evidence, it must have a chilling effect on investment – at a time when the industry is striving to boost capacity in their networks to meet the demands of the future consumer.

A proposal to address the absence of a remedy if Ofcom is proved to have erred

23. Ofcom has gone on record to state that a pure LRIC based charge control following the Recommendation would be vulnerable to legal challenge and that such a legal challenge would have a good chance of success. Given the deficiencies in Ofcom's analysis, O2 can only agree with this statement.

24. It is now clear, however, following the Court of Appeal's recent judgment on the "retrospectivity" issue following the appeal of Ofcom's 2007-11 price controls, that a successful appeal by O2 or other operators to the Tribunal and Competition Commission would result in the pure LRIC-based glide path applying for potentially the first two years of the price control. This is because Ofcom does not have the power to amend the price controls for elapsed periods even when it has subsequently been found to have committed an error in its assessment.

25. Moreover, given the imbalance in the contractual relationship between the mobile networks and BT, there is no guarantee that the LRIC+ glide path could be reinstated following a successful appeal for the unelapsed portion of the price control. It will be in BT's interests to take advantage of this ratchet effect and to frustrate any upward adjustment in termination rates.

26. Absent a grant of interim relief from the Tribunal, which cannot be discounted if the analysis and outcome of the consultation are carried over into Ofcom's final decision, O2 will be left without any meaningful remedy following a successful appeal.

27. Ofcom should not assume that a substandard decision to adopt pure LRIC is more likely to deliver lower prices than a robust decision to maintain a LRIC+ approach going forward.

Conclusion

28. Ofcom's approach in this consultation is wrong in law.

29. Its assumptions about mobile customers lead to contradictory and perverse conclusions and are not supported by the available evidence.

30. Its insistence that pre-pay customers would benefit from the introduction of fixed charges is also wrong. Pre-pay customers would be worse off and, if history tells us anything, fixed consumers would not see prices fall. The evidence suggests that it is only BT's margins that would improve under Ofcom's proposals.

31. Ofcom needs to go back to the drawing board and come up with proposals for mobile termination that are capable of withstanding scrutiny. The economic argument put forward by Ofcom in support of pure LRIC simply fails to get past first base. It is unclear to us what motivates a regulator charged with protecting the interests of low income consumers to put forward proposals it accepts either disenfanchise them or make them pay more.

32. We set out our views in more detail in the remainder of this response. We have answered some of the specific questions raised by Ofcom in the Annex.

B. Ofcom's obligations under the European regulatory framework

33. The Consultation sets out Ofcom's proposal to use pure LRIC as the relevant cost accounting methodology to set the latest round of price controls. In doing so, Ofcom proposes to depart from the LRIC+ model, which has been used in successive price controls (both in the UK and in other jurisdictions in the EU) to determine the level of regulated prices. Ofcom has taken this view on the basis of an interpretation of its obligations under the European Commission's Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates (the "Recommendation").

34. In particular, having undertaken an analysis of, inter alia, allocative efficiency and distributional impacts, Ofcom has currently concluded that there are no strong arguments in favour of pure LRIC vs. LRIC+ and vice versa. However, Ofcom has explained its view that it "ought" to adopt the approach in the Recommendation, namely pure LRIC, unless there are substantive reasons for it not to do so.[1]

35. O2 disagrees with this approach, both as a matter of law and as a matter of economics. Before setting out in detail our response and comments on the substantive issues raised by Ofcom in the consultation, O2 will explain the following:

- When undertaking market reviews and when imposing SMP conditions, Ofcom is required to have regard to the totality of its legal duties. Those duties, which are derived from the European regulatory framework and the Communications Act 2003, oblige Ofcom to undertake a proper balanced analysis of the alternative means of setting the price controls taking into account the factors prescribed in the Directives and the 2003 Act.
- Ofcom's decision, taken in the light of the prevailing factual and economic circumstances must be capable of withstanding profound and rigorous scrutiny by the Competition Appeal Tribunal.
- In making the preliminary decision to opt for pure LRIC, Ofcom has placed undue and excessive weight on the terms of the Recommendation in lieu of the robust analysis required.
- The Recommendation is only a recommendation and expressly has no binding force; nor is there rightly any presumption that the Recommendation should be followed in the presence of compelling reasons to the contrary.
- Ofcom has itself recognised the deficiencies in the approach advocated by the Recommendation and, given the nature of those criticisms, it is all the more surprising in the light of the proposed decision that Ofcom has not sought to present a robust case for moving away from LRIC+ based charge controls in favour of pure LRIC.[2] In particular, the consultation contains no explanation of how Ofcom considers its criticisms have been addressed. Nor has Ofcom addressed the further criticisms aired by O2 in its response to the preliminary consultation.[3]

[1] At paragraph 1.10 of the Consultation

[2] See Technical Annex to BERR-Ofcom comments on the draft Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU: http://www.ofcom.org.uk/telecoms/ioi/eutermination/annex.pdf

[3] For example, the unfair cross subsidy of call originators, the consequential increase in prices of other mobile services, the fact that regulation of MTRs using pure LRIC would force charges below competitive levels, which is unsustainable, and therefore inconsistent with the section 88 of the Communications Act

- Ofcom has a duty to be consistent in its decision making unless there are compelling evidence-based reasons for adopting a change in approach. LRIC+ (or analogous) based charge controls have represented regulatory best practice in the UK in both the fixed and mobile markets for over fifteen years. Ofcom's statutory obligations properly applied require the maintenance of LRIC+ as the appropriate calculation methodology in the absence of compelling substantive economic and factual changes in the period since the last market review. If Ofcom is seeking to justify a material change in approach it needs to present such evidence. The consultation does not put forward any such compelling reasons to justify a departure from the status quo.

Ofcom must have regard to the totality of its legal obligations

36. Ofcom's primary regard when carrying out its regulatory tasks, including the present market review, must be to its obligations under the European regulatory framework. In the present context the relevant provisions are to be found in the Framework and Access Directives. The most pertinent obligations are set out below:

> **Article 8 Framework Directive** specifies the policy objectives and regulatory principles that national regulatory authorities must aim to achieve when carrying out their tasks. These objectives include the promotion of competition in the provision of electronic communications networks and services by, inter alia, *"ensuring that there is no distortion or restriction of competition"*[4] and *"encouraging efficient investment in infrastructure and promoting innovation"*[5].
>
> **Article 8 Access Directive** deals with the imposition of SMP conditions including price controls. Article 8(4) provides that SMP conditions imposed following a market review *"shall be based on the nature of the problem identified, proportionate and justified in light of the objectives laid down in Article 8 [Framework Directive]"*.
>
> **Article 13 Access Directive** deals specifically with the imposition of price controls and the obligations on Ofcom when doing so. Article 13(1) obliges Ofcom to *"take into account the investment made by the operator and allow him a reasonable rate of return on capital employed, taking into account the risks involved*". Article 13(2) states that Ofcom *"shall ensure that any cost recovery mechanism or pricing methodology that is mandated serves to promote efficiency and sustainable competition and maximise consumer benefits"*.

37. The policy objectives and regulatory principles found in Article 8 of the Framework Directive are at the very core of a national regulatory authority's duties when undertaking market reviews. Indeed, Ofcom is obliged, by virtue of Article 7 of the Framework Directive to take utmost account of its obligations to promote the Article 8 objectives. These obligations are transposed into domestic law in the relevant provisions of the Communications Act 2003. In particular:

> **Section 3** sets out the factors to which Ofcom must have regard when undertaking its principal duty of furthering the interests of consumers. These factors include the

[4] Article 8(2)(b) Framework Directive
[5] Article 8(2)(c) Framework Directive

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desirability of (i) promoting competition, (ii) encouraging investment and innovation in relevant markets, and (iii) encouraging the development of high speed data transfer services. Ofcom is also obliged to have regard to transparency, accountability, proportionality and consistency in its regulatory activities.

Section 4 sets out Ofcom's Community obligations, which expressly give effect to the requirements of Article 8 of the Framework Directive.

Section 47 sets out the test for setting and/or modifying SMP conditions. In order to be lawful, the condition or modification must be objectively justifiable, non-discriminatory, proportionate and transparent.

Section 88 sets out the conditions under which Ofcom may impose price controls on operators. That clause requires Ofcom to be satisfied that the setting of the price control is appropriate for the purposes of (i) promoting efficiency, (ii) promoting sustainable competition, and (iii) conferring the greatest possible benefits on end users of public electronic communications services. Section 88(2) requires that Ofcom must take account of the extent of the investment in the matters to which the SMP condition relates.

38. When conducting market reviews Ofcom is obliged, by virtue of the legal provisions cited above, to investigate thoroughly, examine positively and, if necessary, regulate the relevant market(s) in a manner that complies with the various criteria set out above.

Ofcom's decision must be capable of withstanding profound and rigorous scrutiny

39. Not only must Ofcom present its case fully in adopting any decision (that is to say the burden of proof lies with Ofcom), given the seriousness of the obligations imposed on the mobile operators, the requirement on Ofcom to make out its case to the requisite standard is a particularly onerous one.

40. In a succession of cases before the Competition Appeal Tribunal it has been held that Ofcom's analysis must be capable of withstanding *"profound and rigorous scrutiny"* and that to do this Ofcom must equip itself with a *"sufficiently cogent and accurate set of inputs"* on which to base its assessment.[6]

41. Ofcom recognised this fact in its response to the Commission's draft Recommendation:

> *"It is important that any such reductions [in termination rates] are achieved on the basis of evidence-based regulation, including proper assessment of the impact of any change in methodology, both on market players and consumers."*
>
> *"Unfortunately, the current draft Recommendation is, in our view, not consistent with evidence-based regulatory best practice and should be adjusted before it is adopted."*[7]

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[6] *Hutchison 3G UK Ltd v. Ofcom* [2008] CAT 11, *T-Mobile (UK) Ltd & Otrs v. Ofcom* [2008] CAT 12, *Vodafone Ltd v. Ofcom* [2008] CAT 22

[7] Ofcom gave as its principal reasons for this statement – (a) the absence of an assessment of differential impacts on different classes of consumer; (b) the Recommendation represents a major departure from

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"The fact that the Commission has recommended a particular approach does not of itself provide sufficient justification for adopting it, especially in the absence of adequate supporting analysis of rational and impact. Unless these deficiencies are addressed, any account taken of the Recommendation could be vulnerable to legal challenge, not least because of the departures from previously established best practice. On the basis of the current draft Recommendation, we think that such a challenge would have a good chance of success…"

"It is established regulatory best practice that, in the presence of fixed and common costs and recognising the need for operators to break-even and recover these costs, there are economic efficiency reasons for allowing regulated charges to contribute to the recovery of these costs."

42. Ofcom has presented no explanation of why it considers these profound difficulties with the draft Recommendation no longer apply. Ofcom's duties under the Directives and 2003 Act require it to disregard the Recommendation unless Ofcom can now adequately rebut its own criticisms.

43. In contrast, on the basis of its purported understanding of its obligations under the Recommendation, Ofcom has turned the burden of proof on its head. Ofcom itself has found no strong reasons to move to pure LRIC (a shift from the pre-existing regulatory situation) but has opted to do so nevertheless. Ofcom has illegitimately placed the burden of proof on the mobile operators to disprove, among other things, its analysis of distributional effects, rather than shouldering the burden of proof itself to make the case for change. It is doubtful in the extreme whether this approach meets the rigorous standards of analysis required by the Tribunal.

Ofcom has placed undue emphasis on the Commission's Recommendation

44. To the extent that it represents one approach to the Article 8 objectives in the Framework Directive, the Recommendation is clearly a relevant consideration in Ofcom's analysis. It is equally clear, however, that in contrast to Ofcom's objectives and duties in the Framework and Access Directives, the Recommendation is not binding. The terms of the Recommendation are clearly subsidiary to the obligations in the Directives and cannot override Ofcom's primary duties.

45. It follows that Ofcom cannot forgo its obligation to undertake a full assessment of the criteria specified in the Framework and Access Directives when adopting a decision imposing price controls. The objectives in the Framework Directive must remain paramount in Ofcom's mind and cannot become subservient to any other approach. This must apply all the more so in the present case given Ofcom's own intense criticisms of the approach advocated in the Recommendation.

46. In previous regulatory decisions involving consideration of the Recommendation, Ofcom has recognised this fact. For instance, in the *Review of the fixed narrowband services wholesale markets* (Ofcom, 15 September 2009), Ofcom considered the extent to which it was obliged to

established best practice without adequate justification for the departure; (c) the draft Recommendation did not identify why termination should be treated any differently from other price regulated services; and (d) the draft Recommendation was inconsistent with other regulatory obligations.

take "utmost account" of the Recommendation in the context of fixed call termination rates, concluding that:

> *"Similar phrases such as "having regard to" have been considered and interpreted as meaning that the recommendation or guidance concerned is not required to be followed, nor is there a presumption that it should be followed, but where an authority seeks to depart from the recommendation or guidance it is required to give its reason for doing so and those reasons must be sufficient to show that proper consideration has been given to the recommendation or guidance and that the reasons for not following it have demonstrated that the decision reached was sound."* (Emphasis added)

47. Moreover, in departing from the pure LRIC methodology advocated by the Recommendation in the fixed voice call termination market in favour of a methodology which proxies LRIC+, Ofcom acknowledged the primacy of its obligations under the Directives over the approach in the Recommendation:

> *"We have paid particular attention to our duties under Section 4 of the Act which, in turn reflect the objectives set down by Article 8 of the Framework Directive. The Recommendation is issued under Article 19(1) of that Directive which states that Recommendations made under that Article will be made in order to further the achievement of the objectives set out is Article 8. We consider that, for the reasons set out above, a four year control is the best for creating dynamic efficiency incentives that will, in turn, promote competition. In particular the four year model has been designed in order to encourage efficient investment, by both BT … and other CPs who benefit from the certainty of the control. We therefore consider that a four year control achieves the policy objectives in Article 8 and therefore consistent with our duties under the Act. In this regard, in addition to taking utmost account of the Recommendation, we have also taken utmost account of those objectives as required under Article 7(1) of the Framework Directive* [i.e the Article 8 objectives], *specifically as to their application in specific national circumstances.* (emphasis added)

48. Notwithstanding the potentially serious implications of a regulatory shift from LRIC+ to pure LRIC-based price controls and the longstanding use of LRIC+ in the UK, the consultation has not seriously grappled with the many reasons why Ofcom should depart from the Recommendation in this case. This stands in stark contrast to Ofcom's analysis in the fixed voice call termination context.

49. Ofcom's application of the Recommendation in such a manner has unduly limited its discretion as a national regulator and improperly precluded a full assessment of the most appropriate cost accounting methodology in this case. The factors to which Ofcom points at paragraph 7.101 of the Consultation do not support such an approach and nor does Ofcom's decisional practice in the context of fixed termination.

Ofcom is obliged to ensure its regulatory interventions are consistent

50. In addition to the points made above, as a matter of regulatory good practice[8] Ofcom is obliged take a consistent approach in its decision making unless there are objective and justifiable reasons for doing otherwise. Indeed, Ofcom has an express statutory obligation to have regard to the consistency of its regulatory activities.[9] Regardless of this statutory duty, however, consistent regulation is universally regarded as beneficial, because it reduces uncertainty and promotes efficient investment.

51. From an investor's perspective, the combination of regulatory parameters influences expected cash flows. These range from expectations of the form of regulation applied (eg, the form of cost-orientation obligation) to specific assumptions inherent in the regulatory cost model. Revisions to the allowed returns midway through the lifetime of existing investments would affect the ex-ante profile of the investment and may not allow investors to expect to recover the original investment and earn the required return. This principle underlies any price regulation which has an objective of ensuring cost recovery.

52. This is Ofcom's third full review of markets for wholesale mobile voice call termination under the current regulatory framework.[10] The previous two market reviews culminated in charge controls based on the LRIC+ methodology[11]. The 2007-2011 charge control was appealed by both H3G and BT, both of which have been lobbying for low termination rates, but not on the basis of the relevant cost methodology. Indeed, BT has recently confirmed its position in response to the European Commission's consultation on fixed and mobile termination:

> *"BT agrees with this recommendation but calls on the Commission and NRAs to recognise that (i) reducing the proportion of common costs recovered through termination rates means that other prices, including some regulated prices will have to rise (ii) that administrative and other fixed costs have to be incurred to support wholesale activities, such as the provision of call termination."*[12]

53. It is clear that there has been considerable consensus stretching back more than fifteen years over the use of LRIC+ to set charge controls for wholesale mobile voice call termination services.

54. In order to ensure that the obligation of consistency is meaningful, Ofcom should be required to apply the same analytical approach to its various market reviews where there are comparable factual and economic circumstances. This means that the methodological approach employed in market review should not depend on *when* it is conducted if the underlying factual and economic circumstances have not materially changed in the intervening period.

55. This also means that the same set of evidence should result in the same conclusions. If a different conclusion is reached in consecutive reviews of the same market, either in relation to a

[8] See, for example Ofcom's regulatory principles – *"Ofcom will strive to ensure its interventions will be evidence based, proportionate, consistent, accountable and transparent both in deliberation and outcome."*
[9] Section 3(3)(a) Communications Act 2003
[10] Or the fourth, if the 2005 "rollover" consultation is included.
[11] Note also that all mobile charge controls under the previous licensing regime were also premised on the LRIC+ methodology.
[12] http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/bt.pdf

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finding of market definition, SMP or in relation to the remedies imposed, it is incumbent on Ofcom to clearly explain what differences in evidence have resulted in the different conclusions.

56. Ofcom has undertaken this approach in previous decisions; in circumstances where it proposes a market definition, SMP or remedy finding that differs from a previous market review, Ofcom has explained, in very clear terms, the factual and/or economic circumstances that have led it to make those new findings or to reach those new decisions.[13] On each occasion, and in all other market reviews of which O2 is aware, Ofcom has been at pains to justify different conclusions on the basis of changes in the market between reviews.

57. In the context of the current consultation, Ofcom proposes to move away from the well regarded and long established approach to setting charge controls, LRIC+, to a novel approach in the UK market, pure LRIC. It cannot be said that this is just a minor, technical change to Ofcom's approach. As Ofcom notes, the resulting charge control in 2014/15 under pure LRIC would be less than 30% of that under LRIC+. Indeed, in costs and revenues terms, a charge control based on pure LRIC is closer to a situation where wholesale voice call termination is provided for free (e.g., Bill & Keep), than it is to a charge control based on LRIC+.

58. In the current context it is therefore incumbent on Ofcom to adequately explain and justify the *evidence* that has led it to change its approach. As set out above, this evidence must be capable of withstanding the scrutiny of the Tribunal. However, in the consultation, Ofcom does not offer any such explanation at all. The consultation contains no reference to any changes in circumstances, whether economic or factual, on which Ofcom relies as justification for the proposed change in approach. Instead, Ofcom simply suggests that, under a series of assumptions about the relative demand elasticities for various retail and wholesale mobile services, a pure LRIC approach to setting charge controls may or may not result in efficiency gains, compared to a LRIC+ regime. Ofcom has not conducted, or commissioned, any significant new analysis, but relies on qualitative reasoning, which, even according to Ofcom, is subject to uncertainty. This presents a notable deviation from Ofcom's approach in other economically significant regulatory determinations, a deviation that remains unexplained.

The prospect of litigation must not cloud Ofcom's decision making

59. In the consultation Ofcom highlights that the setting of MTRs has been the subject of litigation following each of its previous charge controls. In both cases, Ofcom built well evidenced cases which it defended in the Tribunal/Competition Commission. The prospect of litigation and of the Tribunal/CC reaching their conclusions on the merits of the case, cannot absolve Ofcom from undertaking its analysis to the appropriate standard.

60. The evidence, consistency and Ofcom's own economic assessment support LRIC+. Ofcom cannot simply hand-off a difficult political decision to the Tribunal, it must make a robust evidence based case for the most appropriate methodology.

[13] For example, in its March 2009 review of the fixed narrowband services wholesale markets, Ofcom found that increased amount of interconnection between communication providers meant that a new, wider market definition for conveyance and transit was appropriate, and that BT did not have SMP in that market. Subsequently, in September 2009, on the basis of fresh evidence, Ofcom changed its mind and decided that there was a distinct market for single transit, and that BT did have SMP in this market.

C. Ofcom's analysis of Pure LRIC and LRIC+

61. Ofcom sets out its analysis of the relative merits of LRIC+ and pure LRIC in Annex 12 of the consultation document. Ofcom considers a number of criteria: economic efficiency; competitive impacts; and commercial and regulatory consequences.

62. Ofcom's conclusions are summarised below:

Criterion	Aspect	Conclusion	Reference
Economic efficiency	Allocative efficiency	"the critical question is whether it is more efficient to recover common costs either from a linear mark-up on MTRs or from retail services where mobile operators have more flexibility. The historical evidence points to the mobile operators' ability to engage in extensive price discrimination at the retail level. Although this is unlikely to be perfect, it suggests that pure LRIC may be more efficient than recovery from a mark-up on linear MTRs."	A12.85
	Dynamic efficiency	"we do not believe there is much difference between the two cost standards. Although in principle there is a higher risk of setting MTRs too low under pure LRIC this is likely to be countered by the presence of a waterbed effect (even though this may be incomplete)."	A12.86
Competitive impacts	Competition between mobile operators	"We believe that a switch to pure LRIC for MTRs would ease, any potential concerns about competition among MCPs. However, we have not concluded that this is currently necessarily a substantial concern. In any case any concern would be reduced further as MTRs decline under either of the two cost standards examined here."	A12.99
	Competition between fixed and mobile operators	"Concerns have also been expressed about the impact that high MTRs may have on competition between fixed and mobile networks as they act as a transfer of resources from the fixed to the mobile sector. From a short run point of view the fact that we have concluded that at the retail level the two services are in separate relevant markets limits somewhat such potential concerns. Nonetheless, there is	A12.100

	already strong competition for at least some call types (e.g., calls to mobiles) for at least some consumer groups. The adoption of pure LRIC for MTRs would therefore reduce such concerns, even if the same method was later applied also to setting FTRs.”	
Commercial and regulatory consequences	“Although we are conscious of the regulatory burden of imposing cost-based charge controls in general, we do not believe that in this particular case there is any significant difference on this criterion between LRIC + and pure LRIC.”	A12.112

Relevant principles

63. The four criteria that Ofcom considers are not, of themselves, objectionable, to the extent that they simply reflect Ofcom’s statutory duties. However, Ofcom needs to be mindful of the need to satisfy *all* of its relevant statutory duties when carrying out its functions, including its general duties, duties relating to the setting of conditions generally, and SMP conditions, in particular.

64. The following of Ofcom’s duties are relevant in the context of the present review:

- to have regard (in all cases) to principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted[14];
- To have regard to the desirability of promoting competition in relevant markets[15];
- To have regard to the desirability of encouraging investment and innovation in relevant markets[16];
- To have regard to the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom[17];
- To have regard to the needs of persons with disabilities, of the elderly and those on low incomes[18];
- To take account of the desirability of carrying out functions in a manner which, so far as practicable, does not favour one form of electronic communications network electronic communication service or associated facility[19];
- To encourage, as appropriate, the provision of network access for the purpose of efficiency and sustainable competition in the markets for electronic communications networks, electronic communications services and associated facilities.[20]

[14] Section 3(3)(a)
[15] Section 3(4)(b)
[16] Section 3(4)(d)
[17] Section 3(4)(e)
[18] Section 3(4)(i)
[19] Section 4(6)(a)
[20] Sections 4(7) and 4(8)(a)

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65. Further, since the present consultation document is concerned with setting charge controls, the legal framework for setting SMP conditions is relevant. In particular, section 47 of the Communications Act sets out the test that must be satisfied before conditions are set or modified. Broadly, they must be objectively justified, not discriminate unduly, proportionate and transparent. O2 also notes the requirements of sections 88 (1) and (2), which give effect to much of Article 13 of the Access Directive. These prevent Ofcom from setting price controls except where they promote efficiency and sustainable competition, and confer the greatest possible benefits on end-users. Ofcom must also take into account the extent of investment in (in this case) the provision of voice call termination services

Allocative efficiency

66. As we note above, Ofcom summarises its conclusion on the issue of allocative efficiency in the following terms[21]:

> *"the critical question is whether it is more efficient to recover common costs either from a linear mark-up on MTRs or from retail services where mobile operators have more flexibility. The historical evidence points to the mobile operators' ability to engage in extensive price discrimination at the retail level. Although this is unlikely to be perfect, it suggests that pure LRIC may be more efficient than recovery from a mark-up on linear MTRs"*

67. As we explain below, we disagree with Ofcom's analysis of allocative efficiency. At its heart is an incorrect assumption about relative price elasticities of demand, which Ofcom has not sought to validate (and is inconsistent) with empirical evidence. Ofcom is right to acknowledge that Ramsey pricing principles support the use of LRIC+ as the basis to set charge controls; our assessment of the evidence shows that there is no reason to depart from this approach.

Ofcom's analysis of allocative efficiency

68. Ofcom begins its analysis by asserting that mobile providers could recover common costs from either mobile termination rates and/or from their own subscribers. Ofcom says that this is a critical difference between termination and other access charges. It goes on to explain that the reason that termination is different *"relates to the impact that access regulation has on the regulated platform."* According to Ofcom, if providers cannot recover common costs in one way access charges, then they may not be able to recover their total costs. This is not necessarily the case in two way access markets, because of the "waterbed affect".

69. Ofcom says that a two sided market is a "related concept" to two-way access. In two way markets, overall output depends not only on the overall price charged to the two sides, but also on *relative* prices. In the context of mobile termination, Ofcom says, overall call traffic not only depends on the overall level of termination rates and retail prices, but also on their *relative* levels.

70. Ofcom notes that the implications of Ramsey pricing, that welfare is maximised if common and fixed costs are allocated in inverse proportion to the demand price elasticity of

[21] Paragraph A12.85 refers

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demand for the underlying services. It concedes (in paragraph A12.46.3) that, *from an allocative efficiency point of view, Ramsey pricing supports LRIC+, rather than pure LRIC.*

71. Ofcom then goes on to compare LRIC+ and pure LRIC in terms of allocative efficiency. A summary of Ofcom's analysis of this point is set out in paragraph A12.54:

> *"At a simple level, a shift from LRIC+ to pure LRIC could improve allocative efficiency if the demand price elasticity of subscription is relatively low while that for calls relatively high. The shift would lead to lower MTRs and most likely to a retail price structure with lower call charges and higher fixed fees, possibly marginally limiting adoption" (emphasis added)*

72. Ofcom also goes on the say that there is little evidence of significant uninternalised call externalities and that, accordingly, mobile termination rates should not be discounted on this basis.

73. O2 makes the following comments on Ofcom's analysis of the relative merits of LRIC+ and pure LRIC in respect of allocative efficiency.

Circumstances and theory unchanged

74. Ofcom does not appear to cite any evidence or economic theory that was unknown when it carried out its previous reviews of mobile wholesale call termination markets. Those resulted in charge controls based on LRIC+. The "retail price discrimination" point, which Ofcom now suggests is of such significance as to merit a pure LRIC based charge control, did not even merit examination in 2007. Furthermore, the fact of a LRIC+ based charge control was not appealed nor was it subject to criticism from the European Commission under the Article 7 procedure. In O2's view, Ofcom's duty to have regard to principles under which regulatory activities should be consistent means that, in the absence of new evidence, Ofcom is bound to conclude that the goal of allocative efficiency is best served by the maintenance of charge controls based on LRIC+.

Two sided markets

75. It is widely accepted that the prices charged by the two sides of the market and consequent market outcomes are driven by respective demand elasticities and reflect each side's contribution to the other side's surplus – in economic terms, "cross group externalities".[22] Due to the cross-group externalities, the volume depends not only on the sum of prices, but also on the pricing structure. Indeed, even from the private-profit-maximisation perspective, a firm may have incentives to charge below-cost prices on one side of the market if this is offset by additional revenues generated on the other side.

76. In the context of two-way access (whether fixed or mobile termination), the cross-group externalities are manifested through the benefits gained from receiving calls – ie, call externalities. Thus, as recognised by Ofcom on a number of occasions, evidence of material call externalities is a necessary condition for below-cost pricing, or indeed pricing structure that

[22] See, for example, Rochet, J.-C. and Tirole, J. (2001), 'Platform Competition in Two-sided Markets', working paper, November, 26, p. 3.

deviates from Ramsey-like recovery of costs. Hence, the absence of any evidence of un-internalised call externalities significantly undermines the case to introduce a pricing mechanism that does not allow common and fixed cost recovery.

77. Ofcom is inconsistent in stating that a mark-down on cost-based prices is not justified, while at the same time proposing a price scheme that does not enable the recovery of relevant efficiently incurred costs. O2 acknowledges that LRIC+ does not produce Ramsey-like pricing structures. Without reopening the discussion about Ramsey mark-up, it is more proportionate (when compared to pure LRIC) that the regulatory pricing would allow at least some recovery of common costs, even if this reflected technical capacity requirements (through routing factors), rather than economic principles.

Call externalities

78. O2 agrees with Ofcom's conclusions, that there is no evidence of significant uninternalised call externalities, and that mobile termination rates should not be reduced to below cost on this basis; call externalities would be a critical prerequisite for any deviation from cost-based prices.

Ramsey pricing

79. Ofcom is wrong to state, as it does in paragraph A12.41, that O2 had argued that termination is a more inelastic service and, therefore, merited a greater allocation of fixed and common costs. In fact, in response to the preliminary consultation, O2 had observed that, given Ofcom's position on Ramsey pricing, a move to pure LRIC would be tantamount to Ofcom arguing that voice call termination was perfectly elastic and, since there was no evidence in support of this, there was an obvious inconsistency.

80. As we note above, Ofcom now concedes that the principles of Ramsey pricing are best served by a charge control based on LRIC+, rather than pure LRIC. This is clearly the right conclusion in the absence of firm evidence to the contrary about relative price elasticities of demand for the various services provided by mobile communications service providers.

Price discrimination at the retail level

81. Ofcom's position appears to be that the benefits of allocating some common and fixed costs to termination (in accordance with Ramsey pricing principles) needs to be balanced with the potential advantages of recovering all fixed and common costs at the retail level, where mobile communication providers are able to engage in price discrimination. Ofcom's reasoning is confusing in this respect, as the inability to discriminate at the wholesale level results from regulation.

82. However, Ofcom acknowledges that the mere fact that mobile operators are able to price discriminate at the retail level (albeit imperfectly) is not, of itself, sufficient to demonstrate that termination charges based on pure LRIC could be beneficial from an allocative efficiency perspective. In addition, as O2 understands Ofcom's position, demand price elasticity of subscription must be relatively low, while that for calls should be relatively high. If mobile

communication providers respond to a reduction in mobile termination rates by increasing subscription charges and reducing call charges, then overall output could be greater and, in this way, there would be an allocative efficiency gain.

83. Ofcom and stakeholders now appear to accept that mobile consumers are not homogenous[23]. There is good evidence of this in the array of mobile retail price tariffs available. In economic terms, such diverse tariff availability could imply that varying consumer preferences are reflected and the pricing captures the full demand curve. In practice, the variety of tariffs is manifested through the co-existence of flat-rate tariffs and pre-pay deals, which allows consumers to self-select the best balance of subscriptions and call prices.

84. Accordingly, there is likely to be a class of consumers that view subscription as relatively inelastic and are sensitive to call prices, as Ofcom says. However, conversely, there is considerable evidence of a significant number of consumers that are sensitive to the cost of subscription, but not to the price of calls:

1. The empirical evidence available is not conclusive of significant differences between demand elasticities of calls and subscriptions. For example, Ofcom (and Oftel) have previously applied an elasticity estimate of -0.3 for both calls and subscriptions.[24] Furthermore, the more recent estimates referred to in Ofcom's consultation document at paragraph A13.95 seem to point to a higher price elasticity of demand with respect to subscriptions.

2. The very existence and success of pre-pay as a means of payment is good evidence of low elasticity of demand for subscription. For a one-off payment of as little as £15 or £20 for a handset[25], customers can connect to a mobile network without being subject to subscription charges. Should the demand for subscriptions be inelastic for all customer groups, operators would not have introduced (and further retained) such pricing schemes. Mobile communication providers continue to connect millions of new pre-pay customers each year (O2 makes about five million new pre-pay connections per annum) and Ofcom's market data reveal that between them, O2, Orange, T-Mobile and Vodafone had 42.6 million pre-pay connections at the end of 2009[26].

3. A development in the retail pricing of pre-pay since the last market review has been the proliferation of SIM-only deals. These offers enable consumers to subscribe to mobile telephony at no cost, or virtually no cost. O2 has conducted research amongst consumers revealing that [✂]% of new pre-pay connections are SIM only.

   The introduction of SIM only deals is good evidence that many consumers are price sensitive to the cost of subscription. Pre-pay connections with handsets are widely available in supermarkets for as little as £15 - £20. The success of SIM only deals reflects a demand for connections to mobile networks, which consumers value at less than the relatively modest amounts for a new handset. In other words, the proliferation of

[23] See paragraph A12.59
[24] See: http://www.competition-commission.org.uk/rep_pub/reports/2003/fulltext/475c8.pdf
[25] See: http://direct.tesco.com/specials/?Ne=92&Ntt=6076&Ntx=mode+matchall&Nr=99&N=308+1999606&Ntk=P_SEARCH_Buy_List_IDs, for example
[26] See: http://www.ofcom.org.uk/research/cm/tables/q4_2009/q4_2009.pdf

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SIM only deals is a development in the market, in response to consumers' sensitivity to the cost of owning a mobile.

4. Ofcom's Communication Market 2008 report[27] notes the success of what Ofcom refers to as "low-cost (sub-£20)" SIM only deals in the post pay retail sector, noting that in the period leading up to the report, more than a fifth of new post pay connections were sold on a SIM only basis:

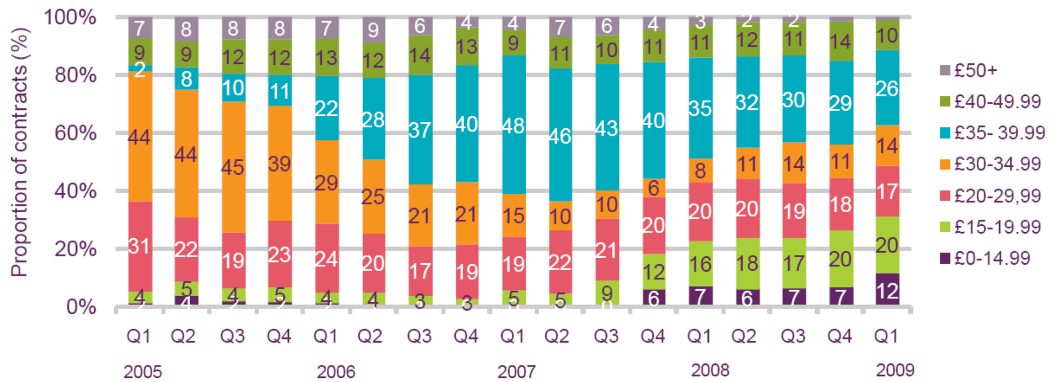
Figure 4.20 SIM-only contracts, as a proportion of all post-pay mobile contracts

Source: GfK Retail and Technology Ltd
Notes: England, Scotland and Wales only (excludes Northern Ireland); based on GfK's coverage of 94% of the market, numbers have been extrapolated to represent the full market; only includes sales through consumer channels, therefore excludes most business connections; excludes contract renewals

In the same report, Ofcom noted that lower price contracts had gained market share:

[27] The Communications Market 2008. see:http://www.ofcom.org.uk/research/cm/cmr09/CMRMain_4.pdf

Figure 4.22 Monthly line rental for new mobile contract connections



Source: GfK Retail and Technology Ltd, based on factual point-of-sale information
Notes: England, Scotland and Wales only (excludes Northern Ireland) based on GfK's coverage of 94% of the market; based on new post-pay connections; excludes contract renewals; only represents sales through consumer channels (i.e. most business connections are excluded)

Both of these phenomena suggest that a large cohort of consumers is, in fact, sensitive to the cost of subscription.

5. Throughout the consultation document, Ofcom assumes that reductions in termination rates will result in an increase in subscription charges[28]. In the context of pre-pay, the way in which this is most likely to manifest itself would, according to Ofcom, be by way of a reduction in handset subsidies and/or the re-introduction of time expired credit. Ofcom considers these scenarios in paragraphs A13.49 – 13.57.

   On the possibility of a reduction in handset subsidies, Ofcom says that consumers would most likely keep existing handsets for longer. However, in the preliminary consultation, Ofcom published some consumer research it had commissioned from Jigsaw Research, about the impacts of various changes to retail prices that might be brought about by a reduction in termination rates, including an increase in pre-pay handset prices of £10. The research did indeed find that consumers would delay purchasing a handset. But it also found that 8% of prepay customers said that they would stop having a mobile if they had to pay an additional £10 for a handset. There is clearly a distributional impact, which we discuss below, but this finding also demonstrates that a significant number of pre-pay mobile customers are very sensitive to the cost of mobile ownership.

   To the extent that mobile customers delay purchasing non-subsidised handsets (or simply fall out of the market altogether), Ofcom suggests that mobile communication providers may seek to introduce a fixed monthly component to pre-pay tariffs. As we explain below, O2 has expended great efforts to stimulate frequent and regular top-ups, by offering “free” services and a reward scheme. [✂]

   O2 is concerned that the re-introduction of time expired credit will have the effect that many of those customers will stop using their mobiles. Again, there is a distributional

[28] See, for instance, paragraph A13.42

angle to this which we address later in this response, but it is also evidence of price sensitivity to subscription charges. Furthermore, insofar as lower handset subsidisation manifests itself through consumers keeping their handsets for longer, this results in lower take-up of new smartphones, which, in turn, has a knock-on effect on service and application development.

85. The evidence suggests that a significant number of mobile customers are very sensitive to the cost of mobile subscription. In Annex 13, Ofcom suggests that mobile subscriptions may fall, but not mobile ownership, to any significant extent. We address the merits of this assumption later on in this response.

86. On sensitivity to call prices, O2 provides the following evidence:

1. Conceptually, the appropriate basis for assessing retail market outcomes would be empirical estimates on the demand elasticities of different types of calls. In the absence of recent robust evidence, Ofcom relies on the estimates put forward in the context of 2003 inquiry, which was also used in the 2007 welfare model. Ofcom's (and Oftel's) assumption was a midpoint -0,3, which is indicative of low elasticity. Ofcom recognises this and states (at paragraph A13.141) that:

   > *"These estimates suggest that demand to make calls from mobiles is relatively inelastic, and so may not be highly responsive to changes in retail call prices. However, these studies either do not specify which types of calls are included in their calculations, or include both on-net and off-net MTM calls (and in some cases, mobile-to-fixed calls as well). Therefore, these estimates do not refer specifically to the subset of calls which we believe will be most affected – i.e. MTM off-net calls."*

   This conclusion does not appear to stand up to closer scrutiny for two main reasons: First, most mobile traffic consists of non-on-net calls;[29] hence, it is not clear why the (low) elasticity estimate for calls would not be similarly representative for off-net calls. Second, the absence of on-net / off-net retail price discrimination suggests that no significant differences in elasticities between the two types of calls are likely to exist. Furthermore, it is not clear why Ofcom notes at paragraph A13.140, but does not account for, the finding of CEG in the first consultation, that MTRs do not have a significant relationship with call volumes.

   Thus, the available empirical evidence points to low price elasticity of calls. Given the customer heterogeneity, this is particularly likely to be the case with certain customer cohorts, as suggested by the qualitative evidence below.

2. At paragraph A13.48, Ofcom reports that research it had commissioned for the preliminary consultation found that 51% of post pay respondents said that they usually used less than their full allocation of bundles minutes. O2 submits that this is evidence of inelastic demand. However, Ofcom speculates that these customers do not use their minutes because their post pay tariff might be better value than the next best alternative

[29] Ofcom (2009) The Communications Market – 4 Telecoms. See: http://www.ofcom.org.uk/research/cm/cmr09/CMRMain_4.pdf

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– a pre-pay tariff. As we note above, however, there is a huge variety of post pay tariffs available on the market, from as little as £5 a month[30], for a small number of inclusive minutes. Accordingly, Ofcom's supposition seems unlikely and we note that it has presented no evidence in support of it.

In any event, to the extent that a change in MTRs implies a rebalancing of tariffs, the necessary condition for even a welfare-*neutral* effect is that calling behaviour is sufficiently constrained under high MTRs that the higher access charges predicted by Ofcom are offset, in welfare terms, by the ability to make many more calls. Indeed, given the principle of decreasing marginal utility, a distinction should be made between call volumes that reflect actual demand, and calls that are originated for the sake of meeting the calling allowance included in the bundle.

3. O2 offers its pre-pay customers a variety of different "free" calls, text and data packages if they top-up each month, typically by an amount of £10 or £15. The allowances are in addition the services customers can use with their balance[31]. O2 also offers a "rewards" scheme for customers who top up. Both schemes are marketed actively, as a means of stimulating regular top-ups.

O2's pre-pay subscriber base is around [✂][32], which includes around [✂] connections that have not been used in three months. Analysis of the base reveals that the "free" packages have had some degree of success; about [✂] customers are on one of the packages, suggesting that the offer is well understood and easy to use.

However, it is also the case that a further [✂]

Further, [✂] customers (or almost [✂]) customers that have used their mobiles in the most recent three months) have not been induced to top up more regularly.

Two observations may be made from this evidence:

First, this market evidence suggests that there are a large number of consumers with very low usage, which would not benefit from higher subscription fees. Rather, for the reasons set out above, this cohort of consumers would be exposed to a risk of having to pay a subscription that does not reflect their demand, or ceasing their mobile usage altogether (see the discussion on distributional implications below).

Second, this is evidence that [✂]

[30] See: http://shop.orange.co.uk/mobile-phones/plans/planDetails.jsp?bbPlanId=&updateBasket=¬bbPlanId=&pagefrom=&id=sku700003
[31] http://shop.o2.co.uk/tariffs/Pay_and_Go
[32] This includes around [✂]customers who have not used their mobile for three months or more, but who are still connected.

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Therefore, it would seem that over [✂] of O2's active prepay base, (or more than [✂] of O2's total pre-pay base) are either perfectly price inelastic, or relatively price inelastic to call charges.

It is not clear what proportion of those customers who have taken advantage of O2's offers are sensitive to call charges; to calculate this, one would need to examine whether, and to what extent, they increased their top ups to benefit from the offers.

4. Ofcom's assumption of highly elastic demand for voice calls is further undermined by strong evidence that for certain call types the majority of customers are insensitive to prices. In particular, O2 has found customers are not responsive to changes in the price of calls to number translation services and other necessary call types. Similarly, the introduction of price caps for retail voice international roaming charges has had no demonstrable effect on consumption. It is evident, therefore, that such services are particularly price inelastic;

5. As we demonstrate in our response to Ofcom's Annex 13, the cost of fixed to mobile calls for consumers has risen significantly since 2007, notwithstanding the reduction in termination rates over that period. Fixed operators, including BT, have elected to increase fixed to mobile call charges instead of other charges such as more competitive (and elastic) services including broadband. This is strong evidence that fixed customers have a low price elasticity of demand for calls to mobiles – an argument already evidenced in the Competition Commission inquiry of 2003, and further reinforced in light of current market data.

87. Ofcom's reliance on the ability to price discriminate in the retail market is absolute. It needs there to be demonstrable pricing freedom at the retail level in order to ensure that the fixed and common costs of call termination are transferred to retail customers. However, at no stage does Ofcom seek to quantify:

(1) Whether there is a minimum number of pricing options required by a service provider in order for a redistribution of unrecovered termination costs to be effective and efficient; or

(2) Whether such an approach is undermined by Ofcom's own regulatory policy and that of the European Commission.

88. With regard to (1), [✂]

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89. With regard to (2), all service providers do not have retail pricing flexibility for international roaming charges, furthermore, the European Commission has suggested that the difference

between roaming and national tariffs should approach zero by 2015.[33] In the case of NTS, Ofcom appears to be preparing to propose some form of retail pricing restrictions, under the guise of national telephone numbering policy.

90. There appears to be a certain amount of "heads I win, tails you lose" regulation going on here. Ofcom is relying on retail pricing flexibility, on the one hand, in order to underpin a move to pure LRIC, whilst on the other hand, regulators are seeking to restrict retail pricing flexibility for the most inelastic of retail products – the very products which, under Ramsey principles, should attract the highest re-allocation of unrecovered termination costs.

Ofcom's assumptions about relative elasticities of demand and competitive constraints on mobile termination rates

91. Without prejudice to the evidence set out above, it seems to O2 that if Ofcom's assumptions (that price elasticity of demand for subscription is low, whilst that for calls is high, such that lower termination rates would increase output) are correct, there would be a competitive constraint on mobile termination rates, such that regulation would be redundant.

92. This is because mobile communication providers would want to enter into a series of bilateral agreements with each other for lower (or even zero) termination rates, even if they were required to provide termination services to fixed providers on the same basis, in order to increase ARPU and consequently profitability. In other words, in the scenario that Ofcom describes, mobile communication providers would have a private economic incentive to charge lower bilateral termination rates. In this way, they would be able to increase returns by increasing subscription charges and lowering call charges.

93. Furthermore, as fixed to mobile traffic falls over time, both in absolute terms and relative to mobile to mobile traffic, the incentive for mobile communication providers to charge lower termination rates would increase (because proportionately less termination revenue would come from fixed line operators). That is, the greater the proportion of mobile to mobile traffic (of all mobile terminated calls), the greater the incentive on mobile communication providers to charge lower termination rates and, therefore, the greater the competitive constraint on termination rates (if Ofcom's assumptions about relative elasticities of demand are correct). Ofcom's market data reveals that fixed to mobile traffic has, in fact, decreased over time in both absolute and relative terms.

94. In summary, if Ofcom's assumptions about relative demand elasticities for mobile ownership and call origination are correct, the implication is that mobile communication providers would face a competitive constraint on setting MTRs, such that they would not have significant market power. Clearly, in the absence of significant market power, the relevant market would be effectively competitive, and there would be no basis for setting smp conditions.

95. Furthermore, Ofcom appears to be suggesting that, under its proposal, mobile customers would have to pay more, but, in response, they would make more use of their mobiles. Ofcom argues that mobile subscription charges would increase, but ownership would not fall

[33] See: http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/200&format=HTML&aged=0&language=EN&guiLanguage=en

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"significantly", and that more calls would be made in response to a reduction in retail call prices. These assertions are fundamental to Ofcom's case in support of pure LRIC.

96. However, that proposition is counter-intuitive. In normal circumstances, when prices go up, demand falls. O2 notes that there is a class of goods - "Giffen goods" – where demand goes up when prices rise. However, the conditions are rare. Consumers reliant on a Giffen good spend nearly all their income on it and cannot afford to buy many better quality substitutes. If the price of this cheap staple rises, they can no longer afford to purchase any substitute good at all, and so must consume more of the staple instead.

97. Ofcom's position in that the price that consumers pay for mobile would increase if MTRs were brought down, in line with pure LRIC. However, Ofcom argues that, in such services, demand, and output, rises. Ofcom, therefore, appears to be arguing that mobile is a Giffen good. O2 believes that this is simply preposterous. As we have shown in this response, the evidence is entirely consistent with the notion that mobile is a "normal" good; if the price rises, demand will fall.

98. In summary, Ofcom's assumption that price elasticity of demand for mobile ownership is low, while that for calls is high, is speculative, simplistic, does not reflect the reality of the UK mobile market and, in any event, would mean that mobile termination rates would be subject to a competitive constraint, rendering regulation redundant. Furthermore, given the reasoning above, this is inconsistent with Ofcom's finding of SMP and the uniform incentive to increase termination prices. The specific set of circumstances (ie relative price elasticities of demand) that must be true for pure LRIC to be more allocatively efficient than LRIC+ simply does not hold. Ofcom's reliance on assumptions about price elasticities of demands is a wholly inadequate basis on which to jettison well established and accepted LRIC+ based charge controls.

Effect of lower mobile termination rates

99. If Ofcom's assumptions about the relative demand elasticities of subscription and calls are incorrect, this has repercussions for Ofcom's next assumption: that if mobile termination rates did not include a mark up for fixed and common costs, the price of mobile subscriptions would increase, while the cost of calls would fall.

100. There is a significant gap in Ofcom's analysis in this respect: Ofcom seems to draw on direct causalities between the MTRs and consequent market outcomes. It has not undertaken any analysis to establish how the UK MNOs would react to the reduction in termination rates, but rather continues to state that:

> *'[…] countries with low MTRs have a higher usage per capita (but also tend to have lower penetration rates). We believe this is a useful indicator of output.'*[34]

101. It is now well established that only limited importance can be attached to observations from other markets. As the Competition Appeals Tribunal put it in *H3G MCT*:

> *"…it is very difficult to draw any conclusions derived from two disparate facts plucked out of the information about a wide range of international markets."*[35]

[34] See paragraph A12.65.

102. Importantly, the operators' behaviour might be expected to deviate from Ofcom's assumed outcomes given that they operate in a mature market, in which consumers have indicated their preferences to certain types of tariff structure, including a variety of pre-pay, SIM-only, and bundled packages. Therefore, the appropriate starting point of this analysis would be to look at:

(i) how the operators would recoup the lost cash flows; and

(ii) the profit and loss of different customer groups to ascertain whether the operators would have incentives to stop offering certain types of tariff package.

103. The difference for O2 in net revenues between mobile termination rates based on pure LRIC and LRIC+ would be around [✂] per annum. O2 has been considering how it might be able to bridge this gap. Obviously, amendments in retail pricing can only be carried out in the context of the competitive environment, and it is not possible to say what will happen in practice. However, uniform increases in subscription prices seem unlikely for a number of reasons. Firstly, there are a set of customers that make more off net mobile calls than total calls they receive. A reduction in mobile termination rates would increase the lifetime value of such customers and, other things being equal, we would expect competition between mobile operators for these customer types to render subscription charge increases as untenable.[36]

104. There is another set of customers who are sensitive to the price of mobile ownership. The market has provided a very low cost means of securing mobile ownership, through SIM only deals. If operators had to recover a greater proportion of fixed and common costs from these customers, it cannot come from a reduction in acquisition costs; there are very little costs in acquiring such customers. Instead, mobile communication providers would need to consider re-introducing time expired credits and/or increasing some call prices.

105. Ofcom analyses the distributional effects of lower mobile termination rates in Annex 13, including the effect on take up, and we set out our response to this in the following section. For now, we simply note that Ofcom's assumption, that lower termination rates would have the effect of increasing mobile subscription charges and reducing call charges, is far too simplistic. In practice, the dynamic competitive process would result in increases and decreases for different mobile subscriptions and call charges (although we agree with Ofcom that there would be a net increase, as mobile communication providers seek to make good the net shortfall from a reduction in MTRs).

106. In O2's view, therefore, Ofcom cannot rely on its simple assumptions about price elasticities for subscriptions and calls, that reduced MTRs are likely to result in higher subscriptions and lower call charges and, in total, higher output (and, therefore, in some kind of allocative efficiency gain). Ofcom has not presented evidence that the UK market has not already reached a state of allocative efficiency and there is plenty of evidence contradicting Ofcom's assumptions. It is clear that the case that Ofcom has made thus far on allocative efficiency

[35] Paragraph 261 of Judgment on Non Price Control Matters. See: http://www.catribunal.org.uk/files/Jdg_CAT11_1083_H3G_200508.pdf

[36] For example, H3G has already said that it will spend the windfall it will obtain in lower termination rates on acquiring more customers. See for example: http://www.ft.com/cms/s/0/3df2ebec-3eb9-11df-a706-00144feabdc0.html

grounds does not meet the Tribunal's test of being able to withstand 'profound and rigorous scrutiny'[37].

The onus is on Ofcom to establish if its assumptions on relative price elasticities of demand are correct

107. If Ofcom wishes to set policy on the basis of assumptions about elasticities of demand, it must demonstrate that these assumptions are reasonable by reference to empirical evidence in the UK market. Further, Ofcom must be able to demonstrate that any linear wholesale charging disbenefits associated with LRIC+ are greater than the benefits associated with allowing operators to recover some of their common costs through termination, in order to show that, on balance, allocative efficiency is best served by charge controls based on pure LRIC. In the absence of any further evidence, Ofcom is bound to introduce charge controls based on LRIC+ because:

1. Ofcom has found that Ramsey pricing principles are best served by LRIC+, as demonstrated in its previous decisions and as it explicitly acknowledged in its comments on the draft European Commission Recommendation; and

2. No new evidence has been presented by Ofcom to justify a move to pure LRIC, and O2 is entitled to be subject to consistent regulation

108. Even if Ofcom can clear this evidential hurdle (which we do not believe it can), it seems to O2 that, if an objective case can be made for wholesale marginal cost pricing (ie charges at the wholesale level that reflect the marginal cost of traffic), it is incumbent on Ofcom to look again at capacity based charging as a means of securing the greatest benefits to consumers. This is because, in principle, CBC would be preferable to linear charge controls based on either pure LRIC (in the sense that termination charges would make a contribution to common and fixed costs) and LRIC+ (if charges that better reflect costs can be shown to generate benefits).

Capacity based charging as an alternative means of securing benefits to consumers

109. Ofcom's primary concern appears to be that the mark-up for common costs would result in linear price schedules, while a non-linear pricing structure would be conceptually appropriate for a complex set of mobile services. Ofcom's concern about linearity is an argument against not allowing operators to charge different termination charges for different types of customer. Rather than forcing all the common cost recovery away from termination services (which seems unreasonable, as discussed above), the conceptually appropriate way to address the linearity concerns would be to introduce capacity-based costing mechanisms.

110. Although it is true that there has been little enthusiasm to develop capacity based charging for commercial purposes, O2 believes that *if* Ofcom can demonstrate that a move to non linear wholesale charging would produce allocative efficiency gains (see above), it is incumbent on Ofcom to seek to introduce capacity based charging via regulation.

[37] See, for example, paragraph 49 of the judgment in Vodafone v Ofcom, Case Number: 1094/3/3/08: http://www.catribunal.org.uk/files/Judgment_1094_180908.pdf

111. This is because, in these circumstances, CBC would result in benefits to consumers in excess of those generated by charge controls based on either LRIC+ or pure LRIC.

112. The important point to note is that there would be a social benefit (ie externality) which would be captured by a move to CBC, in excess of the (private) benefit enjoyed by communication providers. This is because the CBC would better reflect the cost causation principles, and would also align with the retail pricing structures. So although communication providers have not introduced CBC themselves, there would be justification for regulatory intervention to impose a CBC regime for wholesale charging in the UK, in order to capture the social benefit.

113. If Ofcom's pure LRIC model could be made robust enough (see our comments on Ofcom's network cost model, below), it would provide Ofcom with one estimate of the marginal cost of termination for the average efficient operator, which may be suitable for setting one element of a CBC price control.

114. A second fixed access charge can also be derived, in order to recover the fixed and common costs efficiently allocated to call termination. The value can be simply derived from the unrecovered EPMU (LRIC+-pLRIC ppm price) x average operator terminated minutes in the year divided by the number of interconnect circuits that an average operator would require.

115. This approach appears to O2 to overcome all bar one of the difficulties (transit) with CBC articulated by Vodafone in its response to the preliminary consultation. In particular, we estimate that the access charge would be approximately [✂] per E1 per annum in 2011. In our view, this would not act as a barrier to interconnection for smaller operators. Furthermore, there are already mechanisms for operators to share the physical cost of the E1 and so the billing requirements for CBC in this form are likely to be trivial.

116. In principle, the combination of pure LRIC and a 'CBC access charge' would result in a two-part tariff. This approach would lead to a positive outcome from an efficiency and practical perspective, as it would imply moving towards cost causation and more closely reflect the cost structures than an operator itself faces.

117. O2 recognises that it would take some time to develop CBC in the UK; clearly,all communication providers, not just mobile, would need to adjust to the new commercial interconnection regime. We would be happy to work with Ofcom and the industry to develop such a scheme.

118. In the intervening period, O2 would advocate a LRIC+ based MTR charge control for mobile on the grounds that it would better reflect Ramsey pricing principles and to provide the proper incentives for all industry players to develop a CBC scheme (a move to pure LRIC based charge controls would discourage those who would lose financially with the introduction of CBC). Further, we would expect the industry to be able to implement a CBC scheme by September 2013, which is when the charge controls on BT's termination charges (based on an analogy of LRIC+) expire. In this way, there would be no concern that Ofcom's charge controls for fixed and mobile call termination fall foul of its statutory duty not to unfairly favour one form of technology over another (as there clearly is if mobile termination charges are based on pure LRIC, while BT's is not).

119. Furthermore, CBC also presents an opportunity for Ofcom to avoid a major headache with its future regulation of BT's FTRs post-30 September 2013:

- Ofcom commits, at 7.134 of this consultation, to address the discrimination that it's proposals to set MTRs to pLRIC and keep FTRs at LRIC+ would create; *"From 2013 it is highly likely that, for reasoning similar to that set out herein, FTRs will also be set using pure LRIC".* In our view this statement alone must prejudice the execution of a fair, open and transparent consultation to a standard that has been set down by the Courts. Ofcom is simply not in a position to promise to remedy the discriminatory approach it is proposing in some future consultation.

- Ofcom, in reaching the September 2009 decision on FTRs, identifies major issues in moving to pure LRIC, in particular the potentially arbitrary re-allocation of fixed and common costs into other regulated products. This problem will still remain from 30th September 2013 and we do not need to look far to find evidence of the potential minefield of litigation that such cost re-alloction decisions might trigger [see CAT 1111/3/3/09].

120. It would appear sensible, therefore, to consult, on the movement on FTRs and MTRs to a CBC based system from 30th September 2013, whilst in the meantime adopting the LRIC+ glidepath in order to deliver a consistent position between fixed and mobile operators.

121. CBC presents the opportunity to structure termination charges for both fixed and mobile operators in the same manner, from the same point in time (ie non-discriminately), whilst avoiding the arbitrary cost-reallocation problem for FTRs. The fixed costs incorporated in BT's current FTRs would for the "access charge" element as described above.

122. There remains the issue of transit pricing, but in our view the market will take care of this, and to the extent that BT is the transit operator of last resort, there is ample time before 30th September 2013 to agree the appropriate regulatory approach in that regard.

Dynamic efficiency

123. As we have noted above, Ofcom has set out is conclusions on the relative merits of LRIC+ and pure LRIC in the following terms:

> *"we do not believe there is much difference between the two cost standards. Although in principle there is a higher risk of setting MTRs too low under pure LRIC this is likely to be countered by the presence of a waterbed effect (even though this may be incomplete)."*

124. Ofcom's position appears to be that the waterbed effect is not complete and, therefore, that mobile communication providers will not be able to recover, fully, the losses attributable to a charge control based on pure LRIC, as opposed to one based on LRIC+. A reduction in revenues and profitability is likely to have a negative impact on investment – mobile communication providers fund capital expenditure from incomes before depreciation and amortisation, and are targeted (and, therefore, attract investment) on their ability to generate free cash flow (ie income before depreciation and amortisation minus capital expenditure). Therefore,

a reduction in revenues is very likely to put pressure on capital expenditure, as mobile communication providers seek to maintain cash flow.

125. Ofcom argues that investment in capacity for voice call origination would result in capacity for voice call termination. Accordingly, it suggests that a move to pure LRIC would not harm investment. This misses the point described above that, if the waterbed is not complete, then the pool of income available for investment would fall. Ofcom is, in any event, wrong on two other grounds:

1. Under pure LRIC, more common and fixed costs have to be recovered from retail activities. To the extent that some of this extra cost would be recovered on the basis of originating traffic, or suppress demand for origination by, for example, reducing mobile ownership, the origination of calls would fall, and, other things being equal, capital expenditure for voice traffic would fall. In other words, for the reasons explained above, Ofcom's assumption of increasing output is subject to a significant uncertainty, and the overall output (as a combination of subscriptions and call volumes) could actually decline. Should Ofcom's assumption of increasing traffic hold (higher volumes of high-usage customers), there would be greater capacity pressure on networks due to a higher volume of voice calls (stimulated by lower MTRs), which could result in poorer quality insofar as lower termination revenues resulted in CAPEX reductions. Ofcom does not seem to have taken this into account; and

2. [✂]

   A move to pure LRIC based charge controls is likely to have the effect that more fixed and common cost recovery come from data services, suppressing demand and reducing capital expenditure. Furthermore, the inability to recover any common costs through termination would lead to less handset subsidisation. Aside from the question of whether consumers would cease using mobile phones altogether, lower handset subsidies would be expected to result in lower take-up of advanced handsets such as smartphones, with a knock-on effect on data volumes and service/application take-up.

126. While lost termination revenues that contribute to common costs are likely to be recovered somewhere, it does not necessarily imply that only retail prices would be altered. Instead, mobile communication providers may seek to freeze investment plans or recover domestic losses by overseas operations. Given the level of profitability in the UK, cutting operating costs would appear unrealistic. This aspect is largely overlooked in the Analysys Mason study; the report simply states that regulators in sample countries have not expressed concerns about the levels of investment.[38] Again, this is a finding that is not sufficient to conclude that significant revenue loss would not have implications for the UK mobile communication providers' investment for a considerable period of time.[39]

127. As a general point in relation to rapid implementation of a significantly different MTR regime, we note that Ofcom's current consultation deviates in many aspects from its previous

[38] Ofcom (2009), 'Wholesale mobile voice call termination. Preliminary consultation on future regulation', May 20th, para 6.61.
[39] In the 2007 Statement, Ofcom estimated that annual fixed-to-mobile termination revenues amounted to £1 billion. Ofcom (2007), 'Mobile call termination – Statement', March 27th, para 2.17.

statements. For example, in the context of the appeal against its 2007 MTR decision, Ofcom stated that:

> "*Ofcom said that NPZ would bring a risk of disruption and adverse effects on investment because of the need for large rapid decreases in M2M MCT rates. It also said that bill-and-keep would represent a fundamental change to the regulatory regime, and that a transition from a CPP regime to a bill-and-keep or RPP regime had never been successfully implemented.*"[40]

128. This is inconsistent with Ofcom's current proposals because such potential adverse effects are not addressed in the consultation.

129. Ofcom concedes that investment under a bill and keep termination regime could be a problem[41], but since this is not the preferred option, Ofcom does not have cause for concern about investment. However, in practice, a pure LRIC based charge control will be closer in financial terms to bill and keep than it would be to a LRIC+ based charge control. The respective 2014/15 pure LRIC charge control amounts to less than 30% of a LRIC+ based charge control. O2 is interested to know the basis on which Ofcom has dismissed concerns about investment under pure LRIC, but not under bill and keep.

130. Late last year, in its statement following the strategic review of mobile[42], Ofcom wrote:

> *"3.33 Given the current challenging economic conditions, we are keen to do all we can to ensure that UK citizens and consumers continue to benefit from efficient investment in networks. This is also consistent with our duties.*
>
> *3.34 In Mostly Mobile, our second mobile sector consultation, we found that, despite lower profitability, investment in the UK mobile sector in recent years has been comparable to that in other European markets. Capital expenditure (capex) as a percentage of revenue has been consistent with capex in comparable countries, and new network technologies, handsets and services have generally been launched in the UK around the same time as in other countries. Capex as measured on a per subscriber basis is also broadly similar to that in comparable markets, although MNOs which are present in the UK tend to invest more – relative to market size – in at least some other markets.*
>
> *3.35 We believe that the best contribution we can make to timely and efficient investment in the mobile market continues to be to promote competition and ensure that any regulation we impose does not hinder or delay investment. We also recognise the important role of regulatory certainty for investment decisions in a sector with long term investment horizons.*"

[40] Competition Commission (2009), 'Reference under section 193 of the Communications Act 2003 Hutchison 3G UK Limited v Office of Communications *Case 1083/3/3/07* British Telecommunications plc v Office of Communications *Case 1085/3/3/07* Mobile phone wholesale voice termination charges', January 16th, para 14.29.

[41] See paragraph A12.83

[42] Mobile Evolution Ofcom's mobile sector assessment. 17 December 2009. See: http://www.ofcom.org.uk/consult/condocs/msa/statement/MSA_statement.pdf

131. In O2's view, a decision to base charge controls on pure LRIC would be entirely inconsistent with this position. It would amount to an unwarranted attack on mobile communication providers' income and would be an arbitrary change in policy, the very antithesis of "regulatory certainty". Capital expenditure would be hit. This is far removed from Ofcom's undertaking "to do all we can to ensure that UK citizens and consumers continue to benefit from efficient investment in networks".

132. As we noted above, one effect of a move to pure LRIC based charge controls is likely to be that mobile operators will seek to recover more common and fixed costs from data services. This is likely to increase retail data charges, reducing demand for such services. This would be inconsistent with Ofcom's statutory duty to have regard to the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom[43]. Ofcom does not seem to have taken either of these effects into account. Furthermore, Ofcom's base case modelling assumption projects a significant increase in data traffic, which is not consistent with (a) a higher proportion of costs being recovered through data services and (b) lower handset subsidies and hence lower take-up of smartphones.

Competitive impacts

133. O2 agrees with Ofcom that there is no evidence of substantial call charge (or other) differentials between on and off net calls, that some stakeholders claim justify a reduction in mobile termination rates.

134. The claim that high termination rates are necessarily bad for new or smaller entrants is not borne out by the evidence. While it is true that smaller and/or newer mobile communication providers tend to display a proportionately higher off net call profile, what is relevant is the relative volume of inbound and outbound traffic[44]. Some mobile communication providers adopt a commercial policy of selling high value retail tariffs with a large number of inclusive cross net minutes. Customers attracted to these tariffs tend to make proportionately more calls (and, therefore more cross net calls) than they receive. Therefore, these mobile communication providers can expect to send more traffic to other mobile communication providers than they receive, and be net payers of mobile termination rates. Conversely, other small mobile communication providers concentrate on lower spending customers who receive proportionately more calls than they make. These providers would, other things being equal, expect to be net receivers of mobile termination payments.

135. Example of both types of new entrants can be found in the UK market. Consequently, it is not true to say lower termination rates are either good or bad for new entrant mobile communication providers; it depends very much on their commercial strategy.

136. In understanding the reasons for any imbalance, a distinction should be made between the potential drivers of the imbalance that are due to MTRs and other factors that an operator can influence, such as marketing strategies that may have led to a sub-optimal customer mix.

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[43] Section 3(4)(e)

[44] Indeed, in the most recent proceedings before the Competition Commission, Ofcom presented data which demonstrated that H3G had about the same inbound volumes per customer as the other mobile communication providers. Its "issue" was the disproportionately large outbound volumes

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137. Entrants can introduce pricing strategies that prevent call imbalances from occurring (eg, calling circles), and target consumers with positive net inflows of traffic. To the extent that an entrant has not maximised its realistic potential to minimise call imbalances, the observed calling imbalance does not warrant changes in the regulatory framework underlying termination.

138. Crucially, Ofcom needs to consider that on-/off-net discrimination is essentially a matter of economies of scale and network effects and, as such, is normal in competitive markets. The absence of any evidence that Orange or T-Mobile, which entered the market at a later stage, have been constrained in their ability to compete would mean that on-/off-net differentials are not a strong reason to justify changing the regulatory system. In this respect, Ofcom's current thinking appears to be inconsistent with its previous approach. As an example, during the previous CC investigation, the CC noted:

> *"As to H3G's second argument (that its traffic imbalance was caused by being a new entrant in a saturated market and the commercial strategy it had to adopt), Ofcom characterized H3G's case as a plea for entry assistance. Ofcom did not consider that using MCT rates to provide entry assistance was an appropriate policy."*[45]

139. The discrepancy of Ofcom's approach to this issue, coupled with the evidence of shrinking differentials, suggests that on-/off-net differentials do not warrant a step change in termination charges.

140. In any event, Ofcom has wisely decided not to adopt the new strategic approach it had described in the preliminary consultation (to bring termination rates down as far and as fast as possible to stimulate "innovation" in downstream retail markets). Ofcom now says that it is considering the effects of lower termination rates merely to gauge any efficiency and/or distributional effects. We welcome the clarification of Ofcom's position that it is not seeking to manipulate the regulation of mobile termination rates to engineer a particular outcome in fixed and retail markets.

Commercial and regulatory consequences

141. Ofcom has, in the past, accepted that the risk of setting termination rates too low outweigh the risks of setting them too high[46]. No evidence is presented to merit a change in that approach. Therefore, on this criterion, a charge control based on LRIC+ is preferable to one based on pure LRIC.

142. Ofcom presents no evidence that the current approach of LRIC+ based charge controls has resulted in bad market outcomes. Indeed, Ofcom has found in its strategic review of the mobile sector that the UK market compares well with other mobile markets.

[45] Competition Commission (2009), 'Reference under section 193 of the Communications Act 2003 Hutchison 3G UK Limited v Office of Communications *Case 1083/3/3/07* British Telecommunications plc v Office of Communications *Case 1085/3/3/07*Mobile phone wholesale voice termination charges', January 16th, para 5.6.12.

[46] see paragraph 9.168 of Mobile Call Termination Statement, 27 March 2007, for example

Conclusion on the relative merits of pure LRIC and LRIC+

143. Ofcom concedes that Ramsey pricing principles support LRIC+ based charge controls. Its "retail price discrimination" argument, in favour of pure LRIC, rests on assumptions that are not supported by empirical evidence. Further, if Ofcom's assumptions were correct, then this would undermine the case for regulatory intervention. Any substantiated concern about linear wholesale charges should be addressed through a CBC regime, not the adoption of pure LRIC.

144. Further, pure LRIC based charge controls would damage investment. No harm has been identified associated with LRIC+ based charge controls; the UK market has been shown to work well under this regime. There is no case justifying the massive reductions in MTRs that would materialise with the adoption of pure LRIC.

D. Ofcom's distributional analysis

145. Ofcom's distributional analysis is set out in Annex 13 of the consultation document. At paragraphs A13.2 and A13.3 Ofcom writes:

> "A13.2 We consider that the distributional impact of lower MTRs (in line with our pure LRIC-based policy proposal) will be modest, with the most significant effects being:
>
> > 13.2.1 some people who would have multiple subscriptions will face incentives to have fewer subscriptions;
> >
> > 13.2.2 consumers who use fixed (and not mobile) services will be better off; and
> >
> > 13.2.3 consumers who use mobile (and not fixed) services may be worse off depending on how sensitive they are to changes in the prices for subscriptions and calls.
>
> A13.3 We do not think that lower MTRs are likely to have a disproportionately negative impact on particular groups (for example, the elderly, the young or the diabled)"

146. O2 believes that Ofcom is wrong to consider that the distributional impacts of a move to pure LRIC would be modest. Fixed only households are very unlikely to benefit to the extent that Ofcom supposes, while mobile only customers are likely to fare worse. In addition, charge controls based on pure LRIC would adversely affect low income consumers, in particular, in breach of Ofcom's duty to have regard to their interests.

147. Ofcom considers how changes to MTRs would affect retail prices, mobile ownership and mobile only, fixed only and mobile and fixed customers and we set out our response accordingly.

Retail Prices

148. Ofcom says that the most significant and likely effect of a reduction in MTRs is that the structure of prices will change. Usage charges would fall and fixed fees would go up[47].

149. Ofcom's desire to introduce changes that affect retail prices in this way is likely to impact pre-pay users the most, simply because the pre-pay business model has, for many years, now, not required regular and frequent fixed fees to maintain a connection. The majority of mobile customers in the UK are pre-pay customers.

150. Ofcom goes on to consider the effect of a reduction in MTRs on:

- mobile to mobile and fixed to mobile call charges
- increased bundle size and monthly subscription fees for post pay customers
- introduction of some equivalent to monthly fees for pre-pay customers;

[47] Paragraph A13.41 refers

- reducing handset subsidies; and
- receiving party pays

151. We set out our comments on each in turn.

Mobile to mobile and fixed to mobile calls

152. Ofcom states that its distributional analysis rests on the critical assumption that a decline in MTRs (and a further decline when adopting pure LRIC) will most likely lead to lower ppm call charges both for off net mobile to mobile calls and fixed to mobile calls[48]. Earlier in this response, we provided evidence that this is far too simplistic an assumption. An attempt to increase subscription charges would result in a significant reduction in subscribers, particularly pre-pay, and that some subscription charges are likely to fall while some call charges are likely to rise.

153. In relation to mobile to mobile charges, Ofcom's assumption that they will necessarily fall is too simplistic. Although Ofcom concedes that mobile customers are heterogenous, it has failed to reflect this in its analysis. As we have set out above, there is a significant proportion of customers who are sensitive to the cost of mobile ownership. For this group, at least, mobile communication providers will not be able to increase or introduce fixed fees (because those customers would simply stop using their mobiles) and are likely, instead, to increase usage charges, including for off net calls.

154. Further, many retail mobile to mobile calls are currently priced at below termination rates, and this contradicts Ofcom's assumption, that MTRs constitute a "price floor" (in respect of both fixed and mobile calls to mobiles). For example, O2 offers customers 600 minutes (which can be used for calls to mobiles and to fixed lines) for £20 a month, equating to about 3.3 pmm, if the full bundle is used. Higher subscription charges generate cheaper prices, still.

155. As regards fixed to mobile calls, Ofcom's assumption that the retail price of these will fall if MTRs are brought down is not backed up by empirical analysis. The inescapable fact is that fixed to mobile prices, particularly for consumers, have risen consistently since 2007, a period during which MTRs have fallen significantly, as the following graph demonstrates:

[48] Paragraph A13.13 refers

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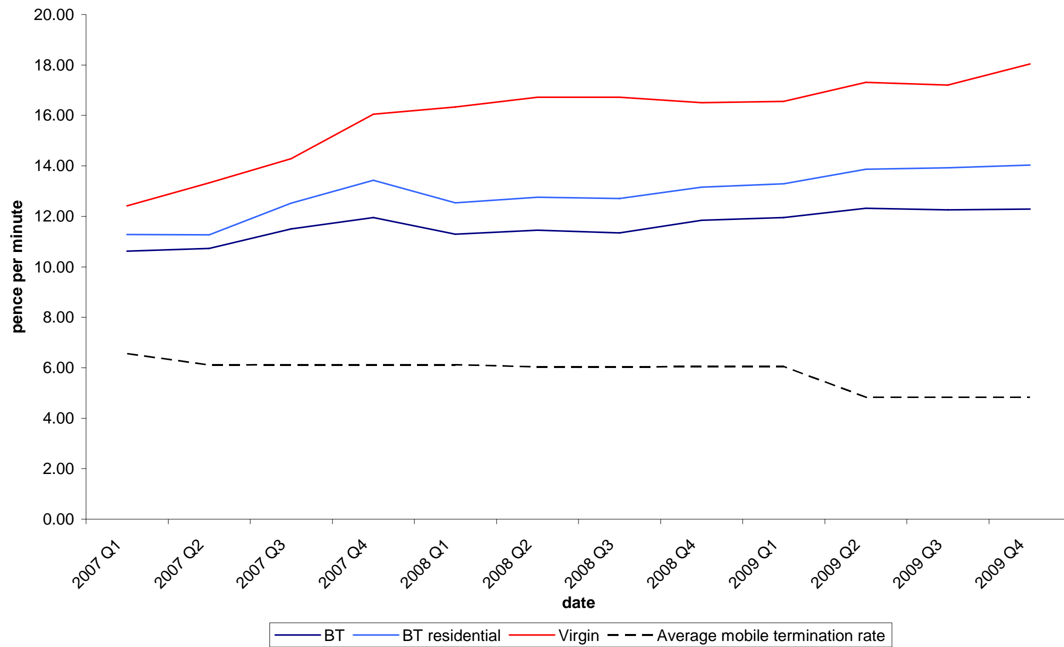
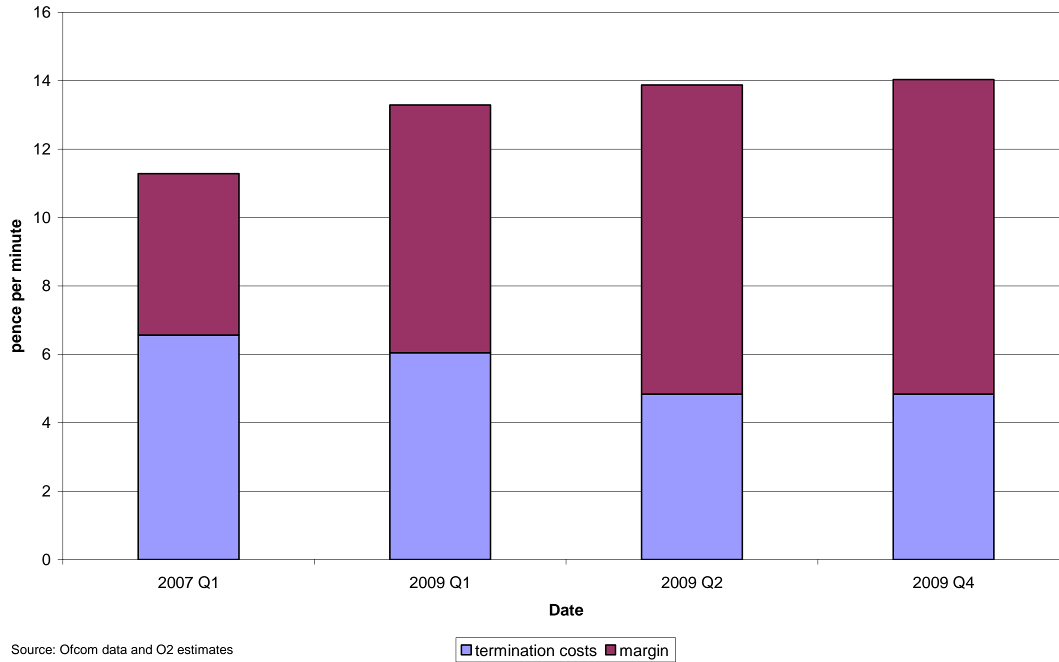
Fixed to mobile retail prices and average mobile termination rates



Source: Ofcom data and O2 estimates

156. BT's promise, that it will reduce its fixed to mobile calls charges if Ofcom brings down MTRs is entirely inconsistent with its actual commercial practice, of increasing its retail price and margins for such calls, even though its costs have fallen:



157. Ofcom is therefore wrong to assume that a reduction in MTRs will lead to a fall in fixed to mobile retail prices.

158. Indeed, those consumers that are most price sensitive would be expected to have unsubscribed their fixed line connection already. Thus, given that BT's remaining subscriber base is expected to be relatively less price elastic with respect to call prices, BT's incentives to pass though the declining termination rates may be limited. Furthermore, these customers will only benefit to the extent that they make significant fixed to mobile calls. Ofcom has undertaken no analysis of the specific demand price elasticity of fixed to mobile calls for fixed customers

159. In response, Ofcom has argued that other prices might fall and, in any event, that there is some evidence that competition in the fixed market is increasingly focusing on calls to mobiles, with BT and Virgin both offering packages or add-ons which significantly reduce the price of fixed to mobile calls. However, O2 has not seen any evidence of new packages being brought to the market and, in any event, they have not, in fact, resulted in a reduction in average call prices. In addition, the argument that lower MTRs will bring other retail prices down is not the basis on which Ofcom is trying to sell these proposals:

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Cheaper calls for UK consumers

01|04|2010

Ofcom has today published proposals which will make it cheaper for you to call mobile phones from your landline.

The consultation proposes slashing mobile termination rates, which are the wholesale charges that operators make to connect calls to each others' networks.

Under Ofcom's plans, these wholesale rates would fall from around 4.3p per minute today, to 0.5p per minute by 2015.

This would lead to cheaper calls to mobiles for the 32.7 million UK homes and businesses with a landline.

Competitive call packages

The proposals will also mean that both landline and mobile operators have more flexibility in designing competitive call packages, promoting competition for the benefit of consumers.

The UK mobile market has changed significantly since Ofcom last set termination rates in 2007.

Today there are many smaller communications providers including mobile virtual network operators (MVNOs), VOIP (voice over IP providers) as well as the four mobile operators with national mobile networks (3UK, O2, Vodafone and the merged Orange/T-Mobile).

This means that there is more choice for consumers in the mobile market than ever

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160. In particular, the phrase "proposals which *will* make it cheaper for you to call mobile phones from your landline" (emphasis added) is unequivocal.

161. As we explain, below, there is little evidence that fixed customers would benefit in other ways, for example, through cheaper subscriptions.

Higher monthly mobile subscription fees

162. The extent to which mobile communication providers will be able to increase post pay subscription charges will depend to a large extent on calling patterns of different customer segments and the behaviour of competitor mobile communication providers. For example, in respect of customers that make more calls to off net mobiles than calls they receive, their net cost would fall in the event of lower MTRs, and, other things being equal, they are likely to be more attractive to mobile communication providers, leading to more competition for them and lower subscription charges. We note that Three has already said that that it will seek to increase its market share through the acquisition of these customer types[49]. In these circumstances, it would

[49] See for example: http://www.ft.com/cms/s/0/3df2ebec-3eb9-11df-a706-00144feabdc0.html

seem that a strategy of increasing subscription charges for these types of customers is unlikely to be successful.

Reducing handset subsidies

163. As we set out above, the Jigsaw Research work commissioned by Ofcom for the preliminary consultation found that 8% of prepay customers said that they would stop having a mobile if they had to pay an additional £10 for a handset.

164. Ofcom suggests that pre-pay SIM only deals will enable consumers to carry on participating in the mobile. However, as we set out above, these deals are available at the moment, and [✂] of O2's pre-pay connections are still made following the purchase of a handset.

165. Ofcom also argues that consumers will continue to participate in the market if handset subsidies are reduced since they will trade off a higher handset charge for lower call charges. However, this assertion rests entirely on assumptions that pre-pay consumers are insensitive to the cost of ownership, display price elasticity of demand for calls (where many are neither) and that they make purchasing decisions rationally with a suitably low discount factor (so that future call savings have a bearing on a decision to make a mobile connection (and Ofcom appears not to have tested either proposition, as it is required to do to discharge the burden of proof for its proposition.).

Monthly fees

166. In response to concerns that the introduction of a fixed component for pre-pay tariffs may adversely impact on mobile ownership, Ofcom remarks that pre-pay is in decline and that consumers can modify their behaviour by buying smaller top up amounts.

167. Ofcom's response on this issue is cavalier. Ofcom's own data show that over 60% of mobile subscriptions and mobile customers are on pre-pay. Yet it has undertaken no research on the implications of an introduction of a fixed fee element, preferring instead to rely on mere assertion. This is wholly unsatisfactory. Ofcom has historically demonstrated a lack of understanding of the pre-pay market; it appears not to have learnt any lessons

168. O2 has an active pre-pay base of over 11.5 million. As we have set out above, O2 has made great efforts to encourage customers to top-up regularly by offering "free" calls, texts and data, and its loyalty schemes[50]. [✂]

Ofcom appears to assume that these customers either own other SIM cards or will simply adjust their behaviour to make regular top-ups. Ofcom has absolutely no evidence to support either assumption, again, contrary to the burden of proof it bears.

[50] Rewards and Top-up surprises. See: http://www.o2.co.uk/shop/paygotopup/10backontopups and http://topupsurprises.o2.co.uk/uk_o2surprises_web/site/index.html

169. It seems to us inevitable that a significant proportion of O2's pre-pay base will choose not to carry on owning a mobile if there is a fixed element to pre-pay tariffs. This will result in a wider loss to society, due to a network externality effect. Ofcom has not taken this into account in considering the relative merits of pure LRIC and LRIC+ based charge controls.

Receiving party pays

170. Ofcom's analysis on this issue rests on the following argument: "as the level of MTRs decline, so will the call charges for such types calls. As arbitrage exploits differences in charges for incoming and outgoing calls, the difference between the two is unlikely to change as MTRs decline."[51]

171. Ofcom also says that H3G has committed not to introduce charges for receiving calls.

172. Ofcom's assumption that retail prices for calls will fall following a reduction in MTRs, will not hold in circumstances where customers are sensitive to the price of ownership, but insensitive to the cost of calls. As we have shown, pre-pay customers in particular display these characteristics. In these circumstances, mobile communication providers could not increase fixed fess and would, instead, have to increase call prices to recover lost net termination revenues. Thus, termination rates and call prices would diverge, providing for the possibility of arbitrage. O2 maintains that, for these customer types, at least, mobile communication providers may be in the position of having to introduce charges for receiving calls to prevent arbitrage, and that this is far more likely if charge controls are based on pure LRIC, as they would be lower.

173. As to H3G's commitment, in our experience, H3G does not actively seek to acquire pre-pay voice customers. It is our belief that H3G's pre-pay connections and user base are low. Ofcom will have information about the size of H3G's pre-pay voice customer base (which is not in the public domain). Ofcom is therefore is in a good position to evaluate the worth and relevance of H3G's offer to low income pre-pay customers.

174. Conversely, O2 connects a large number of pre-pay customers and its pre-pay base is more than 11.5 million customers. We have vast experience about pre-pay customers' usage and preferences, which we are, of course, willing to share with Ofcom.

Mobile ownership

175. Ofcom says that there are four main reasons why it believes that the impact on ownership is likely to be significantly more muted than anticipated by some observers. We examine each of those below.

Subscriptions v ownership

176. Ofcom draws a distinction between owning a mobile and more than one SIM, and places more weight on concerns about ownership than subscription levels.

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[51] Paragraph A13.59 refers

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177. Ofcom says that "it is possible, and perhaps likely that it will be customers with multiple subscriptions who would give up only one of several phones or SIM cards in response to higher prices for ownership."[52] However, no evidence is produced to support this claim. Ofcom argues that the main reason for holding more than one subscription is to separate business and personal calls. Further, many customers hold different devices for data and voice services, often for work purposes. In both cases, an employer might be responsible for paying the bill of one account. O2 has commissioned research showing that employers are responsible for paying the mobile bill for 6% of main mobile phones.

178. In circumstances where an individual subscriber is not responsible for paying more than one mobile bill, even if they hold more than one mobile, it is far from clear that an increase in subscription charges would result in that customers choosing to rationalise devices. If Ofcom wishes to rely on its assertion, it is obliged to compile cogent evidence in support of it.

179. In response to the preliminary consultation, O2 pointed out that, according to Ofcom's own data, 7.7million mobile customers did not make outgoing calls. In paragraph A13.79, Ofcom says that it is unclear what proportion of those customers are unique mobile users, and how many are secondary subscriptions. However, there is evidence available to Ofcom that sheds light on this. In paragraph A13.78, Ofcom observes that many customers have multiple connections to separate business and personal calls and to take advantage of different call charges, ie, in order to *make* calls. Since the 7.7 million customers do *not* make calls, it is reasonable to suppose that most, if not all, are unique mobile users. Indeed, if one's only reason to own a mobile is to receive calls, then there is surely no additional benefit in being able to be contacted on more than one number. Ofcom presents no evidence to the contrary.

180. As we set out in our response to the preliminary consultation, in the absence of termination revenues for these customers, mobile communication providers will seek to recover the loss from other sources. Clearly, increasing call charges will not work, since these customers do not make calls. So the only option would be to introduce fixed fees. As we have set out above, there is strong evidence that these customers are sensitive to the price of mobile ownership and that the introduction of fixed fees will lead to many of them choosing to dispense with their mobile altogether.

Revenue versus profit neutrality

181. Ofcom's argument here is that the cost of keeping a subscriber on a mobile network is very low. Accordingly, mobile communication providers would maintain their connections even if net termination revenues fell.

182. However, Ofcom has not taken into account other costs of maintaining mobile connections, like customer service costs. Neither has Ofcom sought to gather any evidence of such costs. Further, the implication of Ofcom's assertion is that mobile communication providers would be enjoying supernormal profits from such subscribers at the moment. If this were true, then one would expect competition to drive down retail prices bringing profits down to normal levels, since the mobile retail market is effectively competitive.

[52] Paragraph A13.78

183. O2 submits that Ofcom's analysis on revenue versus profit neutrality is, therefore, incorrect.

Price discrimination

184. Ofcom's argument here is that mobile operators would seek to make up any shortfall from net termination revenues by reference to different consumers' price sensitivity to mobile ownership and call charges.

185. O2 agrees that, in practice, mobile communication providers would seek to recover different amounts from different customer types. For example, those customers who make more off net mobile calls than calls they receive, would be more attractive to mobile communication providers following a reduction in MTRs. It is reasonable to assume that H3G has a relatively large number of such customers[53] and that its commercial strategy is to continue to target them, since H3G is seeking lower MTRs. Therefore, mobile communication providers would seek to acquire more of these types of customers (and we note that H3G has indeed said that it will seek to acquire more customers following a reduction in MTRs); in these circumstances, it is difficult to see how retail charges would increase for this customer type.

186. Conversely, other customers would have to shoulder the burden, and low spending customers who receive more calls than they make to other communication provider' mobiles would be expected to pay, proportionately, the most. These tend to be pre-pay customers, and as we have shown, above, the majority of pre-pay customers display elastic demand for mobile ownership and inelastic demand for calls. The conclusion that we draw from this is that, far from limiting a reduction in mobile ownership, the adoption of price discrimination by mobile communication providers is likely to have a larger impact on ownership than a uniform price increase, either in absolute or proportionate terms. These customers have not historically been the target group of H3G. O2 is puzzled as to why Ofcom has drawn such an obviously general conclusion when customers are demonstrably heterogenous

Reliability of survey data responses to complex questions

187. Ofcom says that it must be cautious in interpreting survey data, on the basis that respondents' behaviour often differs from what they say that they will do. O2 accepts the point (although it is rather unsatisfactory for Ofcom to commission research and then discount the results on the basis that some of the questions were too difficult to interpret), to the extent that survey data need to be considered in the context of other evidence. We have furnished evidence that customers are sensitive to the cost of mobile ownership and this is consistent with the Jigsaw Research finding that 8% of pre-pay customers would stop using their mobile if the price of handsets increased by £10 (which, in any event, is a pretty straightforward proposition).

Ofcom's assessment of mobile ownership

188. Our view of this section of Annex 13 (paragraphs A13.89 – A13.110) is that Ofcom has not considered the most relevant evidence of the likely impact on ownership of a pure LRIC

[53] Consistent with Ofcom's evidence to the Competition Commission in the 2007 appeal

based MTRs, which is a proper assessment of the actual behaviour of customers in the UK market. We have furnished evidence that a significant number of them display sensitivity towards the cost of ownership. Ofcom must take proper account of this. We would be happy to assist Ofcom in any further analysis it wishes to carry out before it makes its final decision on the matter.

189. Instead of the proper analysis of evidence, Ofcom speculates that consumers might be price inelastic in respect of the cost of mobile ownership. For example, in paragraph A13.97, Ofcom writes that “It is likely that some who initially perceived mobile as offering only limited value may have discovered that having a mobile gives them greater benefits than initially anticipated and so some later adopters who were initially attracted by falling prices may remain in the market even if prices were to rise later”. No evidence is offered in support of this assertion.

190. The analysis of historical trends is largely irrelevant given the development that has taken place in the market, as described in Ofcom’s mobile sector assessment[54]. In any event, it is not the decline in MTRs which is at issue here, but the proposed adoption of pure LRIC and the consequential recovery of all fixed and common cost recovery from retail services. An analysis of past trends cannot inform Ofcom of the impact of this, since MTRs have always been based on LRIC+ (and, therefore, included a mark up for common and fixed costs) to date.

Mobile only customers

191. Ofcom acknowledges that there are now significantly more mobile only households than fixed only households (12% compared to 7%)[55]. Other research commissioned by Ofcom suggests that the number of mobile households is higher[56]. Further, historical trends published in Ofcom’s Communications Market 2009[57] suggest that this proportion is rising over time. If these trends continue (and O2 is not aware of any reason why they might not), the proportion of mobile only households is likely to be 15% or higher by 2015.

192. Ofcom’s Communication Market Report 2008 also sets out the socio economic profile of mobile only households and reported that 22% of DE households, or around 1.4 million, rely on mobile as their only means of telecommunications. It seems reasonable to assume that if the proportion of mobile only households increases by 2015, the number of DE households relying on mobile will also go up.

193. The research that Ofcom commissioned from Jigsaw Research for the preliminary consultation (see above) revealed some other interesting information about users who rely on mobiles for telecommunications. Compared to the general population of mobile users, mobile only customers are more likely to:

1. be on pre-pay. 73% of mobile only users are pre-pay;

[54] See: http://www.ofcom.org.uk/consult/condocs/msa08/
[55] See Table 24 of the consultation document
[56] Section 3.1 of Jigsaw Research published at Annex 10.2 records that 14% of households were mobile only.
[57] See Figure 4.62 in http://www.ofcom.org.uk/research/cm/cmr09/cmr09.pdf

2. be with O2 than any other network. 28% of mobile only customers are with O2, while only 5% are with H3G[58];
3. be sensitive to the general cost of ownership. 34% of users select their network on the basis of cost;
4. choose a network that their friends and family are on. This suggests that mobile only users are more likely to be part of calling circles on the same network, to take advantage of cheaper calls and inclusive minutes (also mentioned as a more prominent factor for mobile only users);
5. receive more calls than they make; and
6. request call backs, on the basis that it 's cheaper for others to call them and to save their credit

194. O2 submits that this is highly relevant evidence on the distributional impact of the choice between pure LRIC and LRIC+.

195. It is Ofcom's intention that mobile communication providers will respond to a reduction in MTRs by introducing some element of subscription charge for pre-pay customers. O2 agrees that pre-pay customers are likely to be greatly affected by a fall in MTRs, since, generally, the revenue stream from net termination payments is, proportionately, a more important factor for these customers because they spend less money than post pay customers and they receive more calls.

196. In the section of this response on the relative merits of pure LRIC and LRIC+, we set out evidence that a significant number of O2's pre-pay customers are sensitive to the price of ownership and not sensitive to the price of calls (contrary to Ofcom's assumptions). Thus, the introduction of a form of subscription charging is likely to have the effect of reducing O2's pre-pay subscriber base, significantly. A large proportion of those that remain are unlikely to reap the benefits of cheaper off net calls.

197. The Jigsaw Research work, commissioned by Ofcom, is strong evidence that mobile only households are likely to be particularly affected by a reduction in MTRs consistent with pure LRIC based charge controls. This is because proportionately more of these customers use pre-pay, and they receive proportionately more calls than they make (thus, a reduction in termination rates will make these customers less attractive from a mobile communication provider's point of view). Further, since O2 is the most popular network amongst mobile only households, it has a particular interest in the distributional impact of lower MTRs.

198. The research also confirms that mobile only users are particular sensitive to cost, so the introduction of subscription based charging is likely to cause detriment. Mobile only users are more likely to have selected their network on the basis calling groups, to take advantage of cheaper calls and inclusive minutes to those on the same network, so the prospect of cheaper off net calls (that Ofcom claims would be brought about by lower MTRs) is unlikely to provide significant countervailing benefits.

199. Finally, we note that research records that mobile only users make a proportionately greater use of call back. This is significant because it demonstrates that mobile customers do make other arrangements to speak to third parties, other than calling them. As we explain later in this response, Ofcom is wrong to discount the possibility that mobile communication providers will

[58] Hence O2's concerns about Ofcom's reliance on H3G's assertions as to its future pricing strategy

introduce charges for receiving calls, particularly if retail charges for calls are relatively high. The fact that customers already make use of call back makes the introduction of charges to receive calls more likely, as a means of preventing arbitrage.

200. Ofcom appears to have taken none of this into account in assessing the relative merits of pure LRIC and LRIC+. It appears to us that Ofcom is discriminating against O2, unduly focussing on hypothetical benefits for post-pay customers and ignoring the negative impact on O2's pre-pay base.

Fixed only households

201. O2 believes that Ofcom has over estimated the benefits that fixed only users would derive for a number of reasons:

1. historical trends suggest that the proportion of fixed only households will fall over time. Therefore, the number of unambiguous winners from lower MTRs will be smaller than Ofcom assumes;
2. In addition, recent changes in BT's social tariffing offerings under its universal service obligations are likely to have reduced the number of fixed only households, significantly;
3. It seems likely that a large proportion of the remaining fixed only households will use BT's new social tariff, BT Basic. This service has been provided in response to regulatory intervention, and not via the market mechanism. Accordingly, contrary to Ofcom's assertion, BT will not face competitive pressure to pass through a reduction in its costs (obtained by lower MTR payments) to BT Basic customers, in the form of lower subscription charges[59]. Since there is no evidence that lower MTRs reduce fixed to mobile retail prices, these customers will not benefit at all from lower MTRs.

202. We explore these factors in more depth below:

Reduction in fixed only households

203. Ofcom concedes that the number of fixed only households has fallen over time[60]. While it is true that that rate of decline has slowed more recently, there is still a decline. Since Ofcom is seeking to rely on the notion that only fixed only users would be bound to be better off, as part of the justification for lower MTRs in line with the proposed pure LRIC policy, Ofcom should, at least, seek to estimate the proportion of fixed only households at the end of the next charge control period (2014/15). A continuation of the current trend (set out in Figure 53 of the consultation document) suggests that the proportion of fixed only households will fall to around 5% in five years' time (about 1.2 million households).

[59] Indeed, BT has already secured regulatory approval to increase subscription charges in line with inflation
[60] Paragraph A13.148 refers

Effect of withdrawal of Light User Scheme

204. Furthermore, recent changes to BT's social tariffs, which it is required to provide under its universal service obligations, suggest that the reduction in fixed only households is likely to be more pronounced than historical trends imply.

205. Ofcom conducted a review of the Universal Services Obligations in 2005/06. At the time of the review, BT offered two special tariffs under its USO obligations: the Light User Scheme (LUS), which had around 1.1 million customers, and In Contact (IC), which had 63,000 customers.

206. Although O2 is not aware of any research on the issue, it seems reasonable to suppose that many fixed only customers used one or other of BT's USO tariffs. There are two main reasons for this assumption: the age and socio economic profile of LUS customers was strikingly similar to fixed only users[61]. Furthermore, mobile customers were prohibited from using the LUS. The implication is that all 1.1m LUS users were a subset of fixed only households.

207. In the review, BT had argued that LUS and IC were not properly targeted and that some customers of these tariffs did not qualify for help under the USO. Accordingly, Ofcom agreed to BT's proposal to replace LUS and IC with a new, better targeted tariff, BT Basic. BT Basic is a retail tariff available to customers claiming state benefits. The subscription charge is £4.50 per month and customers have an inclusive call allowance of £4.50 per quarter. Outside of this, calls (including calls to mobiles) are charges at the standard rate[62].

208. BT was to migrate qualifying LUS and IC customers to BT Basic. Further, when the BT Basic customer base had risen to 600,000 (around 2.5% of households), BT would be permitted to close the LUS and IC tariffs[63]. O2 understands that BT closed those tariffs at the end of 2009[64]. The estimated 400,000 customers that did not qualify for BT Basic (ie, around 1.7% of households) were invited to accept one of BT's standard tariffs, instead. However, industry observers estimated that this would have represented a price increase of about 35%[65]. Accordingly, it seems likely that many of these customers would instead have opted to terminate their connection with BT. Since LUS subscribers were fixed only customers, it appears highly likely that the closure of that tariff would have resulted in a step reduction in fixed only households. Ofcom does not appear to have taken this into account in its distributional analysis.

Likelihood that BT Basic customers will not benefit from reductions in MTRs

209. It appears to us that a large proportion fixed only users in 2015 are likely to be on BT Basic. Following the withdrawal of the LUS, we might expect the number of fixed only

[61] See paragraphs D 2.4 – D2.6 of the Annexes accompanying Ofcom's Review of the Universal Service Obligation: http://www.ofcom.org.uk/consult/condocs/uso/main/annexes.pdf and Figure 4.63 and pages 246 - 248 of Ofcom's Communications Market Report 2009: http://www.ofcom.org.uk/research/cm/cmr09/cmr09.pdf

[62] See: http://www.btplc.com/inclusion/Needhelp/BTBasic/BTBasic.pdf for more information

[63] See section 3 of Review of the Universal Service Obligation, Ofcom 14 March 2006: http://www.ofcom.org.uk/consult/condocs/uso/uso_statement/statement.pdf

[64] See: http://www.ofcom.org.uk/telecoms/ioi/bulletins/consumers/consumer_oct09.pdf

[65] See: http://www.thisismoney.co.uk/bargains-and-rip-offs/broadband-and-phones/article.html?in_article_id=486325&in_page_id=182&expand=true#StartComments

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households to be around one million in five years' time. Even if the BT Basic subscriber base does not increase beyond its current level of 600,000, that would represent 60% of fixed only users in 2015.

210. We have already set out, above, that there is no evidence to suggest that lower MTRs result in lower retail prices for fixed to mobile calls. This is important in analysing distributional effects of lower MTRs, because, for calls outside of the BT Basic inclusive calling bundle, BT's standard pricing, including its standard calls to mobiles prices, apply.

211. Ofcom argues that, even if calls to mobiles retial prices do not fall, fixed users would nevertheless benefit from lower MTRs, since their Communication Provider would be obliged to pass through a reduction in costs in response to competitive pressures [reference].

212. However, the competitive process clearly does not apply to the BT Basic service. That is a creature of regulation, not competition. If BT were not required to provide the tariff under the USO arrangements, it would not do so. It does not seek customers for BT Basic and nor does it face competition for them. BT has already secured *regulatory* approval to increase subscription charges in line with inflation, a clear indication that it does not face competitive pressures in respect of the provision of BT Basic. There is, therefore, no reason to believe that BT Basic customers would benefit at all from a reduction in lower MTRs. There is no evidence to support the proposition that fixed to mobile prices fall with lower MTRs, and BT Basic subscription charge increases guaranteed by regulatory agreement.

213. Again, Ofcom does not appear to have taken this into account in its distributional analysis.

Are other fixed only customers likely to benefit from a reduction in other charges?

214. It is possible that the minority of fixed only households might benefit from lower MTRs (ie fixed only, non BT Basic households, probably numbering less than ½ million by 2015), but that depends entirely on the extent to which a reduction in fixed operators costs would be passed down in the form of lower subscription charges. This, itself, is a function of the extent to which fixed providers compete for such customers. Ofcom does not appear to have assessed this in carrying out its distributional analysis. However, in its Communications Market Report 2009, Ofcom did observe that:

> *"the average cost of residential fixed access has remained fairly static over the past five years"*[66]

215. During this period, mobile termination rates fell quite dramatically. Accordingly, there is no evidence to suggest that a reduction in mobile termination rates has led to a fall in the cost of residential fixed access.

216. Furthermore, assuming that these households are not eligible for BT Basic, it seems reasonable to suppose that they are not comprised of a disproportionately large number of low income consumers.

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[66] On page 243 in http://www.ofcom.org.uk/research/cm/cmr09/cmr09.pdf

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Conclusion with regard to fixed only customers

217. In summary:

1. There will be fewer fixed only customers than Ofcom suggests;
2. The evidence shows that the standard practice of the large providers of fixed services (ie BT and Virgin) raise retail prices in the face of falling MTRs, therefore reducing the likelihood that the claims in Ofcom's press release will be met;
3. There is no competition for what is likely to be the majority of fixed only customers - BT Basic customers will not see a fall in subscription charges; and
4. The evidence does not support the proposition that other fixed prices, eg subscription charges, are likely to fall.

218. In this respect, it is worth noting that H3G, which has a clear preference for pure LRIC, had commissioned a welfare analysis in response to the preliminary consultation. The following was concluded in this study:

> *'The loss of consumer surplus to mobile consumers (between -£385m and -£974m) would be outweighed by the gain to fixed consumers (£900m) if call externalities are positive'*[67]

219. Notably, this study assumed complete pass through of MTRs to fixed to mobile retail charges (footnote 224 refers). Given the sound evidence against pass through presented above and the absence of call externalities, the reliance on the benefits for fixed consumers seems highly questionable.

Distributional effects on mobile only and fixed only households

220. In summary, the number of mobile only households is increasing over time and by 2015, it is reasonable to think that at least 15% of households, or around 3.7m, will be mobile only. Ofcom's research reveals that mobile only users are more likely to:

- in lower income and socio-economic groups
- be pre-pay;
- be sensitive to the cost of mobile ownership
- already be part of on-net calling circles
- make more calls than they receives; and
- use call back

221. In addition, O2 is the most popular mobile communication provider used by mobile only households, so we have a particular interest in how these customers might be affected by a reduction in MTRs.

222. In O2's submission, mobile only households are likely to be adversely affected by a fall in MTRs. As we have explained above, net recipients of calls would, other things being equal, be

[67] Ofcom second consultation, paragraph A13.121.

expected to have to pay more to maintain their mobile ownership following a reduction in MTRs. However, mobile only users are sensitive to the cost of owning a mobile, and some may choose, instead, to leave the market altogether. These customers already exploit on-net calling circles, and so are less likely to take advantage of any reduction in off net call prices (even if they do fall; see above for reasons why they may not). Mobile only customers also make use of call back, so if MTRs and the price of off net calls diverge, these customers are likely to make use of arbitrage opportunities. This would encourage mobile communication providers to introduce charges for receiving calls.

223. For all these reasons, a reduction in MTRs will be unequivocally bad for mobile only customers.

224. Conversely, the number of fixed only households have fallen over time and there is nothing to suggest that that reduction will not continue. Indeed, changes in the provision of BT's social tariffs are likely to have given the decline impetus. O2 submits that by 2015, the number of fixed only households is likely to be a third of the number of mobile only households. Further, a significant proportion of these, most likely the majority, will be on BT Basic, the social tariff that BT is required to provide, which is immune from competitive pressures and which is subject to Ofcom sanctioned increases in subscription charges. Since Ofcom cannot reasonably expect reductions in MTRs to lead to fixed to mobile retail call charges, the only reasonable conclusion that can be drawn is that the majority of fixed only households will not benefit at all from a fall in MTRs.

225. It is possible that the minority of fixed only households might benefit from lower MTRs, if subscription charges fall as a result. However, the evidence suggests that fixed subscription charges have remained fairly static, so Ofcom cannnot reasonably expect them to go down. Furthermore, assuming that these households are not eligible for BT Basic, it seems reasonable to suppose that they are not comprised of a disproportionately large number of low income consumers.

Conclusion on distributional effects

226. In conclusion, the evidence strongly suggests that Ofcom is wrong to suppose that lower MTRs are unlikely to have a significant distributional effect.

227. Ofcom ignores the fact that this is the first time MTRs would go below costs. We agree with Ofcom that termination rates influence the structure and level of retail prices, and that the level of the termination rate has an impact on the take-up and usage of mobile phones. While such relationships do exist, Ofcom has failed to undertake a proper analysis of how the mobile communication providers would seek to recover lost revenues in practice, given the strategic interaction with other players and consumer preferences inherent in the UK market

228. On prices, the evidence strongly suggests that competition in the fixed market is not working to achieve lower fixed to mobile call prices, even where MTRs have fallen; the reverse is true. There is nothing to suggest that this trend will not continue. The mobile retail market is more complex; various customer types use mobiles differently. Ofcom cannot say that all subscription charges will increase. However, more importantly from a distributional point of view, a significant proportion of customers are sensitive to the cost of mobile ownership, and mobile

communication providers would not be able to increase subscription based charges for them, but would have no alternative to putting up calls charges.

229. O2 maintains that the necessary conditions could exist in the UK for the introduction of charges to receive calls, particularly with pure LRIC based charge controls, and Ofcom is wrong to discount the possibility.

230. On mobile ownership, Ofcom's analysis fails to satisfy the "profound and rigorous" test it is required to meet. There is substantial empirical and survey evidence of sensitivity to the cost of mobile ownership and consequential reduction in mobile take up following a reduction in MTRs. Again, the position is made relatively worse with a move to pure LRIC based charge controls.

231. There are likely to be a smaller number of fixed only households than today, most of whom cannot reasonably be expected to be benefit at all from lower MTRs. The minority might, but only if subscription charges start to fall. However, these have been resistant to competitive pressures to date and no evidence is presented to suggest why this would change.

232. On the other hand, there are likely to be far more mobile only households, comprising a disproportionately large socio economic group DE share. These customers are unlikely to benefit from lower call prices, because they are generally insensitive to call prices. They will suffer as mobile communication providers seek to extract fixed payments to replace mobile termination revenues, in the form of the removal of any handset subsidies, time expired credit and, in circumstances where customers are sensitive to the cost of mobile ownership, higher call charges.

233. Some mobile customers will continue to own a mobile, and simply pay more. That would represent a distributional change brought about by lower MTRs. To the extent that other customers decide not to have a mobile at all, the number of mobile only households could fall. But that is hardly a cause for celebration; in regulatory terms there would be a social cost in the form of a negative network externality, brought about by lower MTRs.

E. Cost of Capital

234. Ofcom sets out its analysis on cost of capital in Annex 8 of the consultation document.

235. While the midpoint estimate of 7.6% does not seem out of line with other recent determinations, Ofcom has not provided detailed analysis in support of any of its parameter estimates, with the exception of its analysis of the mobile communication providers' beta. Rather, Ofcom implicitly or explicitly relies on analysis conducted in the context of previous determinations (particularly in relation to the generic parameters). Furthermore, Ofcom's choice of parameter estimates is not particularly transparent, and would benefit from further explanation, particularly its determination of the lower-bound estimates for certain parameters, most notably beta and gearing. These lower-bound estimates result in a lower bound for the WACC that falls below Ofcom's own lower-bound estimate for BT's copper access WACC, which we regard as counterintuitive.[68]

236. The following issues appear to be weaknesses in Ofcom's analysis.

- **The lower bound of Ofcom's beta range does not seem justified**—the lower bound for the asset beta falls below the lower bound for the beta of copper access services, which we regard as inconsistent with evidence on the relative risks of fixed and mobile activities.

- **Ofcom has not considered all of the information available to it when estimating the beta**. Ofcom relies solely on one point of reference—the Vodafone Group—when estimating the beta for the mobile communication providers. This is likely to result in a less robust estimate than one which takes into account other available sources of information. For example, other regulators have previously examined a range of evidence when estimating the beta for mobile activities.[69] At the same time, it is not clear whether an estimate based on disaggregation of the Group beta or on alternative comparators would lead to a higher or lower beta.

- **Ofcom's gearing estimate is likely to be overstated**. Ofcom does not appear to have taken into account the effect of the financial crisis when determining its gearing estimate. This is important because, to the extent that recent declines in Vodafone's market capitalisation can be seen as a temporary phenomenon, a gearing measure based on current market prices might result in an overestimate. This is evidenced by the similarity between Ofcom's gearing estimate for the mobile communication providers and its estimate for BT's copper access services, which, as we have set out above, appear counterintuitive. In addition, the reliance on Vodafone Group's gearing may also result in an overstatement of gearing since the Group's international diversification may lead to a higher debt capacity than that of a stand-alone subsidiary.

[68] A comparison of lower and upper bounds assumed in these determinations is provided in the Appendix.
[69] For example, TRA Bahrain examined evidence on a number of listed fixed and mobile telecoms operators when estimating the beta of two mobile operators (Telecommunications Regulatory Authority of Bahrain (2009), 'Cost of Capital: Determination', November 3rd).

Review of Ofcom's analysis of systematic risk

237. Ofcom has estimated the equity beta for the UK mobile communication providers based on market data of their parent companies (Vodafone Group, Deutsche Telekom, France Telecom, and Telefónica). As part of its assessment, Ofcom commissioned a study from The Brattle Group, which included detailed statistical analysis of the parent companies' betas. Referring to the results of this study, Ofcom states:

> "Vodafone's 2 year beta against the FTSE All-Share was 0.84, and this is the value on which we would place most weight."[70]

238. Ofcom goes on to propose a range for the equity beta of 0.7–1.0, but does not provide a justification for the upper and lower bounds for the equity beta range. However, Brattle's estimate of Vodafone Group's equity beta is close to the midpoint of the range.
The asset beta range implied by Ofcom's estimates is 0.46–0.75.[71] This is a wide range, which encompasses values of beta that could correspond to a number of different business profiles. Since no explicit justification is provided for the range, it is not clear that Ofcom's set of proposed values is appropriate.

239. In particular, two aspects of Ofcom's beta assessment are questionable:

- the value of Ofcom's proposed lower bound for the beta;
- Ofcom's reliance on Vodafone Group's beta when estimating the beta for UK MNOs.

The lower bound of Ofcom's asset beta range does not seem justified

240. Ofcom's lower bound of 0.46 is below the lower bound for copper access services set during the May 2009 consultation (of 0.54). This does not seem plausible given the available evidence on the relative risk of fixed and mobile activities, which suggests that mobile activities are exposed to the same level or higher risk than fixed-line activities. Hence, the lower bound for mobile activities should not fall below the lower bound for fixed-line activities, and, in fact, are likely to be higher.

Relative risk of fixed line and mobile activities

241. Certain business characteristics of fixed-line and mobile activities, together with empirical evidence put forward by international regulators, suggest that the risk exposure of mobile activities is at least the same as, or higher than, the risk of fixed-line activities, particularly copper access services.

242. From a conceptual perspective, there are attributes of mobile activities that would lead to a reasonable expectation that these are no less risky than fixed-line activities. In particular, mobile termination services are charged on a per-minute basis, implying that termination charges

[70] See paragraph A8.116.
[71] Ofcom estimates the high value for the WACC on the basis of an equity beta of 1.0 and gearing of 25%; it estimates the low value for the WACC on the basis of an equity beta of 0.7 and gearing of 35%.

are exposed to usage volatility and hence higher volatility of demand. This in turn implies a risk exposure that is the same or greater than certain fixed-line services (eg, copper access services), which are exposed only to demand risk stemming from changes in the number of connections, rather than the usage of those connections.[72]

243. International regulators have also historically taken the view that the systematic risk exposure of mobile activities is at least as great as that of fixed-line activities. For example, analysis by the European Regulators Group in 2008 found that European telecommunications regulators have typically assumed a higher cost of capital for mobile activities than for fixed-line activities:

> "Generally speaking it can be observed that [national regulatory authorities] use a different WACC value for regulated companies in the fixed and mobile markets and that the WACC used for the latter is usually higher than the one used for the former. [Our analysis] shows that there is a general coherence in the [countries under consideration] in terms of gap [sic] between the decisions on WACC for fixed networks and the decision on WACC for mobile networks."[73]

244. The above suggests that the beta for fixed-line activities can be considered to be a lower bound for the beta of mobile activities.

Ofcom's findings on the risk of fixed-line activities

245. Ofcom's May 2009 detailed analysis of BT's cost of capital provides a useful benchmark for the systematic risk of fixed-line activities,[74] which can in turn be seen as a lower bound for the systematic risk of mobile activities. In this analysis, Ofcom concluded that the beta of copper access activities lay below that of BT's other fixed-line activities. Hence, the beta for copper access activities can be seen as a highly conservative lower bound for the beta of mobile activities.

Implications for beta

246. In estimating the WACC, a range for the beta is typically used because there is a degree of uncertainty inherent in beta estimation. Such a range indicates a set of reasonable values within which the 'true' beta could plausibly lie.

247. The evidence discussed above suggests that the 'true' beta for mobile activities would not plausibly be expected to fall below the beta for BT's copper activities, and Ofcom has not provided any evidence to the contrary. Hence, at a minimum, the beta range for MNOs should be

[72] See, for example a report prepared for Ofcom during the 2005 LLU/WLR consultation. PricewaterhouseCoopers (2005), 'Disaggregating BT's Beta', June, p. 10. A detailed quantitative assessment of risk differentials between fixed and mobile activities would require further analysis.
[73] European Regulators Group (2008), 'Regulatory Accounting in Practice 2008, September, p. 26.
[74] The subsequent WLR decision adopted the same approach towards estimating the cost of capital, and arrived at the same estimates (see Ofcom (2009), 'Charge controls for Wholesale Line Rental and related services', October 26th, pp79.

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bounded at the lower end by Ofcom's lower bound for the beta for copper access activities (at 0.54).

248. The 'true' beta for mobile activities is likely to lie above this level. For example, BT's non-copper access divisions also focus largely on wholesale fixed-line activities, most of which are subject to regulation and may therefore be exposed to comparable or less risk than mobile activities. Moreover, Ofcom has not provided any evidence to suggest that mobile activities are less risky than fixed-line activities in general, which could be used to support a beta below Ofcom's beta estimate for the BT Group (at 0.61).

249. A key driver of the lower bound for the asset beta is the high gearing estimate employed by Ofcom. This is discussed in section 3.1.

Reliance on the Vodafone Group beta alone introduces uncertainty, but not necessarily bias

250. Ofcom states that it largely relies on a single comparator—the Vodafone Group—to estimate the beta of the four UK mobile communication providers.[75] This is in contrast to its approach during the 2007 consultation, where it was able to rely on two comparators: mmO2 and Vodafone. In that context, Ofcom noted that it placed more weight on 'O2 rather than Vodafone, since doing so limited the difficulties associated with the impact of [the latter's] overseas activities'.

251. Indeed, Vodafone remains an internationally active company, with substantial non-UK operations. In 2008, 85% of its revenues came from outside the UK. Accordingly, it seems that observed Group beta may not be an adequate proxy for the UK mobile communication providers (ie, this approach may introduce uncertainty into the beta estimate).

252. In light of this, Ofcom could have made use of additional evidence. For example, when estimating the beta for mobile activities, other regulators have examined evidence on listed international mobile-only companies.[76] Alternatively, Ofcom could have disaggregated Vodafone Group's beta. Such an approach was put forward by Ofcom's advisers in the context of the 2005 LLU/WLR determination, where it was also the case that no direct UK comparators existed. The absence of such an assessment could be seen as a gap in Ofcom's overall analysis.

Ofcom's gearing estimate may be overstated

253. Since the previous consultation, Ofcom has increased its notional gearing for a UK MNO from 10% to 25–35%. It justifies this on the basis of the observed increase in the mobile communication providers' gearing levels (particularly Vodafone's) since 2007.[77] However, the following indicate that this higher gearing range (particularly the upper bound) may have been set inappropriately high:

[75] See paragraph A8.116.
[76] See, for example, Telecommunications Regulatory Authority of Bahrain (2009), 'Cost of Capital: Determination', November 3rd.
[77] See paragraph A8.117.

- First, the upper bound for the notional gearing level is the same as the level set by Ofcom for Openreach in the May 2009 determination. For a mobile operator to adopt the same level of gearing as BT's copper access business seems unlikely to be reasonable because a key driver of a company's debt capacity is the variability in its cash flows. As described above certain business attributes of fixed-line and mobile activities suggest that the former might be exposed to less demand risk than the latter. Other things being equal, this would point to a lower optimal gearing for mobile operators.

- Second, the observed increase in gearing may have been driven by falls in market capitalisation resulting from the financial turmoil, rather than an increase in the quantum of debt per se. To the extent that this is the case, at least a part of the observed increase in gearing is likely to be temporary; equity valuations are likely to recover as the crisis unwinds, resulting in lower gearing. Hence, under current conditions, a forward-looking gearing estimate should be lower than spot gearing.[78]

- Third, it might be reasonable to expect that the Vodafone Group would be able to sustain a higher level of gearing than the weighted average gearing of the stand-alone leverage of each of its subsidiaries. Debt capacity—and therefore implicitly gearing—depends, among a number of other factors, on total risk (ie, not just systematic risk). Vodafone's international diversification might allow it to mitigate some of the idiosyncratic risk of its national subsidiaries. Hence, a consideration of Vodafone UK's gearing on a stand-alone basis would have to reflect the loss of these diversification benefits, which would result in a lower gearing.

[78] This effect may also be exacerbated by the measurement of gearing on the basis of the book value of debt.

F. Network cost modelling

254 The remainder Annex 8 of the consultation document contains details of Ofcom's network cost modelling. In this part of our response, we describe certain counterintuitive results that the cost model produces, and explain that some of the significant changes to the model are inconsistent with other aspects of Ofcom's case for charge controls based on pure LRIC.

255 Specifically, we discuss:

- inconsistent and counterintuitive results generated by the model under pure LRIC;
- significant differences in the site requirements predicted by the model and historical site volumes;
- arbitrary assumptions in the model about MEA price profiles;
- the model's ambiguity with respect to changes in the WACC;
- lack of evidence to support the market share assumption in the model; and
- the need to ensure that volume assumptions are consistent with the likely market outcomes resulting from the MCT rate reduction.

256. As a general comment, O2 observes that Ofcom has not been fully transparent in explaining the properties of the current version of the model.

Ofcom's model produces some counterintuitive outcomes

257. The model appears to be structurally consistent with the pure LRIC approach as defined by the European Commission. In effect, under this approach, only the costs relating to terminating traffic received from third parties are captured under the pure LRIC approach and the design of the model implies lower economy-of-scale effects relative to the LRIC+ approach. However, pure LRIC, as currently derived, is a proxy, rather than an accurate reflection, of marginal costs, and does not fully address the issue of cost causality, discussed in Annex 12 of Ofcom's consultation.[79]

258. While the model macro seems to follow the steps set out in Ofcom's consultation, the model produces inconsistent and counterintuitive results under the pure LRIC approach, which may be indicative of further issues in the model construction. The following observations can be made.

> ***The impact of the WACC on termination rates is ambiguous***. A reduction in the WACC leads to an increase in 2G termination rates under pure LRIC but a decrease in under LRIC+. An increase in the WACC has the opposite effect. A reduction in the WACC also leads to a fall in 3G termination rates under pure LRIC but an increase under LRIC+. Ofcom has failed to explain this unexpected outcome, stating only that it finds that 'a higher or lower WACC has only a small impact upon the results for both LRIC+ and pure LRIC.'[80]

[79] Paragraph A11.26. As discussed in other parts of this response, capacity-based costing would be the conceptually appropriate approach to reflect cost causality, if concerns about linear wholesale charges cab be substantiated

[80] Paragraph A11.26.

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The pure LRIC model estimates termination rates to be lower under the higher WACC scenario than under the lower WACC scenario when high voice volumes are also assumed. This anomaly does not occur for the low-volume assumption.

Predicted OPEX under the pure LRIC mode—the pure LRIC approach also results in the model predicting negative operating costs, for example, for 8Mbits, 16Mbits and 32Mbits microwave-link assets and backhaul base units in particular (random) years. These results are unexplained by Ofcom (unlike site upgrade OPEX). This problem does not occur under the LRIC+ model and highlights further problems with the pure LRIC approach.

259. In light of these observations, Ofcom needs to revisit the model construction.

The gradient of projected site requirements is not consistent with the actual network deployment

260. The growth in sites predicted by the model for historical years differs significantly from the actual average annual changes in sites reported by MNOs, despite both calibration of the model and Ofcom's claim that the aim of the asset count calibration exercise has been to ensure that the high level asset counts produced by the model are consistent with average operator data.[81]

261. As shown in Annex 10 of the consultation, the slope of the number of sites differs substantially from the MNO average, indicating that further calibration is required for the model to be robust.

262. The number of sites required over time appears to be driven by several factors, with a key determinant of the gradient being the percentage of daily traffic during the busy hour. In its consultation, Ofcom acknowledges that:

> *"The proportion of traffic in the busy hour is a key metric, which directly impacts the size of network needed to meet capacity requirements. In the 2007 model we assumed 10% for all traffic types from 2000/01 onwards. After reviewing MCP data submissions, we have decided to revise these figures downwards:*
>
> *9% for all non-data services in 2004/05 and 2005/06.*
> *8.5% for all data services in 2004/05 and 2005/06.*
> *8% for all non-data services from 2006/07 onwards.*
> *7.5% for all data services from 2006/07 onwards.*" [82]

263. Ofcom does not provide any indication how the mobile communication providers' data submissions have been used when revising this assumption; this seems surprising, given the apparent inconsistency between forecast and actual sites, and suggests that this revision may not be appropriate.[83] Indeed, sensitivity testing indicates that the potential underestimation of sites relative to actual has an appreciable impact on the derived MCT rates.

[81] Paragraph A10.10
[82] Paragraph A8.69
[83] Further to traffic in the busy hour, the gradient of sites over time is derived from traffic forecasts, and engineering parameters such as annual change in radii and traffic split by cell site.

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Changes in the MEA price development assumptions appear arbitrary and have a considerable impact on the results

264. For certain assets and in particular years, Ofcom assumes rapid decreases in MEA prices without providing firm evidence to support these assumptions, simply stating that it has:

> *"based these calculations on a Modern Equivalent Asset (MEA) approach, which takes into account changes in the investment and maintenance costs associated with each asset type, as well as technological developments that improve asset productivity. For example, an asset which is expected to halve in price and double its effective capacity over a given period of time would have an MEA investment price at the end of that period equal to a quarter of the original price. This approach has not changed since the previous version of the model".*[84]

265. In some cases the MEA price profile differs substantially from the trend assumed at the previous review. While some assets are assumed to have small and continual declines in MEA prices over the period, a number of key RN assets show a stepped decrease in their MEA price between 2004/05 and 2008/09 of up to 35% per annum. The periods before and after this stepped decrease show only small changes in the MEA price, and it remains unclear why prices are assumed to fall so significantly and for these particular years. Furthermore, Ofcom's assumption of stepped changes with certain prices for a short period of time going forward is not substantiated in the consultation.
The sudden decline in prices has a knock-on effect on the MEA price in later years, affecting the unit cost profile derived in the Economic module, and hence, termination rates. It appears important that Ofcom considers carefully any assumptions made about MEA price trends and provides analysis and evidence in a transparent manner to support this. Given that the assumptions are necessarily arbitrary to some extent, conservative assumptions would appear to be consistent with the main objective to ensure full cost recovery.

266. To illustrate the importance of these assumptions, if all annual declines of 35% were reduced to 25% and all annual declines of 30% were reduced to 20%, the blended termination rate under pure LRIC would increase from 0.51p to 0.54p, while the LRIC+ blended termination rate would increase from 1.54p to 1.61p.[85]

The model produces ambiguous results with respect to the WACC

267. Abstracting from concerns over the methodological approach used to determine the WACC (discussed elsewhere in the response), in Annex 11 Ofcom demonstrates the sensitivities of pure LRIC and LRIC+ to the WACC assumption. In summary, Ofcom concludes that there is a relatively limited positive relationship between WACC and the MCT rate under LRIC+, and that the pure LRIC is insensitive to the WACC. There are two gaps in Ofcom's consultation which warrant further discussion. First, its choice of presenting the results to only one decimal place does not reveal some counterintuitive sensitivities, particularly with pure LRIC, as explained below. Second, Ofcom does not elaborate on how the WACC assumption features in the model or what drives the apparent low sensitivity.

[84] ParagraphA8.89
[85] The 20% and 25% figures in this example are arbitrary and used to illustrate the impact of a change in the MEA price profile. This result is based on a model containing a formulaic error in the Network module.

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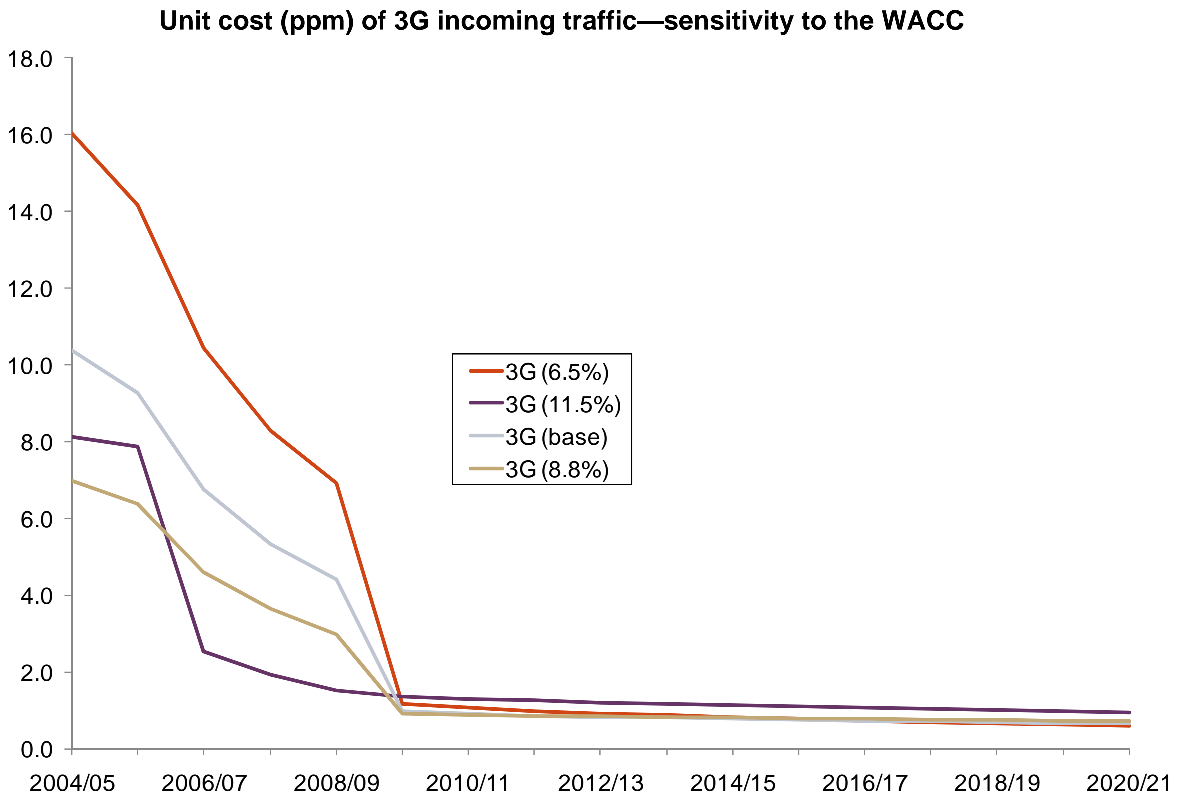
268. Ofcom goes on to make the following statement:

> *"Both 2G and 3G voice are seen to have a decline in unit costs over time: this is due to the declining unit costs of modern equivalent assets which, when using economic depreciation, leads to a fall in unit costs over time. The significant reduction in the unit costs between 2008/9 and 2009/10 is due to a reduction in the assumed WACC for an average efficient operator. 3G services have a higher cost than 2G services until 2009/10, after which 3G services are cheaper. **This is due to the more rapid decline in the costs of modern equivalent assets for 3G and the greater impact of the change in WACC upon 3G assets**."*[86] (emphasis added)

269. This statement by Ofcom appears conceptually intuitive, and as such is consistent with Figure 29 presented in the consultation. However, further testing of the model shows that Ofcom's assertion is not backed up by the model's behaviour. While the decline in the 3G unit costs is, as expected, driven by declining asset prices, the unit cost profile derived by the economic depreciation algorithm (predominantly driven by MEA price assumptions) shows that the cost of capital has an ambiguous impact on the 3G termination rate going forward, as illustrated in the graph below.



[86] Paragraph A11.4.

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270. Furthermore, it is not clear what Ofcom means by 'the greater impact of the change in WACC upon 3G assets'. It appears that a higher WACC (within Ofcom's range) results in lower unit costs per element of the main 3G assets.[87] Consequently, for the relevant time period, the higher WACC results in a lower termination unit cost.

271. This perverse outcome results from the third stage of the ED calculation, whereby the third component of unit cost is added to recover the remaining unrecovered costs due to input costs being different in the earlier years from that in the final year. While it is acknowledged that the ED algorithm, as such, has previously been validated by the Competition Commission, the algorithm has properties that may suggest revisiting the assumptions underlying the observed unit cost profile, and the consequent low and ambiguous sensitivity to the WACC:

- while it is appropriate to assume that the WACC changes over time, this carries the risk of producing a cost-recovery profile that does not match the charges that operators were allowed to charge in the previous years;
- the ambiguous sensitivity to the WACC is not consistent with the calibration benchmark—that is, the CCA/HCA module where the cost of capital has the expected impact.

The admin cost calculation

272. Ofcom's model does not incorporate changes in the WACC to the administration cost mark-up. The mark-up (derived in pages 112–113 of the consultation Annexes and applied in the Economic module) is constant and implicitly assumes a pre-tax nominal WACC of 10.3%, which corresponds with the base-case real WACC (7.6%). It would seem appropriate to include WACC sensitivities in the administration cost mark-up.

Ofcom has not disclosed any analysis to underpin the change in the market share assumption

273. The assumption of the long-term market share of the hypothetical efficient entrant has a significant impact on the MCT rate derived from the LRIC+ model; it is, therefore, disappointing that Ofcom provides little evidence to underpin the return of the market share assumption back to 25%. As a matter of regulatory consistency, any arbitrary changes to the regulatory model midway through the lifetime of the network investments result in further uncertainty for regulated firms.

274. Conceptually, the market share assumption reflecting the minimum efficient scale (MES) should be estimated as the point in the average total cost curve beyond which no significant economies of scale can be achieved. Ofcom does not disclose any significant analysis in this respect; rather, the efficient scale is set equal to the even split of the mobile market between the main MCPs.[88]

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[87] Based on sensitivity testing with Ofcom's model, it appears that, with a significantly higher WACC, the slightly higher unit cost is driven by costs attributable to network elements that are shared between 2G and 3G voice termination.

[88] Ofcom (2010), op. cit., para 9.54.

275. More specifically, there are sound arguments suggesting that Ofcom's reliance on the observed market share may not be adequate, and that further analysis would seem necessary to justify any changes to the existing model:

- Ofcom does not seem to have estimated the cost curve in order to determine the MES of a hypothetical entrant. Rather, it claims that 'this simplification fits the facts reasonably well'.[89] It is clear from Ofcom's market review that the decline in unit costs is partly driven by the decrease in fixed costs—eg, sharing of network elements.[90]

- Ofcom has not substantiated the mechanism through which the MES can be implied through average market share, rather than volumes in absolute terms, which is relevant since the market size is expected to expand in terms of volumes.[91,]

- The merger between Orange and T-Mobile could underpin the 25% MES market share assumption insofar as the rationale for the merger was to acquire the MES, and there was evidence that sustainable returns could not be earned with a lower market share. However, there is no evidence of scale being the main factor underpinning the merger. By the same token, it should be noted that both Vodafone and H3G are active in the market with a market share below 25%.[92]

- Ofcom fails to explain why its analysis departs from the European Commission recommendation in setting an MES above the target value of 20%. It is the case that the Commission's recommendation allows national regulatory authorities (NRAs) to deviate from its recommended approach, but only on the basis that NRAs 'can prove that the market conditions in the territory of that Member State would imply a different minimum efficient scale'.[93] Ofcom does not explain why the market conditions in the UK would imply a different MES. On the contrary, it argues that the asymmetries between the UK market and other markets in Europe are reduced as a result of the merger.[94]

- Ofcom should recognise that the long time period employed in the model implies that some of the 2G/3G customers may be expected to migrate to alternative platforms, which would further suggest applying a more conservative approach to the market share assumption.

- Finally, it is noted that Ofcom expects an efficient entrant to gain a high market share more rapidly than previously assumed, at a time when churn rates have generally been decreasing and the market is more mature.

[89] Paragraph9.54.
[90] Paragraphs 9.47, 9.48 and 9.49.
[91] Paragraphs 9.47, 9.48 and 9.49.
[92] Ofcom (2008), 'The Communication Market', p. 232, paragraph 4.2.4.
[93] European Commission (2009), 'Commission staff working document *accompanying the* Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU Explanatory note, May 7th, p. 26.
[94] Paragraph 7.108

Consistency with model assumptions and likely market outcomes with lower MTRs

276. Ofcom's cost model does not incorporate any retail market implications resulting from different levels of MCT rate (discussed elsewhere in O2's response)—notably, the following.

- Ofcom's voice traffic forecasts appear high given the recent volatility in voice volumes (see p. 82 in Annex 8). Furthermore, as set out above in the discussion on relative elasticities of demand, there is significant evidence to suggest that lower termination rates, even those derived from the pure LRIC, would not result in significantly higher usage;

- The decreasing MCT rates could result in lower levels of handset subsidisation, and hence lower smartphone penetration (and data traffic) relative to the current adoption profile:

- as discussed above, pure LRIC implies that more fixed and common costs would need to be recovered through the pricing of data services, which would be expected to result in lower traffic volumes. Furthermore, the inability to recover any common costs through termination would lead to less handset subsidisation. Aside from the question of whether consumers would cease to use mobile phones altogether, lower handset subsidies would be expected to result in reduced take-up of advanced handsets such as smartphones; and

- as operators have managed to exceed the level of efficiency that was originally envisaged in the 2007 model, (as demonstrated by Ofcom) MTRs have bee higher than Ofcom's estimation of costs over the past years. mobile communication providers will have channelled some of this additional revenue in handset subsidies, which may partly contribute to the observed profile of smartphone take-up. Future growth may therefore be lower than history suggests.

- Hence, given the step changes in termination revenues under both pure LRIC and LRIC+, the historical data usage patterns should be interpreted with care in traffic forecasts;

- Indeed, Ofcom's assumption of average data usage amongst 2G and 3G customers is simply wrong. In fact, a small minority of customers are responsible for the majority of data usage, and the majority of customers with 3G handsets make no or little use of data services. O2 has recently taken steps to curb the excess use of data services[95]. Accordingly, Ofcom needs to consider again its assumptions about the growth in mobile data traffic; and

- The assumption about total SIM growth does not seem to take into account the likely decrease of pre-pay SIMs under lower MTRs; in light of this, the updated forecast that the number of subscribers will reach 83.8m by the end of 2020/21 seems too high.

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[95] See, for example: http://news.bbc.co.uk/1/hi/technology/10285910.stm

ANNEX

Question 3.1: *Do you agree with our views on whether and when new MCPs should form separate markets? Are there any factors we have not considered which should inform this view?*

O2 agrees that this is the logical conclusion if Ofcom's analysis of market definition and significant market power holds

Question 4.4: *Do stakeholders agree with our proposed SMP assessment for the period until 2014/15?*

it seems to O2 that if Ofcom's assumptions (that price elasticity of demand for subscription is low, whilst that for calls is high, such that lower termination rates would increase output) are correct, there would be a competitive constraint on mobile termination rates, such that regulation would be redundant.

This is because mobile communication providers would want to enter into a series of bilateral agreements with each other for lower (or even zero) termination rates, even if they were required to provide termination services to fixed providers on the same basis, in order to increase ARPU and consequently profitability. In other words, in the scenario that Ofcom describes, mobile communication providers would have a private economic incentive to charge lower bilateral termination rates. In this way, they would be able to increase returns by increasing subscription charges and lowering call charges.

Furthermore, as fixed to mobile traffic falls over time, both in absolute terms and relative to mobile to mobile traffic, the incentive for mobile communication providers to charge lower termination rates would increase (because proportionately less termination revenue would come from fixed line operators). That is, the greater the proportion of mobile to mobile traffic (of all mobile terminated calls), the greater the incentive on mobile communication providers to charge lower termination rates and, therefore, the greater the competitive constraint on termination rates (if Ofcom's assumptions about relative elasticities of demand are correct). Ofcom's market data reveals that fixed to mobile traffic has, in fact, decreased over time in both absolute and relative terms.

Thus, if Ofcom's assumptions about price elasticity of demand are correct, then mobile communication providers are constrained in setting MTRs, and do not have significant market power.

Question 5.1: *Do stakeholders agree with the identified harm to consumers of excessive termination rates in the period 2011 to 2015?*

O2 does not agree that high MTRs result in high prices for calls to mobiles. As we have shown in this response, mobile to mobile calls are often less than MTRs, and fixed to mobile retail charges have increased markedly since 2007, even though MTRs have fallen, significantly.

Question 7.1: *do stakeholders agree with Ofcom's view regarding the need for transparency in MCT charges?*

The proposal that Ofcom should be notified of changes to MTRs five days before notification to other communication providers is new. Ofcom has not identified any detriment that might be remedied by this. Therefore, this proposal has not been objectively justified and cannot be implemented.

Question 7.2: *Do stakeholders agree with our preliminary view on application of a condition requiring network access to be provided on F&R terms?*

If the four national mobile communication providers are to be subject to cost based charge controls, then so should other mobile communication providers. The F&R approach is, essentially, arbitrary, because it would allow the non-national mobile communication providers to charge MTRs without reference to their own costs. This would distort competition in downstream retail markets.

Question 7.4: *Do stakeholders believe that there are any circumstances or situations where the UK differs from other EU markets to the extent that would support a departure from following the EC Recommendation?*

As we have explained in this response, the premise of this question is incorrect, in law. Ofcom is not required to adopt the approach set out in the Recommendation, unless there are good reasons to depart from it. It is, instead, required to have regard to the totality of its legal duties. Those duties, which are derived from the European regulatory framework and the Communications Act 2003, oblige Ofcom to undertake a proper balanced analysis of the alternative means of setting the price controls taking into account the factors prescribed in the Directives and the 2003 Act.

In any event, Ofcom is wrong to suggest in paragraph 7.108 that the merger between T-Mobile and Orange might impact on profitability in the UK. As Ofcom is aware, the merger was approved on the basis that it would not significantly impede effective competition.

Question 7.5: *do you agree with Ofcom's proposals for its preferred set of remedies for the provision of MCT services?*

No. As we explain in this response, Ofcom's efficiency and distributional analysis is deficient in many respects. The efficiency analysis rests on assumptions about price elasticities that are not tested (nor consistent) with empirical evidence. To the extent that mobile communication providers are unable to recover common and fixed costs, investment would suffer through pure LRIC based charge controls. There is no reason to think that fixed to mobile prices would fall if MTRs were reduced, or that fixed customers would benefit in other ways. Mobile customers, particularly pre-pay customers would be worse off and many would choose to give up their phones.

Question 9.1: *Do you agree that a four-year period for the SMP remedies is appropriate?*

Yes. This has been the approach that Ofcom has adopted in the past, and no evidence is presented to deviate form it, now.

Question 9.2: *Do you agree with our proposed modelling approach, as discussed in this section, the supporting annexes and the actual model? If not, please discuss the specific proposals you disagree with.*

Please see our comments in this response on Ofcom's modelling.

In addition, we oppose the use of the (1+RPI-*X*) formula, because, as Ofcom notes in footnote 210, a geometric adjustment must be made to the real yearly percentage change. This introduces the possibility of an arbitrary gain or loss, which is entirely avoidable by expressing the charge control in terms of: (1+RPI) x (1-*X*). Such a formulation would deliver Ofcom's objectives, without suffering from the problems associated with the proposed RPI-X approach.

Further, we believe that Ofcom should set the first year charge control to two decimal places, rather than a single decimal place, as Ofcom has proposed. This would remove another potential source of arbitrary gain or loss. Again, we see no advantage in setting the first year charge control to one decimal place; setting it to two decimal places is preferable on the grounds of objectivity.

Question 9.8: *Are MCPs able to provide the information required to demonstrate compliance and for Ofcom to monitor compliance?*

[✂]

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Question 9.9: *Do you agree with the conclusions of our distributional impact assessment?*

No. As we have explained in this response, a move to pure LRIC charge controls would be bad for mobile customers, particularly pre-pay. Many would choose to dispense with their mobile, rather than pay fixed fees. There is no evidence to suggest that fixed customers would benefit; fixed to mobile prices have gone up as MTRs have fallen, and fixed subscription charges have remained static over the last few years. The majority of the small and falling number of fixed only households are likely to be on BT's social tariff, which will be subject to Ofcom approved increases in subscription prices. Conversely, the large and increasing number of mobile only households, with proportionately more lower socio economic DE customers on pre-pay, will suffer.