Part C - Annexes

Annex 20

SP bilateral deals, including the DWP

Introduction

A20.1 The purpose of this Annex is to set out the evidence we have gathered in relation to SP bilateral deals, the largest, and most quoted of which is the DWP agreement with some mobile OCPs over its 080 numbers.

A20.2 A bilateral deal is where an SP directly, or indirectly, negotiates an agreement with OCPs to agree a retail price for calls to its service. The primary example of where this occurs is the zero-rating of a 080 number from a mobile. We noted in Section 15 that some stakeholders had highlighted the existence of these bilateral deals as evidence that SPs were able to exert some control over the retail price charged to callers.

A20.3 Below we have set out:

- what we said on these bilateral deals in the December 2010 Consultation and a brief summary of stakeholder responses on this point;
- an analysis, through specific case studies, of the successful negotiations that have resulted in such bilateral agreements;
- an analysis, again through a series of case studies, of negotiations that have been unsuccessful; and
- finally, in the light of the evidence presented in this Annex, our updated conclusions on this issue.

A20.4 In summary, we conclude that the evidence shows that successful negotiations are rare exceptions even when the company seeking an arrangement is a Government department or major public company. While some agreements have been reached in relation to 080 numbers, none has been secured in relation to calls to 0845 and 0870 numbers. Moreover the agreements that have been reached have not covered all mobile OCPs (although they have encompassed the largest firms). High transaction costs involved in negotiating such arrangements prevent most SPs from attempting to discuss such commercial agreements directly with mobile OCPs. Even in instances where there has been a clear commercial benefit for the OCP, high transaction costs have been incurred, and agreements reached on an individual basis with each mobile OCP, rather than collectively. Existing schemes for zero-rating calls to some numbers from mobiles, such as the one run by THA, serve a genuine purpose, though these have their natural limitations as to who can participate.

A20.5 The evidence supports the existence of the barriers that we identified in the December 2010 Consultation, i.e. transactions costs of negotiating and reaching agreement with a sufficiently large number of mobile OCPs for the SP to achieve its objective of zero-rated calls, and the ability of mobile OCPs to demand origination payments that are significantly above the costs of origination.

Our view in the December 2010 Consultation

A20.6 We previously noted that – with a few exceptions – SPs are currently unable to control the retail price for calls to their service.[1] SPs can select a number associated with a particular retail price for calls originating from BT, but they have no control over the retail price from other OCPs. We found that, when OCPs set their retail non-geographic call prices, they did not have an incentive to fully take into account the preferences of SPs or the impact the chosen price had on SPs (the vertical externality).[2]

A20.7 We noted, however, the existence of a few bilateral agreements between some SPs and the larger mobile OCPs that allowed for the zero-rating of the retail charge for calls to these numbers from most mobiles.[3] There are two distinct categories of these type of arrangements:

- those involving charities and not for profit services, primarily through a scheme run by the THA; and
- those where SPs have directly negotiated a financial arrangement with mobile OCPs to ensure that callers are not charged for 080 calls. The most commonly highlighted example of this second category is the bilateral agreement between the major mobile OCPs and the DWP for the zero-rating of calls to forty of its 080 numbers.

A20.8 In the December 2010 Consultation, we considered whether the vertical externality was addressed by the potential for SPs to directly negotiate with OCPs to secure free calls to their service (see paragraph A7.64). We concluded, however, that the potential for such bilateral agreements did not change our view that a non-geographic number range which is "free to caller" from all OCPs was unlikely to arise absent regulatory intervention. Specifically we noted that:

- there were transaction costs to reaching such agreements, particularly given the number of OCPs, and we noted the mobile OCPs had also acknowledged those transaction costs.[4] We also noted that the DWP is a large SP[5] and the transaction costs for smaller SPs were likely to be significantly higher (particularly in relation to the volume of calls they would expect to receive); and
- that OCPs might be in a position to demand an above-cost and consequently high origination payment from SPs. In particular, in order for an OCP to agree not

[1] For example, in our 2010 SP survey, only 5% of SPs indicated that they had an influence over the retail price of calls to their service. (p.163 of the December 2010 Consultation).
[2] The December 2010 Consultation, paragraph 4.27. This pricing effect was also discussed as part of the 0845/0870 Dispute Determination.
[3] December 2010 Consultation, paragraph A7.64.
[4] In the 080 Dispute Determination, T-Mobile acknowledged the potentially high overhead involved for 080 SPs to negotiate such agreements given the large number of OCPs. Three said that the commercial and legal resources required to negotiate agreements with individual SPs would likely be prohibitive for all but the largest of SPs. Similarly O2 stated that its experience of negotiating terms had been time consuming, and it expected the arrangements for invoicing and collecting payments to be relatively labour intensive. It therefore concluded that, although this is unlikely to cause problems for a small number of individual agreements, it would not be practicable to use such arrangements for large numbers of 080 SPs (see paragraphs A4.60 to A4.65 of that determination).
[5] In 2009-2011, the DWP generally received between 5m and 7m minutes of calls per week to its 080 helplines.

to charge for a call, it might require that any additional origination payment from the SP would not only cover its costs of origination but also in addition outweigh the profits that the OCP is currently making by charging for calls.[6]

Stakeholders' responses to the December 2010 Consultation

A20.9 Vodafone, EE, O2 and Virgin Media argued that the existence of bilateral deals demonstrated that it was perfectly possible for SPs to negotiate free to caller arrangements with OCPs without the need for regulatory intervention, provided that SPs were willing to pay appropriate commercial rates for those calls. They argued that we had failed to take sufficient account of this in our assessment in the December 2010 Consultation.

A20.10 These OCPs noted that they had rarely been approached with proposals from SPs but when they had, the negotiations had been successful, as in the case of the DWP.[7] O2 considered that Ofcom appeared to have accepted SP opinions that they were unable to negotiate with originating providers without testing their assertions.[8] EE and O2 highlighted that there were other examples of successful commercial agreements between SPs and MNOs, for example 0800REVERSE and 08000MumDad. EE noted that it remained open to discussing how to zero-rate other 0800 numbers with individual service providers who contacted them. O2 argued that the existence of successful negotiations demonstrated that any vertical externality that might exist could be easily internalised.[9]

A20.11 These OCPs also referred to the THA scheme and the support they had given to that, arguing that it demonstrated that many calls of social value were already free to caller. They highlighted that they zero-rated these calls without an additional origination charge on those SPs that were part of the THA scheme. EE noted that these arrangements could therefore be characterised as charitable donations.[10]

Ofcom evidence gathering and analysis

A20.12 In response to the above comments, we undertook to gather further information about the existence of these bilateral deals. We contacted a number of SPs and obtained further data, including:

- the DWP;
- the THA and other charities that had zero-rated numbers;
- other SPs that had successfully zero-rated their 080 numbers; and
- other SPs that might have tried to negotiate a zero-rated number.

A20.13 Below we have set out the results of our evidence-gathering. First we set out what we found in relation to those negotiations that were successful, in particular what

[6] The exception might be SPs such as charities, where OCPs may choose to accept a lower (or no) origination payment. For example, some OCPs attributed their zero rating of 080 calls to THA helplines to a desire for corporate social responsibility. 080 Dispute Determination, paragraph A4.81.
[7] For example, O2, December 2010 Consultation response, p.20.
[8] O2, December 2010 Consultation Response, p.20,
[9] O2, December 2010 Consultation Response, p.20,
[10] EE, December 2010 Consultation Response, p. 27,

the negotiations involved and how long they took. This includes the DWP, the THA scheme and other charities as well as the reverse charge services.

A20.14 We have then set out what we have found in relation to negotiations that were not successful, and where SPs have indicated views about why they have not pursued this course of action.

Successful bilateral arrangements

DWP case study

A20.15 Prior to the zero-rating of its 080 calls, the DWP was receiving an increasing number of complaints from callers about the cost of calling its helplines from mobiles. Increasing numbers of the DWP's customers were calling from mobile-only households, and the DWP therefore looked into options for resolving these issues. Previously it had offered customers the option to have a "callback", where one of the DWP operators would offer to call back customers who indicated concerns about the cost of the call. However, we understand from the DWP that this was an often inefficient solution that slowed down their processes. The DWP therefore looked into alternative options to address the problem.

A20.16 The DWP explained that it first approached THA (see below for further details on the role of THA), who began the negotiation process with mobile OCPs. However, it quickly became clear that, given the scale and volumes involved (the DWP had over 70 Freephone numbers at the time) the DWP was unlikely to fit within the parameters of THA scheme. The DWP then undertook to approach mobile OCPs directly and first entered into discussions in January 2009. We understand that the negotiations involved a number of high-profile meetings, including the participation of the Permanent Secretary and Secretary of State at the time. [✂].

A20.17 The DWP indicated that once they had an agreement in place with one of the major mobile OCPs, they were then able to secure agreements with other mobile OCPs. In December 2009, DWP put in place a two-year agreement with six mobile OCPs for selected 0800 numbers to be zero-rated from mobiles from January 2010. The mobile OCPs were O2, Orange, Tesco Mobile, T-Mobile, Virgin Mobile and Vodafone (collectively these firms account for the vast majority of mobile subscribers).[11] The DWP agreed to pay an origination charge of [✂] in exchange for the zero-rating of these calls. In total therefore, the DWP was in negotiation with the mobile OCPs for a period of over 12 months. Note also that small mobile OCPs outside of the arrangements that DWP struck continue to charge for these calls.[12]

The Helplines Association ('THA') Special Freephone Tariff ('SFT')

A20.18 THA is a registered charity, which in 1999 brokered the development of the SFT scheme for not for profit confidential charities through negotiation with mobile OCPs. We understand from THA that the process of negotiating this arrangement took several years. It negotiated individually with each national mobile network operator, and some MVNOs, who signed up to the scheme one by one, with the final national mobile network operator signing up in 2007.

[11] DWP press release dated 5 January 2010. Available at: http://webarchive.nationalarchives.gov.uk/+/http:/www.dwp.gov.uk/newsroom/press-releases/2010/january-2010/dwp007-150110.shtml

[12] For example, Asda Mobile, Lycamobile and Lebara told us that they charge for all 080 calls. Responses to question 4 of our s.135 information request dated 21 October 2011.

A20.19 The scheme works through a specific block of numbers, using the prefix 0808 80. Charities and not for profit bodies that are members of THA[13] can apply for a number within this range, for a charge of 2.1p per call (whether from a mobile or a fixed call) which includes a 0.1p levy to THA and covers the TCPs costs as well as the origination charge for fixed calls (currently around 0.5ppm). All calls to that number are then zero-rated from participating mobile OCPs. The mobile OCPs do not receive any of this payment and absorb their own costs of origination for these calls.

A20.20 There are over 200 charity lines which have 080 numbers as part of THA's SFT scheme.[14] Our understanding is that the major mobile OCPs do not charge for calls to SFT numbers but some of the small mobile OCPs do.[15]

A20.21 THA therefore acts as a central body for charities, and not-for-profit bodies, to obtain a 080 number that is not charged from most (but not all) mobiles. This also has an advantage for participating mobile OCPs in that rather than having to negotiate with hundreds of individual SPs, THA can act as conduit and offer a standardised process.

Other individual charities/helplines

A20.22 There are other examples of socially important services, outside of THA scheme, which have achieved the zero-rating of their calls from mobiles. These are high-profile services with clear public benefits. For example, in the mid-2000s, Crimestoppers became aware that some OCPs were charging for calls to its 0800 555 111 helpline number. This was a particular issue for Crimestoppers because the calls were appearing on itemised bills. Crimestoppers therefore contacted the OCPs directly and were able to achieve zero-rating of calls to its 0800 number.

A20.23 Childline is another example of a zero-rated 0800 number. Childline explained that it contacted the OCPs directly at the time of launch to ensure that all calls were zero-rated, and did not therefore appear on itemised bills, given the importance of anonymity (however, again, we understand these calls are free from the major mobile OCPs only, smaller mobile OCPs may charge). We are also aware that the THA were involved in negotiating the zero-rating of the National Pandemic Flu Service helpline across landline and mobile OCPs in the summer of 2009. This was achieved within a matter of days.

A20.24 One mobile OCP also zero-rates a number of breakdown cover providers' 0800 emergency breakdown numbers, in particular the RAC, the AA and Greenflag.[16] [✂].[17]

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[13] Charities are required to meet certain criteria in order to become THA members. These criteria are set out on the THA's website here: www.helplines.org.uk/content/join-us.

[14] Orange's website, for example, lists all the helpline numbers that are free to caller from its mobile tariffs: http://www1.orange.co.uk/about/corporateresponsibility/charity/free_charity_and_helpline_calls.html

[15] For example, EE, O2, Three and Vodafone all referred to their participation in this scheme in their responses to the December 2010 Consultation. However, as noted above, Lycamobile and Lebara charge for all 080 calls. EE December 2010 Consultation response, Q6.6, paragraph 29(a). O2 December 2010 Consultation response, paragraph 20. Three December 2010 Consultation response, paragraph 83. Vodafone December 2010 Consultation response, footnote 13 to paragraph 17.

[16] We highlighted this arrangement in the 080 Dispute Determination, p.15, paragraph 2.41.

[17] [✂]

Reverse charge services

A20.25 In their response to the December 2010 Consultation, O2 and EE pointed to the existence of bilateral agreements with providers of reverse charging facilities, in particular 08000MumDad and 0800Reverse. [✂].

A20.26 08000MumDad is a service for making reverse charge calls to mobile and landline numbers in the UK, intended primarily for consumers using mobiles that have run out of credit from which to make calls. [✂].

A20.27 [✂][18]

A20.28 [✂][19]

Summary of successful negotiations

A20.29 The above examples demonstrate that bilateral agreements can be reached between SPs and mobile OCPs. However, they also demonstrate that there can be significant transaction costs in reaching such agreements. Moreover while any agreements tend to cover the large mobile OCPs, not all mobile OCPs participate. As a result, even the 080 SPs discussed above are unable to guarantee that their numbers are free to caller.

A20.30 The DWP is a large SP, and could commit the resources necessary to overcome the transaction costs in implementing these bilateral agreements. DWP's status as a prominent Government department and the nature of services it was seeking to zero rate are also likely to have strengthened its position.[20] The same is true of the THA, who was in a unique position to act as a broker with the major mobile OCPs and facilitate negotiations for its members. Nevertheless, in both cases negotiations were protracted, and – in the case of DWP – required the intervention of the then Secretary of State to push forward an agreement.

A20.31 Even where negotiations have been short, namely the case of zero rating calls to the national pandemic flu service, we suspect that this was facilitated by a specific and high profile need of wider public significance and the presence of an established party, in this case the THA, who had already undertaken substantial negotiations with mobile OCPs. We do not consider that this provides a template for bilateral negotiations more generally.

A20.32 We consider that the transaction costs for smaller SPs are likely to be significantly higher than for DWP and that they will have significantly less leverage over an OCP in zero-rating the retail charges for calls to these numbers from mobiles. [✂].

A20.33 Moreover, as discussed in Annex 8, [✂].

A20.34 We note that THA scheme appears to work well and has successfully enabled charities and other not for profit SPs to obtain a 080 number that will not be charged from most mobiles, bringing considerable benefits for those SPs and their callers. However, this option is only open to SPs that meet THA membership criteria, and requires a 080 number within a specific number block (which is unlikely to be an attractive option for SPs that have an existing 080 number they want to zero rate).

[18] [✂]
[19] [✂]
[20] For example, [✂].

Examples of unsuccessful negotiations

THA Public Sector Special Freephone Tariff (PSSFT) scheme

A20.35 In its response to the December 2010 Consultation, EE highlighted the existence of a proposed THA scheme for Public Sector bodies and suggested that the scheme did not get off the ground due to the uncertainty caused by Ofcom's policy review of non-geographic numbers.[21] We obtained further details of this scheme from THA.

A20.36 Initially commissioned by Consumer Focus, in 2008 THA explored the possibility of having a similar scheme for the public sector to its Special Freephone Tariff (SFT) for eligible charities, but with the difference of there being an origination charge to mobile OCPs. Negotiations between THA and the major mobile OCPs began in 2009. THA indicated that one of the primary difficulties was the mobile OCPs' concern about the potential volume of calls that could be covered by the new scheme, which was likely to be significantly larger than the existing charity scheme. For that reason, the mobile OCPs requested quite stringent criteria around which helplines could be part of the scheme, which included for example:

- the helpline being of particular social need or value to lower socio-demographic groups;
- users being at risk or in crisis or users calling to protect those at risk or in crisis;
- users requiring financial accessibility to the helpline (the cost of calling being prohibitive, and/or confusion over call announcements being prohibitive); or
- users having a need to keep the call confidential from others.

A20.37 In addition, the scheme was to be restricted to helplines that provided advice, guidance or support in the fields of education, health or social welfare, without providing a financial transaction service, as well as being public-facing, and funded or owned by Central Government, local government, or a non-departmental public body.

A20.38 THA indicated that discussions around the potential origination charge for the scheme were particularly protracted (again taking place over a period of more than 12 months) and ultimately did not reach a conclusion. It was recognised that, unlike with the SFT scheme, these bodies should bear some of the cost of the calls. The scheme was eventually dropped before the negotiations were concluded, because of changes in Consumer Focus's responsibilities.

National Grid

A20.39 In response to the December 2010 Consultation, National Grid noted that it had, in the recent past, contacted mobile OCPs to request that calls to its Smell Gas 0800 number were zero-rated.

A20.40 A key motivation for this was that under the terms of the licences for gas providers, they are required to establish, operate and maintain a single continuously manned telephone service in order to receive calls on any gas-related incident that may cause danger. The National Gas Emergency Helpline is designated by the licence

[21] EE, December 2010 Consultation response, p.65.

as without charge at the point of use in order to encourage calls by members of the public to minimise risk to life and property. The 0800 national gas emergency number was set up to meet this purpose, however, this was before the widespread use of mobile phones.

A20.41 As well as National Grid, a number of other gas providers and Ofgem (the sector regulator) responded to the December 2010 Consultation to indicate their ongoing concerns about the mobile charges for accessing the 0800 national gas emergency helpline. They were concerned that the charges could act as a disincentive to members of the public reporting a gas leak.

A20.42 We contacted the National Grid to obtain further details. National Grid initially approached THA to discuss possible options. However, because National Grid is not a charity they may not have met the necessary criteria to become a THA member. In addition, National Grid were reluctant to change the 0800 number, as would have been the case under any solution sought through THA.

A20.43 National Grid therefore decided to contact mobile OCPs directly and in the autumn of 2009, wrote to the major mobile OCPs. However, although some mobile OCPs agreed to zero rate the number, the others refused, or did not respond and none offered National Grid the chance to pay an increased origination charge in exchange for free mobile calls, despite its clear indicated preference for its calls to be zero-rated.

Other SP feedback

A20.44 Discussions with some other SPs indicated that whilst they were concerned about the mobile charges for calls to their 080 numbers, they were not aware that negotiating directly with mobile OCPs was even an option. Or, if they were aware, they did not have the necessary resource or understanding of that process to initiate it. For example, one breakdown cover provider said it had not attempted to negotiate with the mobile OCPs because, given the number of them in the market it would be a daunting task and it considered that the ability for one company to get a consistent approach from all the mobile OCPs would be almost impossible.[22]

A20.45 We also understand that the THA offers a service in which it negotiates with the mobile OCPs on behalf of other bodies in order to achieve the zero-rating of calls. However, the THA were unable to provide any further examples of successful negotiations to achieve the zero-rating of calls, outside of those already noted in this Annex.

A20.46 In addition, we understand that there have been occasions where smaller individual charities (i.e. those that are not members of the THA scheme) have not been able to achieve zero-rating of their Freephone numbers from mobile OCP. Safe@Last noted in its response to our December 2010 Consultation that it had only managed to get one mobile OCP to zero-rate its calls. In subsequent discussions it noted that some other mobile OCPs had also agreed to zero-rate the number voluntarily (i.e. they did not request an origination charge payment) but others had refused.[23]

[22] [✂]
[23] Note that it appears Safe@Last asked the mobile OCPs to zero-rate the number in line with their approach to other charity numbers through the THA (i.e. it was not offering to pay an increased origination charge but rather requesting that the mobile OCPs voluntarily waive the charge).

A20.47 We understand that some of the mobile OCPs restrict the zero-rating to members of THA SFT scheme for operational reasons. For example, [✂] told us that it does not have a standard arrangement in place for making 080 numbers free of charge. It noted that the volumes of SPs were simply too great for it to initiate bespoke arrangements for each request. It therefore encourages organisations who contact it to speak to the THA. An email from a mobile OCP to National Grid indicates that [✂] may adopt a similar approach.

Ofcom summary

A20.48 In the case of the proposal by THA for Public Sector Special Freephone Tariff (PSSFT), it appears that any uncertainty caused by this review was not the only reason for the proposal's eventual demise as suggested in EE's comment above. The negotiations were protracted and little agreement could be reached. This serves to highlight the difficulty for service providers of attempting to reach such bilateral agreements even on a collective level, let alone individually.

A20.49 Despite there being no regulatory barriers preventing SPs from approaching mobile OCPs in order to establish a commercial bilateral agreement to zero-rate the retail charge of these calls from mobiles, it is clear that the this is not always an option in practice. As well as the negotiation costs faced by SPs, the mobile OCPs do not necessarily have the resource, or incentives, to get involved in these negotiations either (see the discussion of the horizontal and vertical externality effects in Annex 8). The evidence from National Grid attempts to zero-rate its number to report gas leaks highlights an instance where an SP approached the mobile OCPs with a clear preference for controlling the retail price of calls to their 0800 number but National Grid were not offered the opportunity to negotiate with the mobile OCPs to achieve that.

Conclusion on bilateral SP deals with the OCPs

A20.50 In conclusion, the above evidence does not, in our view, support the argument that SPs are able to control the retail prices of calls to their services by negotiating with OCPs. Instead the evidence supports the existence of the barriers that we identified in the December 2010 Consultation, i.e. transactions costs of negotiating and reaching agreement with a sufficiently large number of mobile OCPs for the SP to achieve its objective of zero-rated calls, and the ability of mobile OCPs to demand origination payments that are significantly above the costs of origination.

A20.51 The successful negotiations noted here are rare exceptions. High transaction costs involved in negotiating such arrangements prevent most SPs from attempting to discuss such commercial agreements directly with mobile OCPs. As set out in the 080 Dispute Determination, O2, T-Mobile and Three have all previously acknowledged these costs.[24] Where agreements have been struck they have generally required many months to conclude.

Nonetheless, none of the OCPs responding by requesting an increased origination payment in exchange for waiving the retail charges.

[24] 080 Dispute Determination, paragraphs A4.60-A4.65. This runs counter to, for example, O2's claims that its agreements with DWP and reverse charge services "demonstrate that any vertical externality that might exist can easily internalised" (O2 December 2010 Consultation response, paragraph 74).

A20.52 Existing schemes for zero-rating calls to these numbers from mobiles, such as the one run by THA, serve a genuine purpose, though these have their natural limitations as to who can, and – for practical reasons – is willing to, participate.

A20.53 Moreover while some agreements have been struck with the major mobile OCPs, many smaller virtual mobile OCPs have not participated. This means that a SP cannot guarantee that its 080 number is free to caller, for example, and thus makes it difficult for SPs to provide clear, accurate pricing messages.

A20.54 Note also that all the examples discussed above relate exclusively to 080 numbers. We understand that no SP operating a 0845 or 0870 number has successfully negotiated with mobile OCPs to ensure that calls to its number are treated in an identical way to geographic calls. Indeed EE, O2, Three and Vodafone all stated that no SP had ever approached them seeking to negotiate such an arrangement.[25] This is despite evidence that large numbers of 0845 SPs regard geographic rating of calls as an attractive feature.[26]

A20.55 Finally there is the issue of the origination payment that mobile OCPs would negotiate in return for pricing calls to a particular number at the level desired by the SP:

- We recognise that mobile OCPs do not charge some charitable SPs in return for zero rating their calls e.g. THA members, Childline etc. However, we consider that these are special cases.

- We would expect mobile OCPs to generally insist on an origination payment that exceeds the profits they are currently earning on calls to that SP.[27] This is likely to act as a further impediment to bilateral agreements between OCPs and SPs. As explained in Annex 8, the market failures we have identified are likely to allow OCPs to charge comparatively high retail prices for non-geographic calls. All of the agreed origination charges and the charges proposed by mobile OCPs of which we are aware are significantly higher than our estimates of the costs of mobile origination.[28]

[25] Responses to question 7 of our formal information request dated 21 October 2011 from EE (17 November 2011), O2 (11 November 2011), Three (11 November 2011) and Vodafone (11 November 2011).
[26] Respondents to the 2011 SPs survey indicated that the most important feature of a 0845 number was that "callers will be charged the same amount as for a call to a normal landline". This feature was "very important" or "fairly important" for 86% of respondents (question 28). Further, when asked what aspect of 0845 numbers they would change, by far the most popular response was that 0845 calls "are charged the same as for a call to a normal landline". 65% of respondents selected this option compared to just 14% who cited the cost to the SP of operating an 0845 number (question 30).
[27] A mobile OCP might accept a slightly lower origination payment where it was concerned that it could be singled out for significant adverse publicity, for example in the case of a high profile SP. [✂].
[28] The free to call '111' non-emergency health number [✂].

Annex 21

Introduction to the Freephone options

Introduction

A21.1 In Section 16 we set out and assess the options for the Freephone ranges. Looking at the 080 and 0500 ranges together, we set out three broad options for intervention:

- make both of these number ranges free to caller ("Option A");
- set a Maximum Mobile Price for both these ranges ("Option B");[29] or
- make one of these number ranges free to caller and make the other into a range with a maximum mobile price ("Option C").

A21.2 As discussed in Section 16, the question of whether making a number range free to caller is an attractive option depends (to a large extent) on the level of origination payments. Similarly, the attractiveness of setting a maximum mobile price above zero depends on the level at which that maximum price is set. Accordingly, as explained in Section 16, we have adopted a two stage approach. First, we specify in detail what the options for intervention are (which includes the relevant origination charge or maximum price). Second, we assess which of those options is the most attractive. This, and the following Annexes, focuses on the first step, namely considering in further detail how Options A to C should be specified.

A21.3 The following Annexes are structured as follows:

- in Annex 22, we discuss various measures of the costs of originating mobile calls;
- in Annex 23, we consider the level of mobile origination payments to a free to caller number range (relevant to Options A and C);
- in Annex 24, we consider the level of the maximum retail price for mobile calls to a Maximum Mobile Price number range (relevant to Options B and C); and
- in Annex 25, we consider which regime should apply to 080 and 0500 under Option C.

A21.4 In order to give context to the assessment in the following Annexes, we first set out the current position in relation to origination payments for Freephone calls. We also provide a summary of our conclusions.

Current position in relation to 080 and 0500

A21.5 Fixed OCPs have always set a retail price of zero for calls to 080 numbers. They receive a payment from the TCP (which is ultimately funded by the SP receiving the call). We refer to this as an "origination payment" but an equivalent way of thinking of it is as a negative termination rate.

[29] To be precise, the "Maximum Mobile Price" option involves setting a maximum price of zero for fixed calls and a maximum price that is above zero for mobile calls.

A21.6 We regulate the size of the origination payment that is paid to BT (acting as an OCP) by other TCPs.[30] This origination payment reflects BT's fully allocated costs of retailing and conveying a 080 call and is approximately 0.5ppm.[31] Historically an equivalent origination payment to that paid to BT was also paid to other OCPs, including mobile OCPs.[32]

A21.7 Mobile OCPs typically charge for 080 and 0500 calls, although there are some exceptions.[33] From 1 November 2008, BT reduced the 080 origination payment that it (acting as a TCP) paid to mobile OCPs to zero.[34] From 3 June 2009, BT (acting as a TCP) introduced so-called 'ladder pricing'.[35] OCPs that set a retail price of zero for 080 calls receive the same origination payment that fixed OCPs had previously received. OCPs that set a retail price above zero either received no origination payment or (if the retail price of 080 calls was sufficiently high) had to pay BT a termination charge. Since the introduction of these 'ladder pricing' schedules by BT other TCPs have also started to introduce similar structures.

A21.8 Table A21.1 below shows the origination payment that BT receives for 080 calls it originates and the origination payment that BT (acting as a TCP) makes where the OCP sets a retail price of zero.

Table A21.1: Origination payment for 080 calls where retail price is zero

	Day	Evening	Weekend
Calls originated by BT	0.6714ppm	0.3074ppm	0.2421ppm
Free calls terminated by BT	0.6481ppm	0.2967ppm	0.2336ppm

Source: Origination payments where BT is the OCP taken from NTS Calculator (v22, December 2011) assuming single tandem handover. Origination payment where BT is the TCP taken from NCCN 1046 and only applies where the OCP does not charge for the call

A21.9 In summary, where an OCP sets a retail price of zero for 080 calls, that OCP receives an origination payment from the TCP of approximately 0.5ppm.[36] This is intended to reflect the fully allocated costs of originating 080 calls on a fixed network. OCPs that set higher retail prices typically receive no origination payment and may have to pay a termination charge to the TCP.

A21.10 We understand from C&W that it sets the same termination rate for both 080 and 0500 calls.

[30] We regulate BT's retail retention on 080 calls pursuant to the NTS Call Origination Condition. In terms of BT's wholesale charged for originating and conveying a 080 call, some components are regulated and some components are determined commercially. See Wholesale Narrowband Statement for further details.
[31] 080 Dispute Determination, paragraph 3.3.
[32] See NCCN 500 Decision, paragraphs 2.23-2.26 for further details.
[33] We set out further details on call prices in Section 14.
[34] Pursuant to NCCN 911.
[35] Pursuant to NCCN 956.
[36] This 0.5ppm figure is consistent with data from the 2010 Flow of Funds study on the average payment to fixed OCPs from TCPs.

The design of Options A to C

A21.11 In summary, for the reasons set out in the following Annexes, we consider that it is appropriate to design Options A to C as follows.

A21.12 **Option A:** a maximum retail price of zero is set for calls to both 080 and 0500. For fixed origination payments we have assumed that the origination payment remains at the current level (approximately 0.5ppm). For mobile origination payments the Impact Assessment Range should be **2.5-3.0ppm**.[37] The analysis in Annex 23 points towards selecting a figure from the lower end of this range.

A21.13 **Option B:** a maximum retail price of zero is set for fixed calls to 080 and 0500. In terms of mobile calls there are two possible designs:

- a maximum retail price of either **4.2ppm** or **5.0ppm** (including VAT) is set for mobile calls to these ranges. We have assumed that the origination payment is the same for both fixed and mobile calls and equal to the current level for fixed calls (approximately 0.5ppm); or

- a maximum retail price equal to the **access charge** is set for mobile calls to these ranges. For fixed calls we have assumed that origination payments will remain at the current level (approximately 0.5ppm). For mobile calls we have assumed that the origination payment is **0ppm**.

A21.14 **Option C:** in terms of the two number ranges:

- a maximum retail price of zero is set for calls to 080. We have assumed that fixed origination payments will remain at the current level (approximately 0.5ppm). For mobile origination payments we consider the Impact Assessment Range should be **2.5-3.0ppm**; and

- a maximum retail price of zero is set for fixed calls to 0500 and a maximum retail price equal to the **access charge** set for mobile calls. For fixed calls to 0500 the we have assumed that the origination payment will remain at the current level (approximately 0.5ppm). For mobile calls we have assumed that the origination payment is **0ppm**.

A21.15 These three options are summarised in Table A21.2 below.

[37] We define the Impact Assessment Range in Annex 23.

Table A21.2: The design of Options A, B and C

	Option A	Option B		Option C
CALLS TO 080				
Price of fixed calls	Free	Free	Free	Free
Assumed origination payment for fixed calls	0.5ppm	0.5ppm	0.5ppm	0.5ppm
Maximum price of mobile calls	Free	4.2ppm or 5.0ppm	Access charge	Access charge
Assumed origination payment for mobile calls	2.5-3.0ppm	0.5ppm	0ppm	0ppm
CALLS TO 0500				
Price of fixed calls	Free	Free	Free	Free
Assumed origination payment for fixed calls	0.5ppm	0.5ppm	0.5ppm	0.5ppm
Maximum price of mobile calls	Free	4.2ppm or 5.0ppm	Access charge	Access charge
Assumed origination payment for mobile calls	2.5-3.0ppm	0.5ppm	0ppm	0ppm

Annex 22

The cost of originating mobile calls to Freephone numbers

Introduction

A22.1 This Annex discusses various measures of the costs incurred by mobile OCPs when they originate a 080/0500 call on their network.[38] These inform the discussion of mobile origination payments and the maximum price for mobile calls to a Maximum Mobile Price number range in subsequent Annexes.

A22.2 The Table below shows estimates for a number of different measures of the cost to a mobile OCP of originating a 080/0500 call. This Table is the output from this Annex and we explain in detail below how it was calculated. More specifically in this Annex we explain the range of cost elements that could be considered when calculating the costs of originating a mobile call. We then explain how these costs are captured in the various economic measures we use to produce the range of pence per minute costs in Table A22.1.

Table A22.1: Measures of mobile call origination costs (2013/14 charges in 2011/12 prices)[39] [40]

Cost measure	Cost of originating mobile calls to a free to caller number range	Cost of originating mobile calls to a Maximum Mobile Price number range
Pure LRIC	0.7ppm-0.8ppm	0.7ppm-0.8ppm
LRIC differential	1.1ppm-1.2ppm	1.1ppm-1.2ppm
LRIC + (no A&R costs)	2.3ppm	2.4ppm
LRIC + (50% A&R costs)	3.1ppm	3.2ppm
LRIC + (100% A&R costs)	3.9ppm	4.0ppm

A22.3 The convention used in this Annex is that final estimates (i.e. those in Table A22.1) are expressed to one decimal place. As explained in subsequent Annexes, the evaluation of origination payments and maximum mobile prices involves weighing up a wide range of factors. There is also uncertainty about the extent to which certain cost categories should be included. We therefore consider that expressing final figures to a greater number of decimal places is of limited value for this

[38] We consider that these estimates are also relevant to the costs of originating 116 calls. We discuss the 116 number range in Annex 27.
[39] Inflation values from the 2011 MCT model have been used to convert costs to 2011/12 prices. The 2011 MCT model assumes forecast inflation of 2.5%.
[40] Pure LRIC and LRIC differential are shown with ranges due to uncertainty around the level of incremental non-network costs.

exercise and risks spurious accuracy. However, for clarity we express intermediate figures to two decimal places, which avoids confusion due to rounding (e.g. the components underlying a particular cost estimate apparently summing to a different figure).

A22.4 This Annex is set out as follows:

- **Background**: a summary of previous observations about the costs of originating mobile 080 calls.
- **Costs categorisation**: an explanation of the costs that could be included when calculating the pence per minute cost of originating a mobile call.
- **Cost quantification**: a breakdown of the cost per minute by cost category and explanation of the sources of our data.
- **Comparison with fixed line origination cost**: a comparison of the cost of fixed call origination with mobile call origination and an explanation of why the pence per minute cost estimates are different.
- **Identification of different cost measures**: identification of the different approaches we could use in evaluating origination costs and how the cost per minute of mobile 080/0500 call origination varies depending upon the approach used.

Background

A22.5 Two mobile OCPs have given a broad indication of what they consider to be the cost of originating a mobile call to a free to caller number range. However, neither provided information relating to which cost categories they had included or the methodology used to estimate these costs:

- In December 2011, EE provided us with an estimation of the effects of making 080 and 0500 free to caller. [✂].[41]
- During our consideration in 2009-2010 of the dispute in relation to the termination rates set by BT for 080 calls, [✂].[42]

A22.6 In the 080 Dispute Determination we stated that "we are minded to consider that the efficient cost of originating 080 calls is unlikely to exceed 5ppm".[43] This was based on two components:

- We considered that the efficient cost of termination provides a suitable estimate of the efficient network costs of origination. The nominal target average charge for mobile call termination in 2010/11 was 4.3ppm.[44]
- We also considered CARS costs (customer acquisition, retention and service costs). For the purpose of the dispute, we were minded to derive the minimum efficient costs of mobile origination by limiting CARS costs for mobile 080 calls to

[41] Email from EE dated 7 December 2011.
[42] [✂].
[43] 080 Dispute Determination, paragraph A3.35.
[44] 080 Dispute Determination, paragraph A3.23.

the same ppm allowance as BT's NTS Retail Uplift (0.1848ppm at the time), perhaps with a further adjustment for the lower volume of call minutes per subscriber on mobile networks. This figure included an allowance for billing and customer service costs.[45]

A22.7 We have revisited our analysis. In particular, the 4.3ppm figure in the 080 Dispute Determination reflects modelling carried out for our 2007 statement on mobile termination rates.[46] We have subsequently carried out fresh modelling for the purposes of the 2011 MCT Statement.[47] We have also considered a wider set of potential cost measures and revisited the treatment of CARS costs.

Cost categorisation

A22.8 This section explains the different categories of costs incurred by mobile OCPs we need to consider.

A22.9 In general, to originate a call there are a number of activities a mobile OCP needs to perform, for example:

- Build (or purchase access to) a mobile network from point of call origination to call handover;
- Sign a customer with a handset to make the call;
- Provide support and assistance if required by the customer making the call;
- Bill the customer for the call if appropriate; and
- Manage the above activities.

A22.10 All of the above activates incur a cost. We initially categorise these cost elements as either network or non-network costs:

- **Network costs**: being the operating cost and capital costs of maintaining, running, and operating the mobile network the call is originating on.
- **Non-network costs**: relating to costs associated with customer acquisition, customer retention, and the administration and distribution activities associated with selling and providing mobile telecommunication services.

Network costs

A22.11 Network costs include only those costs that relate specifically to the physical network (physical network costs). These include the physical network infrastructure that is used to provide an origination service (radio access equipment, backhaul equipment and core network equipment).

[45] 080 Dispute Determination, paragraphs A3.28-A3.30
[46] *Mobile call termination*, Ofcom statement, 27 March 2007. Available at: http://stakeholders.ofcom.org.uk/binaries/consultations/mobile_call_term/statement/statement.pdf
[47] We recognised that the 2011 modelling suggested much lower network costs in our 0845/0870 Dispute Determination at paragraph 4.55.

Non-network costs

A22.12 The non-network costs incurred by a mobile OCP in originating a call can be divided into two categories:

- **Customer acquisition, retention and service costs** ("CARS costs"): we describe these below; and
- **Administration and overhead costs**: these include the network administration costs that cannot be directly attributed to any piece of network equipment or service such as management and administration.

A22.13 CARS costs incurred by the major national mobile OCPs have previously been categorised by the Competition Commission ("CC") as follows:[48]

- **Marketing and advertising**: these costs include all the expenses associated with attracting customers through marketing and advertising. Examples of these costs are advertising campaigns, and brand sponsorship.
- **Handset costs**: handset costs are incurred by mobile OCPs when they supply customers with a handset to make and receive calls. It is usual within the UK mobile sector that the initial cost of a handset for post pay customers is subsidised wholly or in part by the mobile OCP.
- **Discounts and incentives**: discounts and incentives are offered by mobile OCPs in order to attract or retain customers on or to their network. These generally take the form of reduced retail prices.
- **Sales**: a significant proportion of these costs relate to the large mobile OCPs' branch network of shops and particularly the personnel, distribution and depreciation costs associated with operating this network of shops. The other significant element within this category is contract commissions paid to third-party retailers for selling mobile OCPs' products. There are also a small amount of costs relating to telesales and Internet sales.
- **Customer care**: customer care costs primarily relate to the running of customer call centres that make and receive calls to customers in order to help, assist, and service them. These costs consist of personnel costs, building costs, and general call centre operating costs.
- **Billing**: these costs primarily relate to the posting of bills to customers as well as the associated costs of personnel to process, calculate, and produce the actual bill.
- **Bad debt**: these costs relate to the writing-off of debts from customers that are not economically retrievable, and the costs associated with the collection of bad debts that are retrievable. These costs would be personnel costs for the staff involved in the activity as well as any third party costs payable to external agencies.

A22.14 In the 2009 CC Determination the data submitted by the mobile OCPs to the CC relating to handsets costs included both gross handset costs and net handset costs.

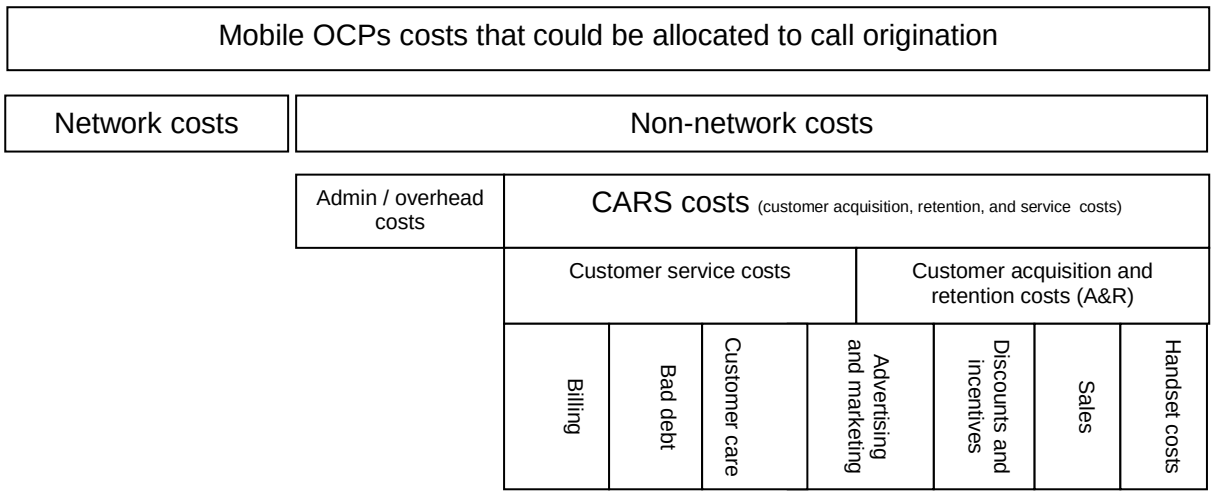
[48] 2009 CC Determination, paragraph 8.5.

Gross handset costs are the costs incurred by a mobile OCP in sourcing handsets from handset manufacturers. Net handset costs are the gross handset costs less any revenues associated with the subsequent sale of those handsets.

A22.15 In the context of regulating wholesale termination charges, the CC considered that it is only appropriate to consider net handset costs.[49] It stated that, were gross handset costs to be considered, then this would lead to the possibility of some costs being recovered twice (once from consumers taking out a subscription and potentially again from termination charges). In the light of the CC's reasoning, we have only considered net handset costs when assessing the costs of originating mobile 080/0500 calls.

A22.16 All the above costs, both network and non-network are graphically shown in Figure A22.2 below.[50]

Figure A22.2: Mobile call origination costs



A22.17 Figure A22.2 further divides CARS costs into the following two sub-categories:

- **Customer service costs**: comprised of billing, customer care and bad debt; and
- **Customer acquisition and retention costs** ("A&R" costs): comprised of handset costs, marketing and advertising, discounts and incentives, and sales costs.

A22.18 The distinction between A&R and customer service costs is that A&R costs are incurred to win new subscribers or incentivise existing subscribers to stay. In contrast, customer service costs are incurred in the ordinary course of servicing existing subscribers.

A22.19 Advertising and marketing costs are primarily treated as being a sub-set of A&R costs. However, when setting BT's regulated retail retention under the NTS Call Origination Condition, we included a contribution to BT's generic sales and

[49] 2009 CC Determination, paragraph 8.45.
[50] There may be other non-network costs associated with running a network. However, we believe we have captured all those non-network costs that could reasonably be allocated to the call origination service. Our approach is consistent with that taken in the 2011 MCT Statement (Annex 9).

marketing costs.[51] Accordingly we leave open the possibility that a proportion of these costs could be characterised as customer service costs.

Cost quantification

A22.20 This section sets out the level of costs according to the different categories we defined in the preceding section.

Costs based on 2011 MCT modelling: network and administration costs

A22.21 We consider that the cost model used to derive the efficient cost of mobile termination provides a suitable estimate of the efficient network costs of mobile origination.

A22.22 In assessing the level of mobile OCP's' network and administration call origination costs, we have used an amended version of the 2011 Statement Cost Model (the "2011 MCT Cost Model"). This model enables us to estimate the ppm network costs for an average efficient mobile OCP with a national 2G/3G network and the allocation of administration costs to this OCP's network activities. The 2011 MCT Cost Model was constructed to calculate both the LRIC+ and pure LRIC of the incoming mobile call termination service.[52]

A22.23 In a LRIC+ approach we calculate the incremental costs of traffic using a large increment approach (i.e. all voice and data traffic). Common costs are allocated across all services using service specific routing factors. For common costs where no routing factors exist (such as administration costs), the allocation is on an EPMU (equi-proportionate mark-up) basis.

A22.24 In contrast, when using a pure LRIC approach in the 2011 MCT Cost Model, incoming voice traffic is considered as a 'final increment' with *no* common costs (such as the common costs of a 'coverage network') being allocated to the service in question. The incremental costs associated with a particular service are determined by separately calculating the model outputs (cashflows, service demand, asset volumes for each network element), first, with the service and, second, without the service.

A22.25 We have taken the same approach to calculating the pure LRIC and LRIC+ of the outgoing origination service. When calculating the unit cost of origination we have used an all outgoing (off-net) traffic increment. The 2011 MCT Cost Model produces a LRIC+ output for this increment without requiring any adjustment. We have altered the 2011 MCT Cost Model so that it can also calculate the pure LRIC of the outgoing origination traffic increment.

CARS costs

A22.26 The 2011 MCT Cost Model did not incorporate CARS costs. This cost category was last considered in detail as part of the appeals against our 2007 statement on mobile call termination.

A22.27 Using data provided by the largest mobile OCPs as part of a data request submitted in 2009, we have estimated that a 'typical' model operator has CARS costs of

[51] Retail Uplift Statement, paragraph 2.37.
[52] See 2011 MCT Statement Section 9 and Annex 6 for a description of Ofcom's approach to modelling the cost of a mobile network: http://stakeholders.ofcom.org.uk/consultations/mtr/statement

£1,508m (2009 prices).[53] Uplifting this to 2011/12 prices gives a total average CARS cost of £1,602m for a mobile OCP.[54]

A22.28 The total CARS costs have been allocated to the individual cost elements using data from the 2009 CC Determination. Table A22.3 below repeats Table 8.1 from the 2009 CC Determination but excludes the both the data relating to gross handset costs from all operators and the data submitted by Orange (Orange only submitted an overall CARS costs figure inclusive of gross handset costs).

Table A22.3: Mobile OCP's CARS costs (from 2009 CC Determination)

Cost element	O2	T-Mobile	Vodafone	Three
Advertising and marketing	[✂]	[✂]		[✂]
Net handset costs	[✂]	[✂]	[✂]	[✂]
Discounts and incentives	[✂]		[✂]	[✂]
Sales	[✂]	[✂]		[✂]
Customer care	[✂]	[✂]		[✂]
Billing		[✂]		[✂]
Bad debt	[✂]	[✂]		[✂]
Reconciliation	[✂]	[✂]	[✂][55]	[✂]
TOTAL (net handset costs)	[✂]	[✂]	[✂]	[✂]

Note: where the figure for net handset costs is in brackets then this indicates that this is a source of net revenue for the mobile OCP

A22.29 The CC commented on the limited breakdown of data submitted by the operators.[56] As can be seen from the above Table A22.3, the data provided by the mobile OCPs varied significantly in terms of cost allocation. The variations in the data probably reflects not only underlying differences between the operators but also different methodologies used by different mobile OCPs to compile the data. Furthermore, the

[53] Data provided by the major mobile OCPs as part of an s135 data request submitted in November 2009.
[54] We have considered whether to make further adjustments to the 2009 total average CARS costs figure. We note that total mobile retail revenues were broadly flat between 2009 and 2010 (£14.9bn and £15.1bn respectively). This suggests that there has not been a major shift in the mobile industry and thus it is reasonable to simply uplift the 2009 figures to reflect inflation. *Communications Market Report 2011*, Figure 5.1 on page 245.
[55] This amount was added to this Table to reconcile the Vodafone data; however the original table published did not contain this figure.
[56] 2009 CC Determination, paragraph 8.5: The information received by the CC "demonstrates that there are considerable discrepancies in the breakdown of CARS costs across the [mobile operators]."

submitted information from each operator is not comprehensive and some cost categories are omitted from some operators' data.

A22.30 In the absence of more consistent and more comprehensive data, we have used the data submitted by the mobile OCPs to the CC to derive a percentage split for each of the cost elements as shown in Table A22.4 below. This Table shows our estimate of an average operator's breakdown of CARS costs expressed in 2011/12 prices.

- The total amount of CARS costs shown in the Table, namely £1,602 m, is an average across major mobile OCPs taken from their responses to s135 information requests submitted in November 2009. This figure is expressed in 2011/12 prices.
- The percentage split for each category of costs is our estimate of a typical mobile OCP's CARS costs based on the information submitted to the CC by the major mobile OCPs and set out in Table A22.3 above.
- In Table A22.4 below A&R costs refers to the top four cost categories from Table A22.3 above, namely advertising and marketing, net handset costs, discounts and incentives, and sales costs. We have aggregated these cost categories due to concerns that different mobile OCPs did not categorise between them in a consistent manner.[57] We have also categorised the reconciliation item from the CC Determination's table of costs as "Other" costs.

Table A22.4: Breakdown of CARS costs (2011/12 prices)

Cost element	Split for average operator	Cost for average operator (£)
A&R costs	65%	£1057m
Customer care	9%	£152m
Billing	3%	£42m
Bad debt	3%	£42m
Other CARS	19%	£309m
TOTAL (net handset costs)	100%	£1,602m

Summary of quantified costs

A22.31 The output of our assessment of mobile OCPs' call origination costs is set out in Table A22.5 below which shows both CARS costs together with network and

[57] For example, [✂] gave a high figure for net handset costs but a low figure for sales costs. Similarly, [✂] gave high figures for net handset costs and discounts and incentives but no costs at all for sales and for advertising and marketing. In contrast, [✂] indicated that handsets were a source of net revenue but both gave high figures for sales costs.

administration costs on both a ppm basis and a total absolute sterling value basis for an average mobile OCP.[58]

Table A22.5: Cost estimates relating to mobile OCPs (2013/14 costs in 2011/12 prices)

COST CATEGORY	£	Implied ppm cost
CARS COSTS ALLOCATED ON EPMU BASIS		
CARS: customer service costs		
Billing	£42m	0.06
Bad debt	£42m	0.06
Customer care	£152m	0.23
CARS: A&R costs	£1,057m	1.57
Other CARS	£309m	0.46
Subtotal: non-network costs	£1,602m	2.38
NETWORK AND ADMINISTRATION COSTS FROM THE 2011 MCT COST MODEL		
Network costs on pure LRIC basis	NA	0.67
Admin and overheads	£181m	0.25
Network costs on LRIC+ basis	NA	1.45

Comparison with BT's 080 origination costs

A22.32 We have compared the above figures in relation to mobile OCPs' costs with BT's costs of originating 080 calls.

A22.33 It is useful to distinguish between two categories of BT's costs:

- BT's (non-network) costs of retailing 080 calls; and
- BT's network costs.

A22.34 In the Retail Uplift Statement we charge controlled the amount BT could retain for the origination of non-geographic numbers that are covered by the NTS Call

[58] To be consistent with the way ppm figures in this Table have been calculated, the implied ppm value for admin and overhead costs has been calculated on an EPMU basis where incoming traffic has been excluded (i.e. no costs are allocated to incoming termination). The actual ppm figure that we use for admin and overhead costs in the remainder of this Annex (reported in Table A22.6 below) is produced by the 2011 MCT Cost model. That latter figure is calculated on an EPMU basis including incoming termination (i.e. some costs are allocated to incoming termination) and so takes the lower value of 0.17ppm.

Origination Condition (this includes 080 calls). The charge control was based on an assessment of BT's costs in relation to all NTS calls, but did not disaggregate the costs for 080 calls. The charge control was based on controlling the average retention on a basket of 080 and non 080 NTS calls with a safety cap limiting the charge for 080 calls to be no higher than non 080 NTS calls.

A22.35 In relation to 080 calls, BT currently retains a retail margin of 0.1753ppm.[59] However, as BT has freedom within the basket of 080 and non 080 NTS calls to charge different amounts, it is not our preferred benchmark to assess BT's costs incurred in relation to 080 calls. Instead we feel it is more appropriate to use the underlying charge control cost model from the Retail Uplift Statement. We have taken the aggregate base year costs for all NTS call types considered in the control in 2009 and adjusted for inflation to 2011/12 prices. This analysis produces a cost per call of 0.22ppm.[60]

A22.36 On top of this figure, BT also charges for the network costs of conveying the call. The actual amount that BT charges TCPs varies by time of day and depends on precisely where BT hands the call over to the TCP.[61] However, as explained in Annex 21 the average origination payment received by fixed OCPs is approximately 0.5ppm. This represents the incremental costs of conveying that call and a contribution to the fixed and common costs associated with call conveyance. Using this 0.5ppm figure and rounding to two decimal places suggests that:

- BT's (non-network) retail costs of originating 080 calls are approximately 0.22ppm; and
- BT's average network costs of originating 080 calls are approximately 0.28ppm.

A22.37 Table A22.6 below compares BT's costs of 080 call origination with the costs of an average mobile operator that we calculated above.

[59] Figure for "Retail uplift" for Freephone calls used in the April 2012 (v25) version of the NTS calculator available on BT's website at: https://www.btwholesale.com/pages/static/Number_Translation_Services/index.htm

[60] There is another advantage of using the figure from our modelling for the Retail Uplift Statement. That modelling allows us to decompose the 0.22ppm figure into different cost categories. This allows us to make a more detailed comparison between the fixed and mobile costs of originating 080 calls.

[61] For example, for a single tandem call BT requires an origination payment of 0.6943ppm (day), 0.3179ppm (evening) or 0.2503ppm (weekend). The origination payment received by BT for double tandem calls (which BT conveys further) is higher.

Table A22.6: Cost estimates relating to mobile OCPs (mobile: 2013/14 unit costs in 2011/12 prices, fixed: 2009/10 unit costs in 2011/12 prices)

COST CATEGORY	Mobile ppm cost	Fixed ppm cost
CARS COSTS ALLOCATED ON EPMU BASIS		
CARS: customer service costs		
Billing	0.06	0.03
Bad debt	0.06	0.05
Customer care	0.23	0.02
CARS: A&R costs	1.57	0.06
Other CARS	0.46	0.06
Subtotal: non-network costs	2.38	0.22
NETWORK AND ADMINISTRATION COSTS FROM THE 2011 MCT COST MODEL		
Network costs on pure LRIC basis	0.67	
Admin and overheads	0.17	
Network costs on LRIC+ basis	1.45	0.28[62]

A22.38 The notable differences between mobile call origination costs and fixed 080 call origination costs, some of which can be seen in the above Table, are:

- **Network costs**: network costs attributable to mobile calls are significantly higher than the average fixed network costs of originating an 080 call that BT recovers; and

- **Non-network costs**: BT's retail costs include fewer categories of CARS costs. The assessment of BT's costs used to determine BT's NTS Retail Uplift included a proportion of generic sales and marketing but not other categories of A&R costs such as handset costs and discounts and incentives.

A22.39 We discuss these two differences below.

Comparison of network costs

A22.40 Dealing with the network element first, the network cost of mobile origination is shown in Table A22.6 as being 1.45ppm (on a LRIC+ basis). This compares with 0.28 pence per minute for fixed origination. The presence of such cost differences is

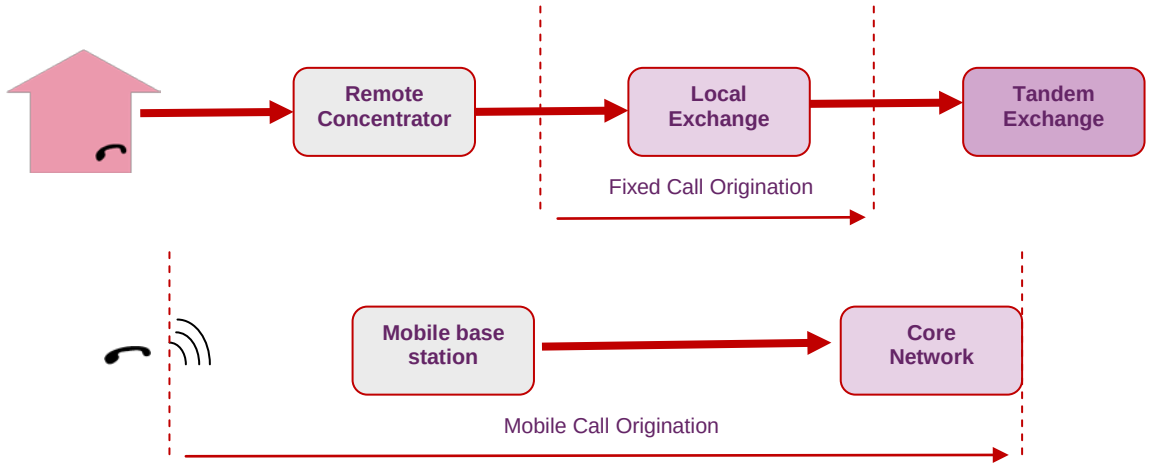
[62] This amount is not calculated using BT's current call origination charges as explained in paragraph A22.36.

unsurprising given the differences between fixed and mobile technologies. Moreover they relate to different parts of the network:

- **Mobile network costs**: the 1.45ppm cost in Table A22.6 represents the network costs for originating a call from the customer's handset into the core of the network.

- **Fixed network costs**: the 0.28ppm cost (which comprises incremental costs and a contribution to fixed and common costs) in Table A22.6 does not include the section of the costs from the customer's premises to the local exchange. This is because BT recovers this cost in the form of a monthly line rental charge. This is illustrated in Figure A22.7 below which shows the network architecture and service definition for BT's PSTN.

Figure A22.7: Network architecture for BT's PSTN and mobile network



Comparison of non-network costs

A22.41 The non-network origination costs between mobile and fixed vary to an even greater degree. Mobile non-network origination costs could be over 2ppm (depending on which cost categories are included) whereas we estimate that BT's retail costs on fixed 080 calls is only 0.22ppm. This cost difference is due to the characteristics of the fixed and mobile telecommunications sectors, and the way in which customers are served.

A22.42 It is current practice within the mobile industry to:

- Provide incentives, discounts and promotions to customers to encourage them to join a particular network;

- Offer free or heavily subsidised handsets;

- Provide loyalty discounts and other promotional offers to encourage existing customers to stay with their current network; and

- Have high street shops that will promote, advertise, and sell services directly to subscribers.

A22.43 Fixed operators do not spend to promote their service to the same extent. For example, BT does not operate a network of high street shops and does not subsidise handsets in the manner that mobile OCPs do. These additional activities lead to higher mobile non-network costs.

A22.44 There is a greater similarity of costs in ppm terms between mobile and fixed customer service costs, although the mobile customer service costs are higher on a ppm basis than BT's customer service costs. This may reflect different cost allocation bases or that mobile customer service costs are typically higher on a pence per minute basis than BT's customer service costs.

Identification of different cost measures

A22.45 Using the cost categories discussed above, we have estimated a number of different measures of mobile OCPs' costs of originating 080/0500 calls.

- Pure LRIC;
- LRIC differential;
- LRIC + (no A&R costs);
- LRIC + (50% A&R costs); and
- LRIC + (100% A&R costs).

A22.46 For each cost measure we have calculated two variants. First, the cost of calls to a free to caller number range. Second, the cost of calls to a Maximum Mobile Price number range. This is because bad debt and consumer billing costs are potentially attributable to the costs of originating calls to a Maximum Mobile Price number range but not to a free to caller number range.

Pure LRIC

A22.47 Conceptually the purpose of the pure LRIC measure is to estimate the incremental costs associated with originating 080/0500 calls. In other words, what extra costs does a mobile OCP incur if it decides to originate these calls (in addition to all the other traffic it carries).[63]

A22.48 The pure LRIC measures were calculated as follows.

A22.49 For calls to a free to caller number range, we included pure LRIC network costs from the revised 2011 MCT Cost Model. We do not have clear evidence on the structure of non-network costs – there is uncertainty about the extent to which they are incremental to 080/0500 origination:

- It seems reasonable not to include an allowance for network administration costs since these are unlikely to be incremental to originating 080/0500 calls.

[63] This definition is intended to reflect the same concept as the definition of pure LRIC in the 2011 MCT Statement (although in that document we referred to avoided incremental costs).

- On the one hand, it could be argued that none of the categories of CARS costs is incremental to originating 080/0500 calls.[64] On the other hand, it could be argued that some customer care costs (which primarily relate to call centre costs) are incremental.

- We have thus produced a range for incremental costs. At one end of the range, we exclude all non-network costs. At the other end of the range we have included an allowance for customer care costs. It seems reasonable to assume that a large proportion of these costs are fixed and common (e.g. buildings). Allocating these costs on an EPMU basis may thus allocate too many of these costs to 080/0500 call origination, and hence a down-lift is appropriate. In the absence of clear evidence, our assumption is that the ratio of LRIC to LRIC+ costs is the same for non-network elements as for network costs (the "EPMU down-lift approach").[65]

A22.50 For calls to a Maximum Mobile Price number range, we included LRIC network costs from the revised 2011 MCT Cost Model. Again, there is uncertainty about the extent to which non-network costs are incremental. We have thus produced a range for incremental costs:

- At one end of the range, we exclude all non-network costs.

- At the other end of the range we have included an allowance for customer care costs and bad debt costs. As discussed above in relation to calls to a free to caller number range, we have allocated customer care costs using the EPMU down-lift approach. In the case of bad debt costs, for post-pay subscribers, a significant proportion of mobile OCPs' retail revenue comes from monthly subscription. For pre-pay subscribers, calls to a Maximum Mobile Price range are likely to be relatively cheap compared to other calls (see the discussion in Annex 24). This suggests that the contribution of these calls to bad debt may be relatively low, and hence, in the absence of clear evidence, we have applied the EPMU down-lift approach.

LRIC differential

A22.51 The concept behind the LRIC differential approach is that fixed and mobile OCPs receive the same pence per minute contribution to their fixed and common costs. An equivalent way of thinking about this cost measure is that the origination payment received by fixed OCPs is uplifted to reflect the extra incremental costs associated with mobile call origination.

A22.52 Mechanically we have calculated this cost measure as follows:

- We have taken the pure LRIC cost estimates for mobile origination described above.

[64] In 2009, there were 11.2bn minutes of calls to 080 numbers (see 2010 Flow of Funds study, page 30). We explain in the next Annex that it is reasonable to assume that 40-50% of calls to a free to caller number range may be originated from mobiles in the medium term. However even with this increase in mobile volumes, 080/0500 calls would remain a small proportion of total mobile voice minutes. In 2009, there were 118bn mobile voice call minutes (see Communications Market Report 2011, Figure 5.1 on page 245).

[65] We have estimated this ratio and hence the down-lift factor as 39% in 2013/14.

- As explained above, BT's average network costs of originating a 080 call are approximately 0.28ppm and its non-network (retail) costs are approximately 0.22ppm. It seems plausible that many of BT's network costs are not incremental to 080 call origination. It also seems plausible that many of the non-network costs (e.g. general overheads) are not incremental to 080 call origination but that some (e.g. customer care) may be. Accordingly, we assume that the incremental cost to BT is about 0.1ppm.

- Fixed OCPs receive an average of 0.5ppm for originating calls to 080 numbers. Deducting our 0.1ppm assumption for the incremental costs of fixed 080 call origination implies that our mobile pure LRIC figures should be increased by 0.4ppm to give the LRIC differential.

LRIC+ measures

A22.53 Conceptually, the purpose of the LRIC+ measure is to estimate the average cost of originating traffic when using an all network traffic increment.[66] Unlike the pure LRIC approach, it includes a contribution to costs that are fixed and common with traffic other than 080/0500 calls.

A22.54 The LRIC+ measures were calculated as follows:

- For calls to a free to caller number range, we included LRIC+ network cost and the network administration costs from the 2011 MCT Cost Model together with two CARS costs categories, namely customer care and Other CARS costs. Non-network costs were allocated on an EPMU basis.

- For calls to a Maximum Mobile Price number range we also included two more CARS costs categories, namely billing and bad debt, both allocated on an EPMU basis.

A22.55 We have explored the impact of including the A&R costs. To test the impact of including these costs, we have produced an estimate that includes no contribution to these costs and an estimate that includes a contribution to 100% of these costs (allocated on an EPMU basis). Finally, as it represents a mid-point between including 100% of these costs and including none of these costs, we also present the effects of including a contribution to 50% of A&R costs.

A22.56 One component of A&R costs is discounts and incentives. We have considered whether it is appropriate to exclude this cost category entirely. A relevant factor is precisely what has been included in this cost category. One possibility is that it includes reduced retail prices. We acknowledge that reduced retail prices do not represent a specific cost incurred by the operator and should thus not be included.[67] However it may also include incentives that do incur specific additional costs for the operator, for example offering new subscribers retail shop vouchers or music downloads. Accordingly, we have not excluded this cost category altogether. Instead we have treated it in the same way as other A&R costs i.e. our different LRIC+ measures include either 0%, 50% or 100% of this cost.

[66] This cost measure is similar to a fully allocated cost approach.
[67] A firm will reduce its prices if it thinks that price reduction is profitable. In other words, lower prices are likely to be self financing.

Our cost measures

A22.57 Our estimates of the various measures of mobile 080/0500 origination costs are set out below.

Table A22.8: Measures of mobile call origination costs (2013/14 charges in 2011/12 prices)

Cost measure	Cost of originating mobile calls to a free to caller number range	Cost of originating mobile calls to a Maximum Mobile Price number range
Pure LRIC	0.7ppm-0.8ppm	0.7ppm-0.8ppm
LRIC differential	1.1ppm-1.2ppm	1.1ppm-1.2ppm
LRIC + (no A&R)	2.3ppm	2.4ppm
LRIC + (50% A&R)	3.1ppm	3.2ppm
LRIC + (100% A&R)	3.9ppm	4.0ppm

Note: does not include any additional mark-up to reflect reduced contribution to fixed and common costs from mobile termination rates

A22.58 All cost estimates relate to the year 2013/14 since any changes to 080 and 0500 may not be introduced until 12 or 18 months after our final statement. However these cost estimates are expressed in current (2011/12) prices, since these are likely to be more intuitive for stakeholders to understand and comment on.

A22.59 We have also explored the composition of these ppm cost estimates:

- Incremental mobile network costs account for 0.7ppm;
- Our LRIC+ estimate of mobile network costs is 1.5ppm; and

A22.60 Mobile call termination rates are currently on a glide-path to their pure LRIC level. This will mean that some common and fixed costs will no-longer be recovered from mobile call termination traffic. We have made an additional adjustment to the 2011 MCT Cost Model to explore the impact if some of the fixed and common costs previously allocated to mobile call termination are instead recovered from the origination traffic increment. The reduction in recovery of costs from incoming termination is calculated as the difference between the pure LRIC unit cost and the LRIC+ unit cost multiplied by the number of minutes of incoming termination traffic. This total yearly cost figure is then allocated across all services (excluding off-net termination) on an EPMU basis to give a ppm mark-up for outgoing origination. This additional mark-up would equal 0.3ppm. This additional mark-up is not included in the outputs in Table A22.8 above.

A22.61 Table A22.9 below sets out each of the mobile call origination cost measures. For each measure the Table shows the ppm allocation by cost category, both for calls to a free to caller number range and also calls to a the Maximum Mobile Price number range.

Table A22.9: Cost estimate breakdown for different approaches (2013/14 ppm costs in 2011/12 prices)[68]

Free to caller / Max mobile price	Pure LRIC	LRIC Differential	LRIC+ (no A&R)	LRIC+ (50% A&R	LRIC+ (100% A&R)
Non-network costs					
CARS costs					
Customer service costs					
Billing	0.00	0.00	0 - 0.06	0 - 0.06	0 - 0.06
Bad Debt	0 - 0.02	0 - 0.02	0 - 0.06	0 - 0.06	0 - 0.06
Customer care	0 - 0.09	0.09	0.23	0.23	0.23
A&R costs	0.00	0.00	0.00	0.79	1.579
Other CARS	0.00	0.00	0.46	0.46	0.46
Sub-total non-network costs	0 - 0.11	0.09 - 0.11	0.69 - 0.81	1.48 - 1.60	2.26 - 2.38
Network and admin costs from the 2011 Cost Model					
Administration costs	0.00	0.00	0.17	0.17	0.17
Network costs on pure LRIC basis	0.67	0.67	NA	NA	NA
Network costs on LRIC+ basis	NA	NA	1.45	1.45	1.45
Network costs on differential basis	NA	0.40	NA	NA	NA
Total[69]	**0.7 - 0.8**	**1.1 - 1.2**	**2.3 - 2.4**	**3.1 - 3.2**	**3.9 - 4.0**

[68] The lower end of the range for each cost estimate is the estimated cost of originating a call to a free to caller number range, which excludes a contribution to billing and bad debt. The cost of calls to a Maximum Mobile Price number range includes a contribution to bad debt and billing. In the case of the pure LRIC estimates, the lower end of the range excludes non-network costs on the basis that these may not be incremental to 080/0500 call origination.

[69] This total amount is shown in Table A22.1, the summary table in the introduction to this Annex.

Annex 23

Assessment of the origination payments for a free to caller range

Introduction

A23.1 This Annex discusses the level of origination payments for a free to caller number range. We discuss the consequences of different levels of origination payment but have taken the context (a free to caller number range) as given. Since this Annex only considers the effects of flexing the origination payment the other effects of making a number range free to caller (e.g. improved price awareness) are not covered. Rather, these other advantages and disadvantages are discussed in Section 16.

A23.2 This Annex is structured as follows:

- analytical context;
- responses to the December 2010 Consultation;
- assumptions about fixed origination payments;
- potential metrics for mobile origination payments;
- analytical approach to specifying the Impact Assessment Range for mobile origination payments;
- sections assessing Principles 1, 2 and 3 under Option A;
- provisional conclusion on the Impact Assessment Range for mobile origination payments under Option A; and
- assessment of the Impact Assessment Range for mobile origination payments under Option C.

Analytical context

A23.3 Apart from calls originated by BT, we currently do not directly regulate the origination payment (or termination rate) for calls to 080 and 0500. Rather the level of origination payments/termination rates has been established by industry.

A23.4 If one or more number ranges were made free to caller then this invites the question of what the level of origination payments will be, in particular for mobile calls (as mobile OCPs would no longer receive revenue from callers). Crucially, the impact on consumers of making a number range free to caller depends on the level of origination payments.[70]

[70] To take an extreme example (for illustrative purposes), if the origination payment were extremely high then almost all SPs would be likely to migrate away from the free to caller number range. This, in turn, is likely to have a negative impact on consumers.

A23.5 We are not proposing to directly regulate the level of origination payments in this consultation, although we are proposing to implement an access condition (see Section 17 for more details). However, in order to assess the impact of making 080 and/or 0500 free to caller we need to make an assumption as to the level of origination payments.

A23.6 In this Annex we derive a range for mobile origination payments, which is likely to balance the various effects between stakeholders. We refer to this as the "Impact Assessment Range".[71] We also set out our assumptions in relation to fixed origination payments.

Responses to the December 2010 Consultation

Position in the December 2010 Consultation

A23.7 We briefly discussed the level of mobile origination payments in the December 2010 Consultation.[72] We identified three "leading candidates" namely:

- equal to the current fixed origination payment (around 0.5ppm);
- the LRIC of originating mobile 080 calls (as an indication of the order of magnitude we gave a figure of 0.7ppm); and
- the mobile LRIC (as above) but additionally including a contribution to mobile OCPs' network common costs (as an indication of the order of magnitude we gave a figure of 1.8-2.0ppm).

A23.8 We highlighted the effects of different levels of origination payment. We said that had not formed a clear preference between the three candidates above and invited comments from stakeholders.

General stakeholder responses

A23.9 A number of stakeholders commented on the order of magnitude figures that we presented in the December 2010 Consultation.

- Magrathea stated that an origination payment of 2.0ppm would be acceptable and that it did not believe the effect on SPs would be extremely detrimental.[73]
- The FCS stated that 2.0ppm would represent a ceiling for many of its members, and would result in migration.[74]
- EE considered that the options set out in the December 2010 Consultation would force mobile OCPs to bear losses on call origination (something EE was strongly opposed to). In EE's view this discriminated against mobile OCPs compared with fixed OCPs and would be in clear violation of Article 6 of the EU Authorisation

[71] We use the term "Impact Assessment Range" rather than "assumption" for a number of reasons. First, it emphasises that the purpose of identifying this range is to inform our assessment of the various options for intervention in relation to Freephone. Second, the use of distinct terminology highlights the particularly detailed analysis of mobile origination payments which underlies the range we have selected (and on which stakeholders' views are welcome).
[72] December 2010 Consultation, paragraphs A7.72-A7.79.
[73] Magrathea December 2010 Consultation response, Q6.6 on page 13.
[74] FCS December 2010 Consultation response, Q6.6 on page 20.

Directive and section 47 of the Act. EE considered that it should not be forced to "subsidise" commercial businesses operating 080 numbers.[75]

- EE also stated that the revenues of the UK mobile industry are already under significant strain due to cuts in MTRs. Moreover further pressure could result from additional EU regulation of roaming rates.[76]

- Vodafone noted that origination payments that are lower than pre-existing retail call prices could, in principle, be revenue neutral. This depends on the extent to which mobile call volumes increase and the level of origination payments. Vodafone stated that the origination payments suggested in the December 2010 Consultation would require implausibly large volume increases to be revenue neutral for mobile OCPs, let alone margin neutral.[77]

- O2 considered that the 0.5-2.0ppm figures in the December 2010 Consultation failed to give appropriate weight to mobile OCPs' higher costs and significantly departed from the level of origination payments in other European countries.[78]

A23.10 Stakeholders also expressed views on how origination payments should be determined. These are set out below.

Fixed origination payments

A23.11 In its response to the December 2010 Consultation, C&W observed that currently only the origination payments made to BT are directly regulated; origination payments to other fixed operators are only set at the same level by convention. C&W stated that the same constraint may not exist on BT under a different regime and therefore it was also necessary to consider the level and control of fixed origination payments.[79]

A23.12 In the light of C&W's representations, we first set out our views on the level of fixed origination payments, followed by our views on how these could be regulated.

A23.13 In terms of the level of fixed origination payments, we have not received any evidence that the current level is inappropriate. The level of origination payments for calls originated on BT's network is currently regulated and cost reflective. Corresponding origination payments are paid to other fixed OCPs. Moreover the current level of fixed origination payments appears to be effective in that fixed OCPs do not charge for 080 and 0500 calls and (to the best of our knowledge) fixed OCPs do not refuse to originate these calls. Accordingly we have assumed that for fixed calls the origination payment would remain the **same as at present** (i.e. approximately 0.5ppm).

A23.14 In terms of regulation of fixed origination payments:

[75] EE December 2010 Consultation response, Q6.6 paragraphs 15 and 41-43.
[76] EE December 2010 Consultation response, Q6.6 paragraph 17.
[77] For example, assuming the previous retail price was 20ppm, an origination payment of 2ppm would require a 10 fold increase in call volumes to deliver the same gross revenue. Vodafone response to December 2010 Consultation, paragraph 62.
[78] O2 December 2010 Consultation response, paragraph 167.
[79] C&W December 2010 Consultation response, pages 49-50.

- for calls originated by BT, as explained in Section 17 we will be considering whether the NTS Call Origination Condition continues to be appropriate as part of the next narrowband market review;

- for calls originated by fixed OCP's other than BT, our position is the same as for calls originated by mobile OCPs, namely that we do not propose direct regulation of the level but we will be imposing an access condition (see Section 17 for more details).

Different potential metrics for mobile origination payments

A23.15 To provide a context for the following discussion of mobile origination payments, Table A23.1 below shows:

- the fixed origination payment;

- the mobile termination rate;[80]

- various measures of mobile OCPs' costs of originating calls to a free to caller number range. Our calculations are set out in Annex 22;[81] and

- mobile OCPs' average price for 080 calls in 2009.[82]

Table A23.1: Potential metrics for mobile origination payments

High-level metric	Further details	ppm level
Fixed origination payment	Approximate average figure	0.5ppm
Mobile termination rate	Pure LRIC of termination	0.7ppm
Cost of mobile origination	Mobile pure LRIC	0.7-0.8ppm
	LRIC differential	1.1-1.2ppm
	Mobile LRIC+ (no A&R costs)	2.3ppm
	Mobile LRIC+ (50% A&R costs)	3.1ppm
	Mobile LRIC+ (100% A&R costs)	3.9ppm
Retail mobile prices	Average 2009 price (excl VAT)	14.1ppm

[80] In the 2011 MCT Statement we adopted a charge control for the four national mobile CPs based on the pure LRIC of termination. We specified a glide path to that level. The duration of the glide path is under appeal. For the purposes of this Table, we have set out the pure LRIC of mobile termination in 2013/14 expressed in current (2011/12) prices. As with other figures, we have rounded to one decimal place.

[81] As explained in that Annex, A&R costs encompass advertising and marketing costs, net handset costs, discounts and incentives and sales costs.

[82] Mobile OCPs' average retention in 2009 was a little higher according to data from the 2010 Flow of Funds study due to origination payments from at least some TCPs.

A23.16 In addition, mobile OCPs have reached commercial deals with some SPs:

- for calls to those DWP helplines that are free to caller [✂];[83]
- for calls to reverse charge services, [✂].[84]

Stakeholder responses on different cost metrics

A23.17 Below we set out stakeholders' views on different metrics for origination payments.

Fixed origination payment

A23.18 A number of stakeholders considered that there should not be different origination payments for fixed and mobile calls:

- BT argued that the costs of mobile origination were similar to those of fixed operators and that its view was supported by the figures we presented in the December 2010 Consultation. It favoured a single cost-based origination payment set roughly at current levels for both mobile and fixed calls. It considered that this approach would lead to smoother implementation.[85]
- [✂] used MTRs as a proxy for costs. It considered that fixed and mobile costs would not be materially dissimilar by the time that any intervention came into effect. It considered that if different origination payments were set for fixed and mobile calls then "wholesale termination pricing" would be likely to move to the higher (mobile originated) point. This would increase costs for SPs thereby incentivising them to switch to revenue share numbers. [✂] thus favoured a single origination payment on the grounds of simplicity and consumer protection.[86]
- The FCS was unconvinced that the costs of mobile origination were higher than for fixed calls and considered that clear evidence would be needed to demonstrate that this was the case. The FCS considered that we should be wary of adopting an approach that reflected the mobile termination rate plus a contribution towards common costs.[87]

A23.19 However, a number of other respondents considered that the origination payment should vary between fixed and mobile calls.

- C&W considered that different fixed and mobile origination payments were justified because there are clear differences in costs.[88] C&W considered that, at the very least, origination payments should allow an efficient operator to recover the pure incremental cost of carrying the call.[89]

[83] Meeting between DWP and Ofcom on 22 June 2011. EE response EE dated 16 November 2011 to question 8(iii) of our information request dated 21 October 2011.
[84] [✂]. Responses to question 8(iii) of our information request dated 21 October 2011 from EE (16 November 2011) and O2 (11 November 2011).
[85] BT December 2010 Consultation Response, pages 11-12.
[86] [✂].
[87] FCS December 2010 Consultation response, page 19.
[88] C&W December 2010 Consultation response, page 52.
[89] C&W December 2010 Consultation response, pages 50-51.

- Sky noted that fixed and mobile origination payments should differ to reflect the differences in costs, as is similarly recognised in the higher price for terminating calls to mobiles.[90]

- UKCTA recognised that the cost of origination was different for fixed and mobile calls and that the additional costs of mobile calls should be reflected through a higher mobile origination payment.[91]

- Colt also considered that the higher costs of mobile call origination should be reflected in a higher origination payment. Colt referred to the position in relation to MTRs and the higher origination payments that apply to Freephone calls that originate on a BT public payphone (the 'Payphone Access Charge').[92]

- O2 noted that in other European countries it was not uncommon for origination payments to differentiate between fixed and mobile calls.[93]

The cost of mobile call origination

A23.20 Some stakeholders referred to the level of the charge controls that we set for mobile voice call termination. These controls on MTRs reflect the incremental costs of mobile termination.

- Talk Talk argued that the cost of mobile termination was similar to the cost of mobile call origination. It thus considered that the origination payment should be no higher than the charge controls for MTRs.[94]

- In contrast, C&W considered that setting origination payments at the current level of fixed and mobile termination rates was not necessarily ideal for two reasons. First, termination rates might not accurately reflect the costs of origination calls to Freephone numbers. Second, there is the outstanding question of whether pure LRIC (the basis on which MTRs are set) was an appropriate basis for controlling origination payments.[95]

A23.21 C&W noted that if origination payments were too high then SPs were likely to migrate elsewhere or seek to impose restrictions on their services. In extremis, this could result in a worse outcome for consumers than the status quo.[96] C&W favoured an approach that used a predetermined adjustment to the benchmark of termination rates. The adjustment would reflect factors such as recovery of common costs and "retail charges". C&W also said that it would support an absolute origination payment (although different for fixed and mobile), but considered that this would require regular review by Ofcom.[97]

A23.22 EE referred to both network and non-network costs:

- EE considered that the network costs of origination should be roughly equivalent to Ofcom's estimate of the network costs of termination estimated on a LRIC+

[90] Sky December 2010 Consultation response, page 7.
[91] UKCTA December 2010 Consultation response, page 13.
[92] Colt December 2010 Consultation response, page 7.
[93] O2 December 2010 Consultation response, paragraph 167.
[94] TalkTalk December 2010 Consultation response, page 5.
[95] C&W December 2010 Consultation response, pages 54-55.
[96] C&W December 2010 Consultation response, pages 50-51.
[97] C&W December 2010 Consultation response, page 55.

basis. This is because both origination and termination involve the same network elements.[98]

- EE stated that mobile OCPs must be able to recover their full costs and overheads, including CARS costs, on some services.[99] EE considered that Ofcom's reasoning for excluding CARS costs from MTRs (namely that CARS should be recovered from mobile OCPs' customers through retail charges) does not apply since the origination payment is in lieu of a retail charge to the OCPs' own customers. EE noted that these non-network costs were likely to be significant.[100]

A23.23 Vodafone considered that calls to non-geographic numbers, including Freephone, should contribute to its CARS costs. It stated that SPs clearly benefitted from customer acquisition. Vodafone considered that excluding particular heads of common costs from origination payments would effectively allow SPs to free-ride.[101] Vodafone also referred to our recent decision to set MTRs on a pure LRIC basis. Vodafone stated that this means that common network costs cannot be recovered from inbound calls and thus have to be recovered from elsewhere, including from outbound calls. Vodafone considered that there was no reason why origination payments should not make a contribution to the recovery of these costs.[102]

Based on current mobile call prices

A23.24 EE reiterated its view that the retail level was competitive and that TCPs enjoyed market power at the wholesale level. In the light of this, EE considered that the purpose of any intervention should be to prevent TCPs setting origination payments that were too low, rather than controlling retail prices.[103] EE stated that it was not objectively justifiable for Ofcom to force mobile OCPs to make any less profit from this category of calls than they do currently.[104]

A23.25 EE considered that mobile OCPs' current retail prices provided the best proxy for the appropriate level at which any origination payments should be set, since the retail level was competitive. In other words, if SPs want their 080 number to be free to call from a particular OCP, then they should pay to that OCP the same price that callers currently pay to the OCP to make those calls.[105]

A23.26 Vodafone argued that origination payments below the "market determined level" were likely to increase consumer detriment.[106] It considered that Freephone calls were a lower priority for customers than other calls, which they make more frequently and which have a greater bearing on their monthly expenditure. Given this pattern of consumer preferences, Vodafone considered that it was unlikely to be efficient to either allow equi-proportionate contributions to common costs from all call types or to prohibit common cost recovery on relatively inelastic call types. Vodafone considered that such an approach would run counter to the principles of Ramsey pricing. Vodafone considered that the reason for not adopting a Ramsey

[98] EE December 2010 Consultation response, Q6.6, paragraph 40.
[99] EE December 2010 Consultation response, Q6.6, paragraphs 16-17.
[100] EE December 2010 Consultation response, Q6.6, paragraph 40.
[101] Vodafone December 2010 Consultation response, paragraph 54.
[102] Vodafone December 2010 Consultation response, paragraphs 46-47.
[103] EE December 2010 Consultation response, Q6.6, paragraph 34.
[104] EE December 2010 Consultation response, Q6.6, paragraph 36.
[105] EE December 2010 Consultation response, Q6.6, paragraphs 35-36
[106] Vodafone December 2010 Consultation response, paragraph 45.

pricing approach when setting MTRs (namely the perceived difficulty of accurately measuring price elasticities) did not justify second guessing the "competitively determined pattern of cost recovery" when setting origination payments.[107]

A23.27 C&W considered that setting the origination payment equal to the AC would result in every OCP having a unique origination payment which would become much too costly to operate.[108]

Analytical approach to specifying the Impact Assessment Range for mobile origination payments

A23.28 In the 080 Dispute Determination three cumulative principles formed our analytical framework.[109] These three principles were supported by the CAT.[110] In determining the Impact Assessment Range for mobile origination payments we have adopted these same cumulative principles:[111]

- **Principle 1:** mobile OCPs should not be denied the opportunity to recover their efficient costs of originating calls to a free to caller number range.
- **Principle 2:** the mobile origination payment should, taking into consideration our statutory duties:
  - provide benefits to consumers, taking into account indirect and tariff package effects;[112] and
  - avoid a material distortion of competition either among OCPs or among TCPs.
- **Principle 3:** the mobile origination payment should be reasonably practicable to implement.

A23.29 The substance of the analysis under Principle 2 differs between Option A (when both 080 and 0500 are free to caller) and Option C (when only one of these ranges is free to caller). Accordingly we first consider Option A and apply Principles 1-3 in turn. Then, at the end of this Annex, we discuss how the analysis differs under Option C.

Principle 1: recovery of efficient costs of origination

A23.30 Principle 1 is that mobile OCPs should not be denied the opportunity to recover their efficient costs of originating calls to a free to caller number range. However, as

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[107] Vodafone December 2010 Consultation response, paragraphs 48-49 and 51.
[108] C&W December 2010 Consultation response, page 55.
[109] 080 Dispute Determination, paragraphs 1.17-1.21.
[110] 08x CAT Judgment, paragraph 439.
[111] We have changed the wording slightly to reflect the context and language used in this current consultation. In particular, this current Annex is considering mobile origination payments to a free to caller number range and hence we have omitted language that results from the possibility that mobile OCPs charge callers. The substance of the principles is unchanged.
[112] Indirect effects refer to the factors that influence the attractiveness to an SP of offering a service via a number on the free to caller range. Changes in the number, quality and variety of services provided by SPs on the free to caller range affect the welfare of consumers. As explained in paragraph 2.33 of the 0845/0870 Dispute Determination, there are two types of consumer in the NTS value chain: the caller and the call recipient (the SP). We made a similar point at paragraph 2.28 of the 080 Dispute Determination.

shown in Table A23.1, there is not a unique measure of the costs of originating a mobile call to a Freephone range. Rather it depends on which fixed and common costs are included.

Incremental costs of origination

A23.31 We estimate that the long run incremental costs of originating a mobile call are in the region of 0.7-0.8ppm. While we accept that there is some uncertainty around our estimates of incremental non-network costs (see Annex 22), setting the mobile origination payment equal to the fixed origination payment (around 0.5ppm) would be insufficient to cover even our estimate of incremental network costs (around 0.7ppm). Any incremental losses incurred by mobile OCPs may be exacerbated by the increase in mobile call volumes that is likely to occur if 080 and/or 0500 are made free to caller (see below).

A23.32 If mobile OCPs fail to cover their incremental costs of originating calls to a free to caller number range then there is a risk that they refuse to originate calls to that number range. This would disadvantage mobile subscribers, particularly the 15% of households that only have access to a mobile phone.[113]

A23.33 We thus consider that setting mobile origination payments at the same level as fixed origination payments is unlikely to satisfy Principle 1. Accordingly this option lies outside the Impact Assessment Range for mobile origination payments.

A23.34 While some stakeholders favoured applying the fixed origination payment to all calls (see above), this largely rested upon their view that the fixed origination payment was close to some measure of the costs of mobile origination. As explained above, our analysis is not consistent with this view.

Fixed and common costs of origination

A23.35 All the other metrics in Table A23.1 above allow mobile OCPs to recover their incremental costs.[114] Evaluating these other metrics involves consideration of what contribution should SPs make to mobile OCPs' fixed and common costs. We discuss this in the next section, as part of our evaluation of Principle 2.

Principle 2: benefits to consumers and avoid material distortions of competition

Introduction to Principle 2

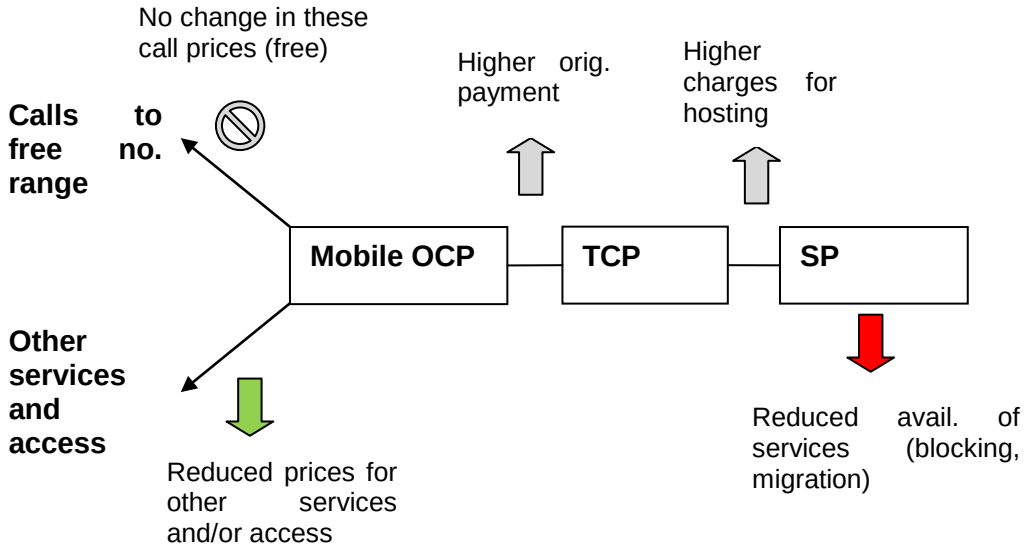
A23.36 We now consider Principle 2, namely that the mobile origination payment should provide benefits to consumers and avoid a material distortion of competition. This analysis relates to Option A (where both 080 and 0500 are free to caller). We cover differences under Option C (where only one range is free to caller) at the end of this Annex.

[113] The Consumer Experience 2011, Figure 26 on page 24.

[114] The possible exception is an origination payment equal to the mobile termination rate. Such an origination payment would cover the incremental network costs. However if non-network costs such as customer care are incremental to origination then they will be not covered by the origination payment.

A23.37 To help explain the trade-offs that lie at the heart of any decision over mobile origination payments, Figure A23.2 below illustrates the impact of higher mobile origination payments for a free to caller number range (lower payments have the opposite effect). This figure shows a stylised depiction of the parties involves in a call, namely the mobile OCP, the TCP and the SP. The mobile OCP supplies a variety of services to its consumers: (i) calls to the free to caller number range; and (ii) other services (e.g. calls to other number ranges, text messaging, internet access and access to a mobile phone).

Figure A23.2: Key impacts of raising mobile origination payments



KEY: Green arrows show positive effects for consumers; red arrows show negative effects

A23.38 The starting point for this Figure is that a number range is free to caller and that there is some level of mobile origination payments.[115] As illustrated in this Figure, a higher mobile origination payment is likely to:

- **reduce the availability of services on the free to caller number range**. Higher origination payments will ultimately be paid by SPs through higher charges for hosting. This is likely to discourage SPs from delivering services via that number range and may prompt some existing SPs to migrate to other ranges. This reduction in availability is likely to make consumers worse off and is depicted by the red downward arrow in Figure A23.2; and

- **reduce prices for other mobile services and/or mobile access**. Higher origination payments are generally likely to increase mobile OCPs' profits from calls to the free to caller number range.[116] Those higher profits are likely to support lower prices for other mobile services and/or mobile access via the tariff package effect. This is depicted by the green downward arrows in Figure A23.2.

[115] Figure A23.2 does not capture the effects of making a number range free to caller e.g. improved consumer price awareness. It simply isolates the effects of varying the mobile origination payments.
[116] In principle once a certain level of origination payments is reached (namely the level set by an OCP that was able to act as an unconstrained monopolist at the wholesale level) then further increases actually reduce OCPs' profits. This is because the extent of migration away from the number range outweighs the extra profits from calls to those SPs that remain.

Note that the price of calls to the free to caller number range (i.e. to the SPs that ultimately fund any origination payments) does not change. As depicted by the grey 'stop' symbol, these calls remain free regardless of the origination payment.

A23.39 Trading off the impact on service availability against the impact on wider mobile prices is at the heart of our assessment of Principle 2. In terms of our assessment criteria, the trade off is between the criterion of service quality, variety and availability and the criterion of efficient prices.

A23.40 The remainder of our analysis of Principle 2 is structured as follows:

- an overview of the factors that are relevant to an efficient balance of prices between callers and SPs;
- evidence about the impacts on service availability and other retail mobile prices;
- the price signals sent to SPs;
- the impact on competition; and
- our conclusions in relation to Principle 2.

The efficient balance of prices between callers and SPs

A23.41 In order to help frame the remainder of our analysis of Principle 2, we briefly discuss the factors that are relevant to the efficient balance of prices between callers and SPs. When considering the level of the mobile origination payment, the following are relevant:

- mobile OCPs' marginal costs;
- the contribution to mobile OCPs' fixed and common costs;
- externalities between SPs and callers; and
- the benefits to SPs.

A23.42 The starting point for considering the welfare optimal origination payment (and therefore the price paid by the SP for operating a free to caller number) is the marginal cost of call origination.[117] As a result, the SP would take this resource cost into account when deciding whether to use a free to caller number. While pure LRIC is not exactly the same as marginal cost, for regulatory purposes pure LRIC is often a better approximation of the economic concept of marginal cost.[118] All of the metrics for mobile origination payments that we discuss below are sufficient to cover the pure LRIC of originating a mobile call to a free to caller number range (which we estimate to be 0.7-0.8ppm).

[117] Absent externalities (which are discussed below).

[118] In network industries (such as telecoms) the marginal cost of a service may be very low or very high depending on whether usage is a long way from, or effectively at, installed capacity. This leads to very low (or zero) marginal cost most of the time, but with short increments over which marginal cost is very high. In regulatory practice, long-run incremental cost has therefore been applied as a proxy, avoiding the volatility implied in setting prices on the basis of marginal cost. 2011 MCT Statement, footnote 4 to paragraph 1.8.

A23.43 In principle Ramsey pricing is the most efficient way of recovering mobile OCPs' fixed and common costs.[119] This implies that if SPs' elasticity of demand with respect to the origination payment is relatively low (i.e. relatively inelastic) then the origination payment should incorporate a relatively high mark-up (and vice-versa). In practice, we do not have the information necessary to calculate relative price elasticities and are thus unable to formally adopt this approach. However in our analysis under Principle 2 we do take into account both SPs' willingness to support origination payments and the impact on callers of higher prices for other telecoms services. See paragraphs A23.58-A23.65 and A23.68-A23.82 below.

A23.44 In addition, we consider various cost measures, each of which reflect a different contribution to fixed and common costs:[120]

- In terms of sending SPs efficient price signals about whether to block calls from mobiles, the LRIC differential cost measure is relevant (see paragraphs A23.111-A23.118 below).

- SPs on a free to caller number range do not benefit from the costs mobile OCPs incur in handling bad debt and consumer billing.[121] We have thus excluded any contribution to these costs from our measures of the costs of originating calls to a free to caller number range (see Annex 22).

- As explained below, SPs may not benefit from some A&R costs. Specifically, in paragraphs A23.92-A23.98 below we consider to what extent this expenditure by mobile OCPs simply results in subscribers moving from one mobile OCP to another mobile OCP, without benefiting SPs.

A23.45 Reflecting externalities in prices will improve efficiency. In particular, high origination payments reduce SPs' willingness to operate a free to caller number which, in turn, reduces callers' welfare. We have taken this into account in paragraphs A23.66-A23.67 and A23.80-A23.82.

A23.46 Finally, it could be argued that SPs should contribute to mobile OCPs' expenditure only where they (SPs) benefit.[122] In terms of the benefits for SPs, we have already mentioned the possibility that some A&R costs may not benefit SPs and that it may therefore not be efficient for SPs to contribute to the recovery of those costs. In addition, there is a separate argument that, while the mobile origination payment should reflect mobile OCPs' incremental costs, SPs should not make a greater ppm contribution to fixed and common costs than they do for fixed calls. This is because the SP is likely to be indifferent about whether they receive a call from a mobile or from a landline. This is an alternative justification for the LRIC differential approach and we discuss it in the footnote to paragraph A23.142 below.

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[119] Absent externalities (which are discussed below).

[120] Under the LRIC+ approach we allocate non-network costs on an EPMU basis.

[121] Since callers are not charged for such calls there is no (caller) bad debt associated with them and callers do not need to be billed.

[122] There is an efficiency justification for this approach. Where a particular category of OCP expenditure benefits SPs then the price (origination payment) paid by SPs should reflect the benefits that they enjoy. Otherwise an externality may effectively arise, in that SPs enjoy a benefit from OCPs' conduct that is not reflected in prices. Note that there is also a separate argument on fairness grounds. Put simply, it could be characterised as 'fair' for a SP to contribute to expenditure than it benefits from and 'unfair' for it contribute where it does not benefit.

The impact on service availability and other retail mobile prices

A23.47 This sub-section discusses the evidence showing the impact of higher origination payments on service availability and other retail mobile prices. It is structured as follows:

- evidence from the 2011 SPs survey indicating how SPs react to origination payments;
- evidence relevant to how origination payments affect the retail price of other mobile services; and
- a provisional conclusion that draws together the implications of this material for the Impact Assessment Range.

Survey evidence on SPs' reaction to origination payments

A23.48 In the 2011 SPs survey we asked SPs about increases in the amount that they pay to operate a 080 number. Before we discuss the results, it is important to explain how we have interpreted the responses.

Interpretation

A23.49 Since not all the calls to an SP come from mobiles, a 1ppm increase in the mobile origination payment will increase the hosting charge to that SP by less than 1ppm. For example, if 30% of calls to a free to caller number range are from mobiles then the hosting charge will only increase by 0.3ppm but if 50% of calls are from mobiles then the hosting charge increases by 0.5ppm.

A23.50 Putting this same point in a different way, if an SP were willing to pay a 0.5ppm increase in hosting charges then (assuming that fixed origination payments do not change) it would be willing to increase mobile origination payments:

- by 1ppm if 50% of call minutes came from mobiles; but
- by 1.67pm if 30% of call minutes came from mobiles.

A23.51 This means that, in order to interpret the results of the 2011 SPs survey, we need to form a view on what proportion of call minutes to a free to caller number range are accounted for by mobiles.

A23.52 We have obtained data on how the mix of calls to DWP's helplines changed as a result of these being made free to caller. In 2009, the proportion of call minutes originated from mobiles was stable at 7%. After these helplines were made free to caller in January 2010, there was an immediate jump in the proportion of calls from mobiles. Between 40-45% of call minutes came from mobiles between November 2010 and June 2011.[123]

A23.53 O2 argued that the level of substitution from fixed to mobile calls in the DWP example was likely to be a special case since:

[123] Email from BT dated 8 November 2011.

- callers to DWP are likely to be very price sensitive, which was not the case for callers to all 080 services;

- O2 also did not know whether DWP invested heavily in advertising that their services would be free to caller. If DWP did not then the rate of substitution could be informative for free to caller ranges but if it did then other SPs are unlikely to deliver the same level of promotion; and

- O2 did not know whether DWP's particular services "resonate" with customers in the current economic climate.[124]

A23.54 When considering whether not to cease charge for calls to DWP's helplines, internal O2 analysis stated that [✂].[125] We have considered the points raised in O2's response to the December 2010 Consultation:

- We agree with O2 that callers to DWP's helplines may be particularly price sensitive. However they may also have limited alternatives, given that low income households are more likely to be mobile only.[126] Moreover consumers that are particularly price insensitive would presumably currently be calling 080 numbers from mobiles but in practice very few do so.[127] In other words, most consumers appear to be fairly sensitive to the relative price of fixed and mobile 080 calls, as reflected by the low usage of mobiles of make these calls. We consider that if the price of fixed and mobile calls were identical (free) then callers are likely to use whichever device is more convenient for a call.

- We asked DWP how it publicised this change. It issued a press release to announce the change, the Secretary of State was interviewed for a breakfast television show and staff handling calls were encouraged to tell callers that they were not being charged. However it did not undertake a major advertising campaign. Moreover if all 080 numbers were consistently free to caller then this would reinforce any individual advertising by SPs or OCPs – consumers would be receiving the same message from all sides that 080 meant 'free'. As a result, there would be not be as strong a need for individual advertising campaigns in order to get the message across.

- Finally, while the wider economic climate may well affect the total number of calls to DWP's helplines, it is unclear why this would materially affect the proportion of these calls that are made from mobiles.

A23.55 In our view the DWP evidence is a helpful guide to the proportion of calls to a free to caller range that are likely to be originated from mobiles. More generally, in 2011 approximately 50% of all voice calls were originated from mobiles.[128] We also note that the THA stated that some of its members in Ireland (which use free to caller numbers) received 89% of their calls from mobiles.[129] While such SPs may not be

[124] O2, December 2010 Consultation response, paragraph 154.
[125] [✂].
[126] In 2011, 25% of households in socioeconomic groups D and E were mobile only. *The Consumer Experience 2011*, Figure 27 on page 25.
[127] In 2009, 95% of 080 call minutes were originated on fixed networks. 2010 Flow of Funds study, page 6.
[128] Specifically 129bn fixed voice minutes and 125bn mobile voice minutes. *Communications Market Report 2011,* August 2011, Ofcom, Figure 5.1 on page 245.
[129] THA, December 2010 Consultation response, Q6.6.

representative, it does suggest that some SPs may receive an even higher proportion of calls from mobiles than the DWP does.

A23.56 Overall, in the medium term it seems reasonable to assume that between 40% and 50% of call minutes to a free to caller number range would be originated from mobiles. This is consistent with the data we have received from DWP and the overall position in relation to all voice calls.

A23.57 Accordingly, if a SP was willing to increase its overall origination payment by 0.5ppm then this implies that it is willing to increase its mobile origination payment by between 1ppm and 1.25ppm (depending on whether 50% or 40% of call minutes come from mobiles). Currently that SP is funding an origination payment of approximately 0.5ppm on those call minutes (since almost all of those call minutes are currently originated on fixed networks).[130] This implies that this (illustrative) SP is willing to fund an absolute mobile origination payment of approximately 1.5ppm to 1.75ppm.

Evidence on SPs' preferences

A23.58 In the 2011 SPs survey we asked respondents with 080 numbers to state their willingness to pay in return for 080 being made to free to caller. We also asked how large an increase in costs 080 SPs would be willing to bear before they got rid of free to caller numbers. We discuss the responses to these two sets of questions below.

A23.59 We first consider survey evidence on 080 SPs' stated willingness to pay.

A23.60 There were two steps to this question:

- We asked 080 SPs "How do you feel about the impact of … mobile [call] charges on the total number of calls that you receive?" 15% of respondents said that mobile charges were a "major disadvantage" and 32% said they were a "slight disadvantage".[131]

- We then asked the 47% that responded it was a disadvantage the following question: "By how much would you be willing to increase the pence-per-minute amount that you pay to receive calls on your freephone number(s) in return for the charge to mobile callers being reduced to zero?"[132]

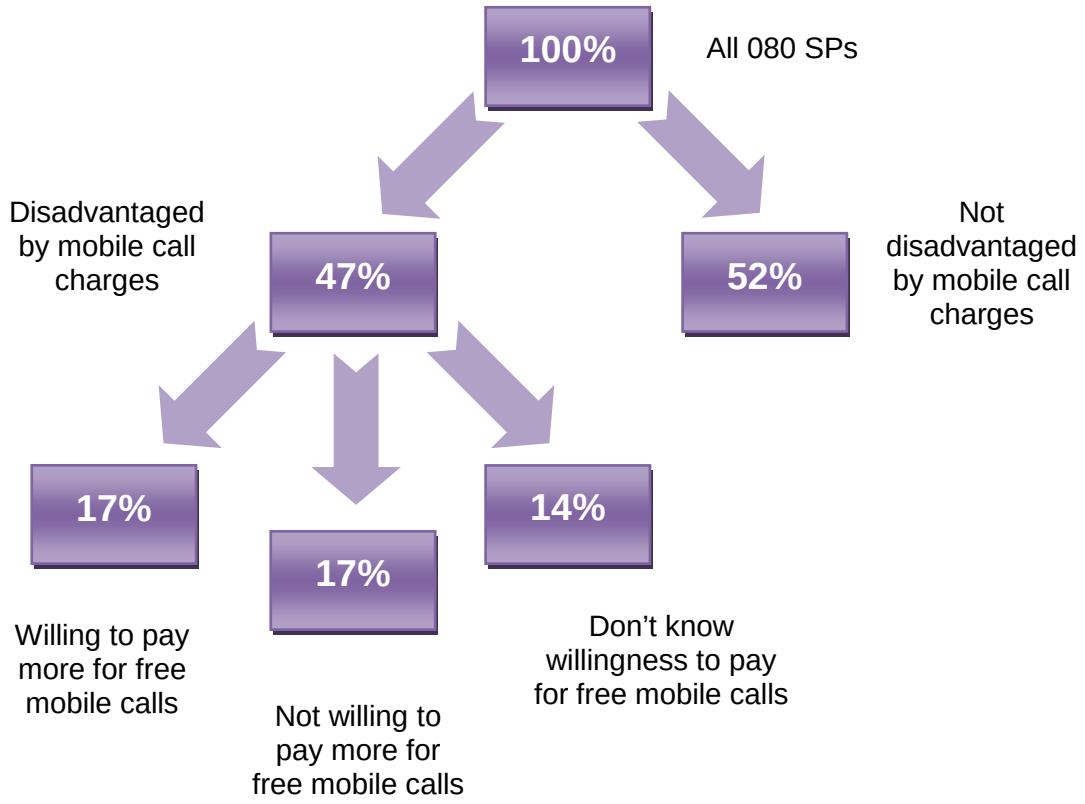
A23.61 To help explain the responses, the relationship between these questions is summarised diagrammatically in Figure A23.3 below. Since 52% do not regard mobile call charges as a disadvantage they are unlikely to be willing to pay higher origination payments for mobile calls to be free. 47% of 080 SPs consider that they are disadvantaged by mobile call charges and this can be broken down as follows:

- 17% are unwilling to pay more than the current fixed origination payment in return for mobile calls being made free;

[130] In 2009, 95% of 080 call minutes were originated on fixed networks. 2010 Flow of Funds study, page 6.
[131] 45% of SPs gave a neutral response, 7% said mobile call charges were a "slight" or "major" benefit and 1% said "don't know". 2011 SPs survey, question 14.
[132] 2011 SPs survey, question 16.

- 14% do not know how much they would be willing to pay in return for free mobile calls; and
- 17% are willing to pay a mobile origination payment of at least 2.5ppm (and considerably more in the majority of cases).[133]

Figure A23.3: Stated willingness to pay for a free to caller 080 range (% of all 080 SPs)



A23.62 Responses to the latter question about willingness to pay (Q16) are captured in Table A23.4 below. Specifically, the top two rows of this table reflect a conversion of the ppm responses to the 2011 SPs survey into the equivalent ppm mobile origination payment, as described in paragraph A23.57 above and depending on whether 40% or 50% of call minutes are assumed to come from mobiles. The bottom row of this table gives the proportion of respondents giving each answer.

A23.63 Response rates in Table A23.4 are shown as a percentage of SPs disadvantaged by mobile call charges, whereas in Figure A23.3 above the response rates are shown as a percentage of all 080 SPs. Hence the 35% willing to pay 0.5ppm (i.e. the same as at present) shown in the first column corresponds to the 17% in Figure A23.3 above not willing to pay more for free mobile calls. The 29% of "Don't knows" in Table A23.4 corresponds to the 14% in Figure A23.3. Similarly the sum of the proportion willing to pay 2.5ppm or more (i.e. the second to fifth columns) corresponds to the 17% in Figure A23.4 above that are willing to pay more for free mobile calls.

[133] We have rounded responses to the nearest 1% and, as a result, they do not sum to 47%.

Table A23.4: Stated willingness to pay of 080 SPs that are disadvantaged by mobile charges (% of SPs disadvantaged by mobile call charges)

Implied mobile origination payment (50% from mobiles)	0.5ppm	2.5ppm	4.5ppm-6.5ppm	8.5ppm-10.5ppm	Over 10.5ppm	Don't know
Implied mobile origination payment (40% from mobiles)	**0.5ppm**	**3ppm**	**5.5ppm-8ppm**	**10.5ppm -13ppm**	**Over 13ppm**	**Don't know**
Responses	35%	3%	9%	12%	11%	29%

Base: SPs that are disadvantaged by mobile charges

A23.64 We turn now to a somewhat difference perspective on SPs. As explained above we also asked 080 SPs how large an increase in costs they would be willing to bear before they got rid of free to caller numbers.[134] We have converted the ppm amounts asked about in this question into equivalent mobile ppm mobile origination charges (as described above) in Table A23.5 below.[135]

Table A23.5: Likelihood of 'getting rid of' free to caller 080 number in response to higher origination payments (% of all 080 SPs)

Implied mobile origination payment (50% from mobiles)	1.5ppm	2.5ppm	3.5ppm	4.5ppm
Implied mobile origination payment (40% from mobiles)	**1.75ppm**	**3ppm**	**4.25ppm**	**5.5ppm**
Very likely	8%	11%	18%	24%
Fairly likely	10%	7%	10%	12%
Unsure	10%	13%	14%	15%
Fairly unlikely	16%	24%	19%	15%
Very unlikely	55%	44%	38%	34%
Net likely	19%	19%	28%	36%
Net unlikely	71%	68%	57%	49%

A23.65 The results in this Table suggest that even fairly low mobile origination payments (1.5-1.75ppm) are likely to result in a reasonable minority of SPs getting rid of their free to caller number(s). Beyond this point, the incremental impact on availability seems limited until a threshold a little above the 2.5-3.0ppm level is reached. From

[134] 2011 SPs survey, question 17: "If your freephone number(s) were made completely free to all callers and the amount you currently pay per minute for those calls was increased, how likely would you be to get rid of your freephone number(s)?" Respondents were asked about increases of 0.5ppm, 1ppm, 1.5ppm and 2ppm.

[135] The "Net likely" row in this table is the sum of the "Very likely" and "Fairly likely" responses (similarly for the "Net unlikely" row).

that point onwards, SPs' responses suggest that higher origination payments would result in a steady decline in availability.

Impact of reduced availability on consumers

A23.66 The 2011 SPs survey also sheds light on the impact for consumers if SPs get rid of their free to caller numbers. For those respondents that said they were likely to get rid of their 080 number we asked "If you did get rid of your freephone number, which of the following would you be most likely to do?" [136] The answers to this question are summarised in Table A23.6 below. Note that the unweighted base for this question only had a sample size of 65, so the results should be treated as indicative. Of these respondents 55% said they were "very likely" to pick this alternative option and 45% said they were "fairly likely".[137]

Table A23.6: Behaviour of SPs that 'get rid of' their 080 number(s) (% of SPs very or fairly likely to get rid of 080 numbers)

Reaction by SPs that get rid of their 080 number	Proportion
EITHER Switch that line and those calls to a different number that you already have OR Get a new non-freephone number and use that instead	60%
Keep your freephone 080 number(s) but avoid the increase in cost of operating the number by asking for calls from mobile phones to be blocked	20%
Get rid of that line completely	15%
Don't know	5%

Note: small sample size

A23.67 The different ways in which SPs say they will get rid of their free to caller number have different negative effects on consumers.[138]

- Migrating services to a number that is not free to caller increases call prices.[139] If the SP migrates to a 084 number with a very low SC then all consumers will be charged for these calls. The amount depends on their AC. If the SP migrates to a 03 number then some fixed callers and all pre-pay mobile callers are likely to be charged for these calls.[140] The majority of post-pay mobile consumers will not pay for 03 calls, although they will use up inclusive minutes within their bundles.[141]

[136] 2011 SPs survey, question 18.
[137] No respondents said "not very likely" or "not at all likely". 2011 SPs survey, question 19.
[138] This Annex is considering the impact of higher origination payments to a free to caller number range. Accordingly, the counterfactual for this comparison is fixed and mobile calls being free.
[139] Migration is also likely to result in costs for the SP. See Annex 12 for further details on migration costs.
[140] Some fixed packages (e.g. from BT) offer free calls to geographic numbers, either all the time or at certain times of the day. However fixed 03 calls are not universally free. Data from the 2010 Flow of Funds study suggests that, in 2009, 87% of fixed 03 calls were charged for and that fixed OCPs' average retail price across all 03 calls was 2.9ppm (excl. VAT).
[141] Consumers that use up their allowance of inclusive minutes are charged for 03 calls.

- An SP could ask TCPs to block calls from mobile OCPs. We consider that this is technically feasible.[142] Blocking calls from mobiles will particularly disadvantage mobile-only consumers. In 2010, 15% of households were mobile only.[143]

- Getting rid of the line completely will disadvantage all consumers, since the service ceases to be available (at least via a telephone call). However this also means that the SP ceases to receive the benefit of being called. Accordingly it seems plausible that the non-geographic services that are discontinued are likely to attract relatively low volumes of calls now or have an alternative (e.g. the internet) that is readily accessible for a large proportion of consumers.

Impact of origination payments on retail prices

A23.68 As explained above, an increase in mobile origination payments will generally increase mobile OCPs' profits from calls to the free to caller range. This, in turn, is likely to support lower mobile prices for other services. Below we set out an indicative calculation of the impact of a 1ppm change in mobile origination payments, discuss the scale of the tariff package effect and consider which retail services may bear the bulk of any price changes.

Illustrative calculations

A23.69 In 2009, there were 11.2bn minutes of calls to 080 numbers and SPs paid approximately £120m to TCPs.[144] This implies that the impact of a 1ppm increase in mobile origination payments may be as follows:

- if 40% of calls to the (free to caller) 080 range are made from mobiles then SPs' costs will increase by £45m per annum (a rise of 37% over the 2009 figure); and

- if 50% of calls to the (free to caller) 080 range are made from mobiles then SPs' costs will increase by £56m per annum (a rise of 47% over the 2009 figure).

A23.70 Note that these simple calculations assume that total 080 call volumes do not change.[145] In practice, this is unlikely to be the case. For example, improved consumer confidence will tend to increase call minutes. In contrast, reductions in access to 080 services (due to migration, closure or blocking mobile calls) will tend to lower 080 call volumes. The calculations also assume that an increase in mobile origination payments does not lead to any substitution of fixed to mobile calls (or vice versa). This is a reasonable assumptions as the situation we are analysing is a zero mobile call price with both the lower and higher mobile origination payments. With these simplifying assumptions the increase in cost to SPs can also be taken as the increase in profit to mobile OCPs.

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[142] As explained below, calls that receive a higher mobile origination payment could be identified using Caller Line Identification ("CLI"). We consider that TCPs could identify and block mobile calls using this same information. The SP may have to pay a small fee to their TCP in return for this additional call blocking service.

[143] The Consumer Experience 2011, Figure 26 on page 24.

[144] 2010 Flow of Funds study, Figure 5.7 on page 30 and Figure 5.23 on page 45.

[145] We have not carried out an analogous calculation for 0500 calls. [✂]. This implies that, in 2010 there were under [✂] of calls to 0500 numbers. If we maintained our assumption that volumes do not change then the absolute impact (in £million terms) would be small. Source: C&W, December 2010 consultation response, annex 4.

Tariff package effect

A23.71 The more complete that the tariff package effect is then the greater proportion of any origination payments that are passed onto consumers.

A23.72 We discuss the magnitude of the tariff package effect in Annex 8. Our view is that the tariff package effect is significant but is unlikely to be complete (100%). In other words, if mobile OCPs receive an extra £1m (say) from higher origination payments then the retail price of other telecoms services is likely to fall by less than £1m.

Distribution of the tariff package effect across consumers

A23.73 Changes in origination payments are likely to have different effects on different consumers. In particular, some consumers may benefit from higher origination payments whilst others may be disadvantaged.

A23.74 Higher origination payments tend to reduce service availability. As a result, consumers that wish to make large numbers of 080 and/or 0500 calls are likely to be disadvantaged. This includes consumers that use landlines to call these numbers.[146] In the 2010 Consumer survey we asked respondents how often they called 0800 numbers from their landline and their mobile.[147] The results are summarised in Table A23.7 below.

Table A23.7: Frequency of making 080 calls

	Regularly (every week)	Sometimes (every month)	Rarely (less than once a month)	Never
Landline	11%	24%	44%	21%
Mobile	1%	6%	18%	75%

A23.75 Table A23.7 needs to be interpreted carefully. As discussed above, on a free to caller number range the proportion of mobile calls is likely to be much higher than is currently the case on 080 (e.g. 40-50% rather than 5%). As a result, the frequency of landline calls is likely to be lower than shown in Table A23.7 but the frequency of mobile calls is likely to be higher. Nonetheless it is clear that the effects of reduced availability are unlikely to be evenly spread. There appears to be a small number (in the region of 10%) of consumers that frequently make these calls and which are most likely to be disadvantaged by any reductions in service availability.

A23.76 Making a number range free to caller (absent a change in origination payments) will tend to reduce mobile OCPs' profits. This effect is mitigated by higher origination payments. As a result, higher origination payments will tend to diminish the price increases associated with making a number range free to caller. The 2011 MCT Statement discussed the impact of lower MTRs on other mobile prices. We have

[146] Insofar as SPs respond to higher origination payments by blocking access from mobile phones then this will not disadvantage fixed callers. However as shown in Table A23.6 above, only around 20% of SPs on 080 would select this option. The reminder indicated that they would migrate or close the number, which will disadvantage some or all fixed callers.

[147] "How often do you make calls to the following numbers from your own landline/your mobile phone?" 2010 Consumer survey, Q21 and Q25.

considered whether this sheds light on the services which are particularly likely to increase in price if origination payments are low.

- Based on economic theory, in the 2011 MCT Statement we stated that "it makes commercial sense for each MCP to target price increases as far as possible towards those whose demand (for subscription and usage) is less price elastic (post pay users), and limit (or completely avoid) price increases for those who are more sensitive to price changes (particularly for subscription) such as some pre-pay users",[148] as long as customers remain profitable to serve.[149] We then made various inferences about the impact of lower MTRs on pre-pay and post-pay customers.[150]

- The CC disagreed with our analysis.[151] Rather it focused on the impact of changes in MTRs on customer lifetime values (CLVs).[152] For classes of subscribers where the impact of lower MTRs on CLVs is likely to be small, the CC expected that price rises would be smaller and vice-versa.[153]

A23.77 Changes to mobile origination payments have the greatest effect on the CLVs of subscribers that make large numbers of mobile calls to free to caller number ranges. The CLVs of subscribers that make few of these calls is likely to be largely unaffected. The CC's reasoning might thus suggest that changes in other mobile telecoms prices would mainly fall on those subscribers that make large numbers of free 080/0500 calls.

A23.78 However this presumes that mobile OCPs are able to target price changes at subscribers that frequently call free to caller numbers. It is unclear whether this is feasible. This creates uncertainty about how in practice mobile OCPs will respond to changes in origination payments. According we have not drawn clear conclusions about which particular telecoms prices are likely to be affected by changes in origination payments or which customers groups are particularly likely to bear those price changes.

A23.79 As a further note of caution, in recent years mobile OCPs have been required to reduce both MTRs and prices for roaming. As a result, they have already had to rebalance their pattern of retail prices. This makes it harder to judge where further changes may fall. Intuitively, the argument is that mobile OCPs may have already increased post-pay subscriptions (say) in response to other regulatory changes and may thus seek new ways to raise prices if the profitability of non-geographic calls falls.

Trade off between service availability and the tariff package effect

A23.80 We have weighed up the evidence discussed above:

[148] 2011 MCT Statement, paragraph 7.102.
[149] 2011 MCT Statement, paragraph 7.104.
[150] 2011 MCT Statement, paragraphs 7.70-7.72.
[151] 2012 CC Determination, paragraph 2.657.
[152] The CC stated that "MCPs will form expectations on the net present value (NPV) of the contribution to be earned from individual customers, or class of customer, over their period of subscription to the MCP's network. The NPV of such contribution is known as the 'customer lifetime value' (CLV). … MCPs will be prepared to offer more generous terms to attract individual customers, or groups of customer, with higher CLVs". 2012 CC Determination, paragraph 2.23.
[153] 2012 CC Determination, paragraphs 2.658-2.660.

- Putting aside any impact on availability, consumers (callers) are likely to moderately benefit from higher origination payments. These benefits are likely to be moderate for two reasons. First, the tariff package effect is unlikely to be complete. Mobile OCPs' are unlikely to pass all of the extra profits that they earn onto callers, although we accept that a significant proportion will be. Second, higher origination payments mitigate the rises in the price of other mobile services that may otherwise occur as a result of making number ranges free to caller.

- Reduced availability of services on free to caller number ranges disadvantages consumers, particularly in the case of the 15% of SPs that say they will get rid of services completely.[154]

- We have placed particular emphasis on the survey results set out in Table A23.5 above. This shows that 19% of SPs claim to be likely to get rid of their 080 number(s) in response to a mobile origination payment of 1.5-1.75ppm. Increasing the mobile origination payment to 2.5-3.0ppm does not affect the proportion of SPs that say they are likely to get rid of their number(s) but will reduce retail prices for consumers. A further increase in the mobile origination payment to 3.5-4.25ppm results in a significant rise in the number of SPs that say they'll get rid of their 080 number(s), namely to 28%.

- We recognise that (as a general point) survey respondents often overstate their tendency to react to changes. One way of taking this into account is just focusing on those respondents that said they were "very likely" to get rid of their 080 number(s). This suggests that raising the mobile origination payment from 1.5-1.75ppm to 2.5-3.0ppm would slightly increase the proportion of SPs that get rid of their number(s) from 8% to 11%. A further increase in the mobile origination payment to 3.5-4.25ppm leads to a bigger rise, namely to 18%.

A23.81 Even a comparatively low mobile origination payment (1.5-1.75ppm) results in a minority of SPs getting rid of their 080 number. However the survey evidence suggests that the rate at which SPs get rid of their 080 numbers accelerates somewhere above 2.5-3.0ppm. We have weighed the negative effects on consumers of this steeper reduction in service availability against the moderate consumer benefits in terms of lower prices for other mobile services (via the tariff package effect). This suggests that, given the evidence currently available to us, a mobile origination payment in the region of 2.5-3.0ppm represents a reasonable trade off between the impact on service availability and the price of other mobile services.

A23.82 We recognise that this range relies heavily on the results to the 2011 SPs survey, and in particular the limited change in SPs' stated propensity to react to an origination payment of 2.5-3.0ppm compared to 1.5-1.75ppm. While it is not possible to predict SPs' reactions with certainty, the 2011 SPs survey represents the best evidence that is currently available to us. In designing this survey we tried to ensure that the questions were clear and we piloted the questions before commencing the full survey. That said, we recognise that stated behaviour in response to a telephone survey may not be the same as SPs' actual, considered behaviour.

[154] The potential negative impact on service availability is also highlighted by the finding that less than a third of SPs said that they were willing to increase origination payments in order to secure a free to caller range (specifically 17% were willing to do so; a further 14% said they didn't know how much they were willing to pay). See Figure A23.3 above.

Price signals for SPs

A23.83 If decision makers face price signals, so that they take into account the costs of their actions, then this tends to promote economic efficiency. In the case of a free to caller number range, callers do not face price signals about the relative resource costs associated with using a mobile phone rather than a landline. Rather, calls from both devices have the same retail price (zero). However setting different origination payments for fixed and mobile calls does send price signals to SPs. Such price signals affect whether or not SPs choose to operate a free to caller number when it is efficient to do so. Considering price signals for SPs provides another perspective on the extent to which SPs, rather than mobile subscribers, should bear costs.[155]

A23.84 Below we discuss three issues. First, the extent to which price signals should reflect mobile OCPs' fixed and common costs. Second, the consequences of setting MTRs on a pure LRIC basis. Third, the relevance of sending efficient price signals in relation to blocking calls from mobiles.

Price signals and mobile OCPs' fixed and common costs

A23.85 As set out above, respondents to the December 2010 Consultation disagreed about the extent to which price signals for SPs should reflect mobile OCPs' fixed and common costs. At one extreme, by advocating mobile origination payments that are no higher than MTRs, Talk Talk was effectively arguing that price signals should not reflect fixed and common costs at all.[156] At the other extreme, Vodafone argued that because callers are relatively price insensitive then SPs should make a relatively high contribution to fixed and common costs.[157]

A23.86 We first highlight what the contribution to fixed and common costs is under the various cost metrics set out above. We then consider whether SPs benefit from certain expenditure by mobile OCPs. Finally we set out our conclusions on this issue.

Mobile fixed and common costs

A23.87 The origination payment to fixed OCPs reflects their fixed and common costs. As explained in Annex 22, all of our ppm estimates of mobile OCPs' costs are higher than the fixed origination payment. One reason is mobile OCPs' higher incremental costs (0.7-0.8ppm). However, under most of those cost measures the ppm contribution to fixed and common costs is also higher. This is illustrated in Table A23.8 below.

[155] This is relevant to our assessment criteria of service variety, quality and innovation and efficient prices.
[156] Talk Talk December 2010 Consultation response, page 5.
[157] Vodafone December 2010 Consultation response, paragraphs 48-49.

Table A23.8: Contributions to fixed and common costs

Cost measure	Contribution to fixed and common costs
Mobile LRIC	None
LRIC differential	0.4ppm (same as fixed)
Fixed and common network costs (EPMU)	0.8ppm
Mobile LRIC+ (no A&R costs)	1.5-1.6ppm
Mobile LRIC+ (50% A&R costs)	2.3-2.4ppm
Mobile LRIC+ (100% A&R costs)	3.1-3.2ppm

A23.88 The LRIC+ figures in Table A23.8 do not include a contribution to bad debt or consumer billing costs.

A23.89 By way of comparison:

- fixed OCPs' receive a contribution of approximately 0.4ppm to their fixed and common costs; and
- if mobile OCPs' fixed and common network costs are allocated on an EPMU basis then they equal 0.8ppm.[158]

A23.90 Typically when Ofcom is setting charge controls it allows a contribution to reflect the fixed and common costs of an efficient supplier, although there are exceptions (e.g. controls on MTRs).

A23.91 If mobile OCPs' costs are higher than those for fixed networks then reflecting this through higher mobile origination payments means that SPs take those higher costs into account when deciding whether to select a free to caller number. However, we have considered carefully whether SPs should contribute to all of the costs incurred by mobile OCPs. In particular, where SPs do not benefit from particular categories of expenditure it is questionable whether they should contribute to these costs. We consider this issue in the following section.

Benefits to SPs from mobile OCPs' expenditure

A23.92 In terms of network costs, SPs are likely to benefit from this expenditure since it allows callers to contact them using mobile phones.

A23.93 In terms of non-network costs, in Annex 22 we separated these into the following categories:

[158] As explained in Annex 22 the pure LRIC estimate for network costs is 0.7ppm and the LRIC+ estimate for network costs is 1.5ppm.

- administration costs e.g. overheads for non-network depreciation (IT, furniture and office equipment), property costs, human resources, finance and legal costs and IT overheads; and

- CARS. These costs can be further broken down into two categories:

  - A&R costs. These consist of advertising and marketing, handset subsidies, sales and discounts and incentives. For an average mobile network these totalled £1,057m; and

  - customer care (e.g. call centres) and "other" costs. For an average mobile network these totalled £461m.

A23.94 We are particularly concerned about the A&R costs component of CARS costs.[159] Where expenditure increases the total number of calls to SPs, for example because it grows the number of mobile subscribers, then SPs are likely to benefit. In contrast, expenditure that simply results in a subscriber moving from one mobile OCP to another mobile OCP ("customer redistribution expenditure") is unlikely to benefit SPs. This begs the question of what proportion of mobile OCPs' A&R costs reflects customer redistribution expenditure.

A23.95 It is very difficult to separate customer redistribution expenditure from expenditure that benefits SPs. We have considered a number of factors that may shed light on this:

- Currently the mobile sector is saturated. At the end of 2009 there were 129 active mobile connections for every 100 people in the UK.[160] In 2010, 94% of households had access to at least one mobile phone and 91% of adults personally used a mobile phone.[161] This suggests that there is limited scope for further growth in mobile subscriber numbers. However we accept that these figures do not shed light on the extent to which mobile take-up might fall if mobile OCPs were to scale back their expenditure on A&R costs.

- In 2003 the mobile sector was found to be effectively competitive and since then the number of suppliers has increased.[162] Mobile OCPs have emphasised the strength of retail competition.[163] In such an environment, it seems likely that expenditure on discounts and incentives and subsidised handsets (net handset costs) mainly attract subscribers from other OCPs, rather than drawing new subscribers into the market.[164]

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[159] The size of this component of CARS expenditure is material. It thus has a significant impact (1.6ppm) on our cost estimates.
[160] This is comparable to Germany, the Netherlands and Sweden, is significantly higher than in France, the US, Canada and Japan, and is lower than in Italy. The Consumer Experience 2011, Figure 12 on page 16.
[161] The Consumer Experience 2011, Figure 13 on page 16.
[162] *Mobile Evolution: Ofcom's mobile sector assessment*, 17 December 2009, paragraph 3.37. See also the generally positive commentary in paragraphs 1.1-1.5 and 3.18-3.23. Available at: http://stakeholders.ofcom.org.uk/binaries/consultations/msa/statement/MSA_statement.pdf
[163] For example, EE December 2010 Consultation response, Q4.1, paragraph 11 and Vodafone December 2010 Consultation response, Summary, page 2, third bullet.
[164] To illustrate, consider the contrasting position of a monopolist. Any increases in the monopolist's subscriber numbers as a result of price reductions reflect growth in the overall number of subscribers.

- One component of A&R costs is sales, which largely relates to mobile OCPs' retail outlets. It is plausible that some of this expenditure increases total mobile penetration. However at least some of the expenditure on a network of retail outlets may be to build the visibility of a mobile OCPs' brand and to attract customers that would instead purchase subscriptions from shops operated by rival firms. Thus arguably some of these costs may represent customer redistribution expenditure that does not benefit SPs.

- An increase in mobile subscribers is more likely to grow the volume of calls to SPs if those subscribers do not have access to a fixed line. In 2010, 16% of households did not have a fixed line.[165] This implies that even if expenditure on A&R costs helps sustain the total number of mobile subscribers, the vast majority (84%) of those subscribers already have access to a landline. As a result, the impact on the number of calls to SPs may be small.

A23.96 While not definitive, this evidence suggests that only a small proportion of mobile OCPs' expenditure on A&R costs is likely to benefit SPs.

A23.97 Moreover, if only a small proportion of this expenditure benefits SPs then this implies that there is a high degree of "leakage" from higher origination payments into activities that do not benefit SPs.[166] To illustrate, suppose that X% of expenditure on A&R costs increases the overall number of mobile subscribers and thereby benefits SPs. If the mobile origination payment were to increase to reflect this expenditure then only X% of the resulting rise in SPs' costs would support activities that actually benefit them.

A23.98 There are parallels between this discussion and the uplift that used to be applied to MTRs to reflect the positive externality created by growing the overall number of mobile subscribers (the "network externality surcharge" or "NES"). The objective of the NES was that higher termination revenues would support activities by mobile networks that increased the total number of mobile subscribers. In our 2007 statement, we included a NES of 0.3ppm (2006/07 prices).[167] During the subsequent appeal, the Competition Commission determined that the network externality surcharge should be removed. It stated that "even without an NES, MNOs would still have strong incentives to attract new subscribers to (and retain existing subscribers on) their networks even if those subscribers would have a willingness to pay for a subscription which is lower than the costs that would be incurred by an MNO in providing that subscription." Further "…the NES is not a proportionate regulatory mechanism for achieving its ends …" and that "the expected level of leakage is a highly material factor in our overall judgement on the likely costs and benefits of the NES." [168]

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[165] 15% of households were mobile only. The Consumer Experience 2011, page 13 and Figure 26 on page 24.

[166] Another source of leakage occurs if mobile OCPs retain some of the monies from higher origination payments as increased profits.

[167] *Mobile call termination*, Statement, 27 March 2007. Available at: http://stakeholders.ofcom.org.uk/binaries/consultations/mobile_call_term/statement/statement.pdf

[168] *Mobile phone wholesale voice termination charges*, Determination, Competition Commission, 16 January 2009, in particular paragraphs 4.95 and 4.159-4.160. Available at: http://www.competition-commission.org.uk/appeals/communications_act/mobile_phones_determination.pdf

Conclusion on price signals and fixed and common costs

A23.99 Reflecting the higher costs of mobile calls in mobile origination payments would send a price signal to SPs about the overall resource costs associated with these calls. While in principle Ramsey pricing is the most efficient way of recovering mobile OCPs' fixed and common costs, in practice we do not have the information necessary to adopt this approach. However, certain types of expenditure by mobile OCPs are unlikely to benefit SPs. Accordingly, for the purposes of determining the Impact Assessment Range, it is not appropriate to assume that SPs contribute to such expenditure through mobile origination payments.

A23.100 As shown in Table A23.1 above, the cost of mobile origination varies from 0.7ppm to 3.9ppm, depending on the level of contribution to fixed and common costs. There are reasons for discarding estimates from the upper end of this range, since they reflect contributions to expenditure by mobile OCPs that is unlikely to benefit SPs.[169] Nonetheless the range of potential cost figures may still be fairly wide.

A23.101 Our approach is to use these cost figures as a cross check against the 2.5-3.0ppm range for mobile origination payments that we identified above as being a reasonable trade off between the impact on service availability and the price of other mobile services.[170]

A23.102 We first discuss the lower end of this range, namely 2.5ppm.

- This amount is sufficient to cover mobile OCPs' network costs, estimated on a LRIC+ basis, of 1.5ppm. SPs are likely to benefit from this expenditure and thus it seems reasonable to reflect it in the price signal that they receive.

- It is a little higher than our estimate of the LRIC+ costs including some non-network costs but excluding expenditure on A&R costs, namely 2.3ppm. An origination payment of 2.5ppm would include a contribution to just over 10% of A&R costs. Only allowing a small contribution to these costs seems reasonable since a significant proportion of A&R costs may reflect customer redistribution expenditure (see paragraph A23.95 above).

- It still includes an allowance for non-network costs of 1.0ppm. This is considerably higher than the retail costs allowance of approximately 0.22ppm that BT receives as part of the fixed origination payment.[171]

A23.103 We now consider the upper end of this range, namely 3.0ppm. This includes an allowance for just under 45% of mobile OCPs' expenditure on A&R costs. As explained above, there are reasons for suspecting that a significant proportion of these costs reflect customer redistribution expenditure that does not benefit SPs.

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[169] In addition, increasing origination payments to reflect this factor is likely to be poorly targeted – a large proportion of those payments are likely to leak into other forms of expenditure that don't benefit SPs.

[170] We have cross-checked the 2.5-3.0ppm range since it reflects the impact on consumers (in terms of availability and the tariff package effect) more directly than the various cost metrics that we have identified.

[171] For the purpose of the recent 080 dispute, we stated that we were minded to favour deriving the minimum efficient costs of mobile origination by limiting the ppm amount recovered for retail costs to the same ppm allowance as for BT's NTS Retail Uplift. We did acknowledge there could perhaps be a further adjustment to reflect the lower volume of call minutes per subscriber on mobile networks. 080 Dispute Determination, paragraphs A3.28-A3.29.

We thus have some concerns that assuming that 45% of expenditure on A&R costs is recovered from SPs is too high.

A23.104 We are thus concerned that the upper end of the range derived above, namely 3.0ppm, is unduly high. This would suggest that limited weight should be placed on this figure for the purposes of our impact assessment. However, this needs to be considered in conjunction with another category of costs that might potentially be included in mobile origination payments. We discuss this issue in the next sub-section.

The consequences of setting MTRs on a pure LRIC basis

A23.105 In the 2011 MCT Statement we set MTRs on a pure LRIC basis. Since these rates do not include a contribution to mobile OCPs' fixed and common costs then these costs need to be recovered from other mobile services. This raises the question of whether the cost figures discussed above, and hence the price signals sent to SPs, should be adjusted to reflect this.[172]

A23.106 As explained in Annex 22, we calculate that if an adjustment were made to reflect the unrecovered network costs then it would raise the cost figures by 0.3ppm.

A23.107 Deciding which services should make up for the impact on fixed and common cost recovery of setting termination rates on a pure LRIC basis raises complex issues. These issues may arise as part of next Network Charge Control on BT and may thus form part of the next fixed narrowband market review which starts soon. We do not wish to pre-empt the discussion of this issue, given its complexity and the potential ramifications for other charge controls.

A23.108 We have considered this issue in conjunction with our analysis of price signals and fixed and common costs. That earlier analysis suggests that, while the lower end of the 2.5-3.0ppm range is reasonable, the upper end is more questionable. However the uncertainty about whether or not unrecovered network costs should be included supports the use of 3.0ppm as the upper end of the Impact Assessment Range. A 3.0ppm mobile origination payment would be consistent with an additional 0.3ppm contribution to network costs (as a consequence of setting MTRs on a pure LRIC basis) with a contribution of approximately 0.4ppm to expenditure on A&R costs. This is equivalent to allowing approximately 25% of these costs to be recovered from mobile origination payments.

A23.109 It is unclear what proportion of A&R costs reflect customer redistribution expenditure. Nonetheless, we have concerns that recovering 25% of these costs from mobile origination payments is still too high, given that SPs do not benefit from customer redistribution expenditure.

A23.110 In summary, we consider that a cross check against mobile OCPs' costs does not rule out the 2.5-3.0ppm range for mobile origination payments that we previously identified. However it points towards selecting a figure from the lower end of this range, particularly if no adjustment is made to reflect MTRs being set on a pure LRIC basis.

[172] As noted above, Vodafone raised this issue in its response to the December 2010 Consultation.

Efficient price signal in relation to blocking calls from mobiles

A23.111 We now consider incentives on SPs to accept calls from mobiles, rather than blocking them.

Theoretical position

A23.112 If an SP accepts calls from mobiles then there are two effects:

- the SP receives some truly additional calls (an expansion in total demand); and
- some calls which would otherwise be made from a landline are made from mobiles (a diversion effect).

A23.113 In principle, an SP will want to accept calls from mobiles (rather than block them) if the benefits from the truly additional calls outweigh the incrementally higher origination payments on calls that would be made anyway. The difference between mobile and fixed origination payments affects the second of these factors (the incrementally higher origination payments).

A23.114 If the difference between origination payments for fixed and mobile calls is greater than the difference in the incremental costs of fixed and mobile origination then the price signal will not be efficient as regards blocking calls from mobile. As a result we expect that too many SPs will block mobile calls. Calls will be blocked even where the benefits exceed the incremental resource costs.

A23.115 To put this same point in another way, the incremental cost to society of a 080 call being made from a mobile rather than a landline reflects the difference between the incremental costs of fixed and mobile calls. If the difference in origination payments is larger than this amount then the price signals sent to SPs may be inefficient.

A23.116 This reasoning suggests that setting origination payments using the LRIC differential approach creates incentives for SPs to only block calls when it is efficient to do so.[173]

Evidence on calling blocking

A23.117 Where SPs block mobile calls this results in the loss of those calls that are truly additional. In particular, as explained above, the 15% of consumers in mobile-only households are particularly likely to be disadvantaged.[174]

A23.118 However, the 2011 SPs survey suggests that only 20% of SPs would block calls from mobiles when the origination charge was higher than they were willing to bear. 75% would either migrate services to another number or get rid of the service entirely.[175] Since blocking is a relatively minor part of how SPs react to increases in the cost of hosting, this suggests that incentivising efficient blocking decisions is not

[173] In principle, the LRIC differential figure may still be too high since the SP will only weigh up its private benefits from truly additional calls. This may not capture benefits to callers or wider benefits to society. Note also that the LRIC differential is derived from the fixed origination payment and thus rests upon the assumption that the fixed origination payment is set at an appropriate level.
[174] The Consumer Experience 2011, Figure 26 on page 24.
[175] 5% of respondents said "don't know". 2011 SPs survey, question 18. Similarly the 2011 International Study did not identify instances where blocking is common, although it does occur in Germany and Holland. 2011 International Study, page 30.

the most important factor. We have therefore not made any adjustments to the Impact Assessment Range to reflect this factor. However, it has some relevance and supports lower mobile origination payments.

The impact on competition

A23.119 Principle 2 involves avoiding a material distortion of competition. In considering this issue we have focused on competition between fixed and mobile OCPs.[176]

A23.120 Fixed and mobile OCPs compete in relation to both the retail origination of 080 and 0500 calls and wider bundles of telephony services. We discuss these in turn below.

Competition in the retail origination of 080 and 0500 calls

A23.121 A consumer that wishes to call a free to caller number range typically has a choice of either using their landline or their mobile.[177] There is therefore competition between fixed and mobile OCPs in the origination of these calls.[178]

A23.122 There is no difference in retail call prices between landlines and mobiles in the case of a free to caller number range. The level of the mobile origination payment therefore cannot affect price competition in the supply of this product. However SPs can influence which device is used to make calls by blocking calls from mobiles. As a result, setting mobile origination payments at too high a level might disadvantage mobile OCPs.

A23.123 As explained above, if mobile origination payments reflect the LRIC differential then this creates incentives to only block mobile calls if it is efficient to do so. This would help avoid distortions in competition in the retail origination of calls to the free to caller number ranges. However, as explained above, only 20% of SPs said they would block calls from mobiles if the origination charge was higher than they were willing to bear. This suggests that the level of mobile origination payments actually has a limited impact on competition in the supply of this product.

Competition in wider telephony bundles

A23.124 Fixed and mobile OCPs supply wider bundles of telephony services to retail consumers. As a result, setting a high mobile origination payment could allow mobile OCPs to reduce the price of other telephony services, leading to a competitive advantage over fixed OCPs.

A23.125 Below we first discuss the strength of competition between fixed and mobile OCPs in the supply of wider telephony bundles.

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[176] For the purposes of identifying the Impact Assessment Range we have assumed that different TCPs all make the same origination payments. If such differences did emerge then it may lead to asymmetries between TCPs in the supply of hosting to SPs. Similarly, if different mobile OCPs received different origination payments then this may lead to competitive asymmetries between them.

[177] In 2011, 79% of households had both a fixed line and a mobile phone. The Consumer Experience 2011, Figure 28 on page 25.

[178] To illustrate the current extent of price competition, very few 080 calls are made from mobiles and this reflects callers' beliefs about relative prices. Mobiles account for less than 5% of 080 call minutes (2010 Flow of Funds study, page 6). 78% of respondents to the 2010 Consumer survey thought mobile 0800 calls are more expensive than a landline call. A further 12% said they didn't know (2010 Consumer survey, Q33).

A23.126 We then consider the issue of equivalence between fixed and mobile origination payments. Given mobile OCPs' costs are higher on a pence per minute basis, this begs the question of what is an equivalent mobile origination payment to that received by fixed OCPs:

- One possibility is that the mobile origination payment could be calculated in a similar fashion, by including the same cost categories, but reflecting the higher costs of mobile origination. This points towards the use of one of the LRIC+ measures discussed above.[179]

- Alternatively, it could be argued that mobile OCPs receive the same pence per minute contribution to their fixed and common costs as fixed OCPs i.e. the LRIC differential approach.

A23.127 We discuss each of these approaches in turn below, before setting out our conclusion in relation to competition in wider telephony bundles.

Strength of competition in wider telephony bundles

A23.128 In the 2011 MCT Statement we considered retail competition between fixed and mobile OCPs. We stated that "A finding of services being in separate markets does not preclude some material degree of competitive interaction between the markets."[180] Further, "In terms of competition between FCPs and MCPs, we conclude that there is some competitive interaction between FCPs and MCPs, despite our conclusion that the services are not in the same economic market."[181]

Equivalence between fixed and mobile origination payments: inclusion of same cost categories for fixed and mobile OCPs

A23.129 It could be argued that, to place fixed and mobile OCPs on an equivalent competitive footing, the origination payment should be calculated in a similar fashion. In other words, that it should include the same cost categories but reflect the higher costs of mobile origination.

A23.130 Fixed origination payments reflect retail costs, including sales and marketing. In the Retail Uplift Statement, under the heading "We proposed to allow BT to recover all of its (reattributed) generic sales and marketing costs", we stated that previously "…we excluded 20% of generic sales and marketing costs on the grounds that this expenditure was aimed at stimulating calling rates and was not relevant for NTS calls, for which demand depends largely on the service provided. We included sales and marketing costs aimed at the acquisition and retention of customers, since

[179] The fixed origination payment to BT is calculated on a fully allocated costs ("FAC") basis. However in the Retail Uplift Statement we stated at paragraph 4.11 that "this basis is broadly equivalent to LRIC plus a mark-up for common costs … Both bases of preparation are forward looking and allow for the recovery of all efficiently incurred costs, including common costs."
[180] 2011 MCT Statement, paragraph A3.231.
[181] 2011 MCT Statement, paragraph A3.255. Similarly the CC stated that "It is, in our view, incorrect to suggest that a conclusion that mobile and fixed networks comprise separate economic markets implies a degree of competitive interaction between the providers of fixed and mobile network services that is so limited that we would not be concerned about the impact of the cost standard adopted on this competition. It only suggested that the extent of competition was not sufficient for the two products to have been included in the same market. In particular, it did not suggest that from the consumer's perspective there was no substitutability between fixed and mobile services", 2012 CC Determination, paragraph 2.491.

these do benefit NTS service providers." However "We did not propose to make an equivalent adjustment this time around as we had not been able to identify any generic sales and marketing expenditure specifically designed to stimulate calling rates."[182]

A23.131 Given that fixed OCPs receive a contribution to their sales and marketing costs, this might imply that that an equivalent mobile origination payment is the LRIC+ figure including expenditure on A&R costs. This is 3.9ppm if all of these costs are included. However there are some caveats around this figure:

- A 3.9ppm figure implies a substantially higher ppm contribution to some cost categories for mobile OCPs compared to fixed OCPs. Table A22.6 in Annex 22 indicates that mobile OCPs would receive a contribution of 1.57ppm towards A&R costs compared to 0.06ppm in the case of fixed OCPs. There are also substantial differences in terms of "other" CARS costs (0.46ppm compared to 0.06ppm) and customer care (e.g. call centre costs) (0.23ppm compared to 0.02ppm).

- A&R costs include handset subsidies. For the purposes of assessing an equivalent mobile origination payment that would place mobile OCPs on a similar competitive footing to fixed OCPs it does not seem appropriate to include an allowance for mobile handset subsides. This is because such subsidies are not paid to purchasers of fixed handsets.

- Similarly A&R costs include sales costs, such as mobile OCPs' network of high street stores and commissions paid to third party mobile phone retailers. Since BT does not operate an equivalent branch network, such costs are not included in the fixed origination payment.

A23.132 In the light of these caveats, we do not consider that the 3.9ppm LRIC+ figure (with a full allowance for A&R costs) represents an origination payment at which fixed and mobile OCPs are on an equal competitive footing. Rather this figure is likely to be too high. For example, it would support mobile OCPs' subsidising handsets in a way that fixed OCPs do not engage in. Moreover, the data that we have used to produce our cost estimates in Annex 22 is not in sufficient detail to allow us to be confident that the various cost items are being treated on a consistent basis. For example, we do not know whether customer care costs are truly ten-times larger (on a ppm basis) for mobile OCPs compared to fixed OCPs.

Equivalence between fixed and mobile origination payments: LRIC differential

A23.133 The LRIC differential approach reflects differences in fixed and mobile OCPs' incremental costs of call origination. It involves SPs paying the same ppm mark up (over incremental costs) to both fixed and mobile OCPs.

A23.134 As a result, mobile OCPs must recover any additional fixed and common costs they incur from their subscribers, via the price they charge for their wider bundle of mobile telephony services. In other words, the charges for wider telecoms services reflect the relative costs of fixed and mobile networks. This allows callers to take those costs into account when deciding whether to subscribe to a fixed or mobile telephony service.[183] We thus consider that there is a sound theoretical basis for

[182] Retail Uplift Statement, paragraph 2.37.

[183] Note that the focus is on competition for callers (we are considering wider telephony bundles). We recognise that the LRIC differential cost estimate does not take into account mobile OCPs' higher

concluding that setting mobile origination payments for calls to a free to caller range based on the LRIC differential would not distort competition between fixed and mobile OCPs.

A23.135 This implies that a mobile origination payment of 1.1-1.2ppm is unlikely to distort competition.

Conclusion on competition in wider telephony bundles

A23.136 Given the differences between fixed and mobile OCPs' retail business models, identifying the mobile origination payment that is equivalent to the fixed origination payment is not straightforward.

- At one extreme, there is a figure of 3.9ppm which reflects mobile OCPs' higher network and non-network costs, including all A&R costs. However, as explained above, there are reasons for suspecting that this 3.9ppm figure is too high. As a result, a mobile origination payment of 3.9ppm may actually result in mobile OCPs enjoying an advantage over fixed OCPs.

- Alternatively, there are good theoretical reasons for concluding that the LRIC differential figure of 1.1-1.2ppm is unlikely to distort competition in wider telephony bundles.

A23.137 It is important to recognise that Principle 2 involves avoiding a *material* distortion of competition. The effect of a mobile origination payment that is slightly too high or too low may not be material. We have taken the following two factors into account when assessing the materiality of the effect on competition:

- whilst there are some competitive interactions between fixed and mobile OCPs, since they operate in different retail markets we have placed slightly less weight on this factor. In other words, the effects on competition of a mobile origination payment that is a little above or a little below the competitively equivalent price is unlikely to lead to a material distortion of competition; and

- revenues from origination payments are comparatively small, compared to overall mobile revenues. This implies that a distortion of competition is likely to be small. To illustrate, suppose the mobile 080 origination payment was 0.25ppm higher than the competitively equivalent figure. This might result in payments to mobile OCPs being 'too high' by £11m to £14m.[184] These are small sums, compared to overall mobile retail revenues (£15.1bn in 2010).[185] We made a similar observation in the 0845/0870 Dispute Determination.[186]

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fixed and common costs. However we did take these into account earlier in our analysis, as part of our consideration of efficient prices.

[184] In 2009, there was approximately 11.2bn minutes of calls to 080 numbers (2010 Flow of Funds study, Figure 5.7 on page 30). We assumed that either 40% or 50% of calls to the (free to caller) 080 range are made from mobiles and multiplied this by the illustrative 0.25ppm figure. Note that these simple calculations assume that total 080 call volumes do not change as a result of it being made free to caller. They thus exclude the impact of, for example, SPs migrating towards or away from 080.

[185] *Communications Market Report 2011,* August 2011, Ofcom, Figure 5.1 on page 245.

[186] We stated that "we do not consider it likely that the profit that MNOs earn on 0845 calls is capable of providing a subsidy that would lead to a material distortion of competition in either voice or broadband markets". 0845/0870 Dispute Determination, paragraphs 7.71-7.74.

A23.138 In our earlier analysis above, we identified a 2.5-3.0ppm range for origination payments that appears to reasonable trade off between the impact on service availability and the price of other mobile services. We have considered whether adopting an origination payment within this range is likely to lead to a material distortion of competition.

A23.139 When discussing the cost categories that are included within the fixed origination payment, we identified a figure of 3.9ppm. Compared to this 3.9ppm figure, the 2.5-3.0ppm range for mobile origination payments might appear to place mobile OCPs at a competitive disadvantage. However, as explained above this 3.9ppm figure is likely to be unduly high (for example, because it includes mobile handset subsidies). In the light of this, as well as the comments on materiality in paragraph A23.137, we consider that a mobile origination payment within our 2.5-3.0ppm range is unlikely to place mobile OCPs at a material competitive disadvantage when supplying bundles of telephony services to retail consumers.

A23.140 Compared to the LRIC differential (1.1-1.2ppm), a figure within our 2.5-3.0ppm range may place mobile OCPs at a competitive advantage. The magnitude of the difference is 1.3-1.9ppm. However in the light of the comments in paragraph A23.137, we consider that the effect on competition of a mobile origination payment of this magnitude is unlikely to be material.

A23.141 We thus consider that an origination payment in the region of 2.5-3.0ppm is unlikely to materially distort competition between fixed and mobile OCPs in the supply of bundles of telephony services to retail consumers.

Conclusion on Principle 2

A23.142 Based on the evidence and analysis currently available to us, Principle 2 suggests an Impact Assessment Range of 2.5-3.0ppm for the mobile origination payment under Option A.

- A figure within this range would reflect mobile OCPs' incremental costs of call origination. It trades off the impact on SPs, and ultimately service availability, against the impact of the tariff package effect on consumers. In making that trade off we have relied heavily on the 2011 SPs survey – this survey is the best evidence that is currently available but we recognise that our analysis is sensitive to its results.

- We have cross-checked this range against our estimates of mobile OCPs' costs. This points towards selecting a figure from the lower end of this range, particularly if no adjustment is made to reflect MTRs being set on a pure LRIC basis. It includes a contribution to some but not all fixed and common costs. In particular it does not include a contribution to bad debt and consumer billing costs (under Option A we are considering origination payments for free to caller number ranges) and does not fully reflect the A&R costs incurred by mobile OCPs (given that much of this expenditure may not benefit SPs).

- We recognise that this range is higher than the LRIC differential (1.1-1.2ppm).[187] In principle, this may mean that SPs have too strong an incentive to block mobile 080 calls but in practice the 2011 SPs survey suggests that relatively few SPs

[187] A further justification for placing weight on the LRIC differential figure is that SPs are likely to be indifferent about whether they receive a call from a landline or a mobile. This supports SPs making the same ppm contribution to all OCPs' fixed and common costs.

identified this as a reaction to high origination payments. It may also mean that mobile OCPs enjoy a competitive advantage over fixed OCPs in the provision of bundles of telecoms services, although any advantage is unlikely to be material.

Principle 3: practicality

A23.143 Principle 3 is that the mobile origination payment should be reasonably practicable to implement.

A23.144 We received some representations on these practical issues from C&W. In its response to the December 2010 Consultation C&W stated that the number of different origination payments should be kept to a minimum. Its preference was for there to be two (or possibly three) different origination payments. Further, any higher mobile origination charge should only apply to UK originated calls with a mobile CLI present.[188] BT also commented that it was essential that, if a different mobile origination charge was introduced, that charge was the same for all mobile OCPs. It noted that having varying payments would introduce complex billing development which would be both expensive, and take significant time to implement.[189]

A23.145 Below we discuss in turn differences between fixed and mobile origination payments, differences between mobile OCPs and differences between Freephone numbers.

Differences between fixed and mobile origination payments

A23.146 It is practicable to pay different origination payments for fixed and mobile calls.

A23.147 Implementation of different payments for fixed and mobile OCPs requires identification of the OCP type by the TCP terminating the call. We consider that a TCP could identify the OCP type based on the telephone number of the calling party using Caller Line Identification ("CLI"). Calling party number information can be based through the call routing path using the signalling information associated in setting up a call. OCPs have the option to include the CLI in the information passed further along the call routing path. Mobile OCPs who expect a higher origination payment would have to pass the caller number that identifies the call as a mobile-originated call.[190] If a transit provider is present in the call routing path, it would be reasonable for the mobile OCP to expect a mobile origination payment. Accordingly the transit provider should pass the calling party information further along the chain to receive the mobile origination payment from the terminating provider.

Differences in origination payments between mobile OCPs

A23.148 C&W stated that there would be additional complications for TCPs if each mobile OCP was paid a different origination payment. Porting of callers' numbers between mobile OCP would make it harder to determine which firm originated a particular call and hence what origination payment should be applied. This would result in

[188] C&W December 2010 Consultation response, page 52.
[189] BT December 2010 Consultation response, pages 31-32.
[190] Numbers allocated to mobile OCPs, under the National Telephone Numbering Plan, are identified using the unique '07x' prefix, where x is in the range 1-5 or 7-9.

additional costs for TCPs, for example to update their billing and billing verification arrangements.[191]

A23.149 None of the analysis under Principles 1 and 2 led us to identify different Impact Assessment Ranges for different mobile OCPs. As a result, our working hypothesis is that it would be appropriate for all mobile OCPs to be offered the same origination payment. This implies that practicality concerns do not arise.

Differences in origination payments between SPs

A23.150 Some stakeholders suggested that calls to some SPs should attract a lower origination payment:

- In order to avoid a significant impact on the use of free to caller numbers by essential services or charitable organisations, the CAB suggested that we should consider whether such SPs should be exempt from higher mobile origination payments.

- The CFC suggested adopting a system similar to the THA's existing special Freephone tariff whereby charities and government helplines are identified and exempted from some portion any increase in origination payments.

- THA urged us to ensure that there was a mechanism for easing the impact on non-profit helplines. THA strongly supported its existing 'special Freephone tariff' as a mechanism for identifying and exempting charities from higher origination payments. It noted that it operates a similar scheme for Government helplines and there was moderate support from its members for using this as a mechanism for exempting these helplines from higher origination payments too.

A23.151 In contrast, C&W stated that origination payments should not vary according to the specific dialled number within a free to caller range. C&W stated that if, for example, TCPs were required to make lower origination payments for calls to charities then this would require dedicated 10,000 number blocks within any free to caller range. C&W considered that this would be costly. Moreover, it may be difficult for TCPs to determine whether a particular SP's activities met the criteria for lower origination payments.[192] C&W also noted that Ofcom had already carved out the 030 range for use by public sector bodies and not-for-profit bodies.[193]

A23.152 We have considered the issues raised by stakeholders.

A23.153 It seems possible that different types of SP would react differently to mobile origination payments.[194] However our working assumption is that TCPs would not be *required* to make different origination payments based on the identity of the SP. Such a system would be simpler to administer for TCPs (i.e. would reduce regulatory costs). It also avoids the complications that arise from the likelihood that different types of SP are intermingled on some blocks of 10,000 numbers.

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[191] C&W December 2010 Consultation response, page 52.
[192] C&W December 2010 Consultation response, page 53.
[193] C&W December 2010 Consultation response, page 57.
[194] The 2011 SPs survey classified some SPs as "Socially Significant" (the definition of this term is set out in Annex 1 of that report and includes organisations such as charities, banks and utilities). While there were a small number of differences between the propensity of "Socially Significant" and "Other" SPs to get rid of their 080 number(s) in response to higher origination payments these appear to be isolated cases and there was no consistent pattern to them. 2011 SPs survey, question 17.

A23.154 This does not preclude OCPs voluntarily choosing to waive origination payments if they wish, as is currently the case for calls to SPs such as Childline and members of THA.

The Impact Assessment Range for mobile origination payments

A23.155 Our assessment of Principles 1-3 above suggests an Impact Assessment Range of 2.5-3.0ppm for the mobile origination payment. As explained above, there are reasons for selecting a figure from the lower end of this range, particularly if no adjustment is made to reflect MTRs being set on a pure LRIC basis. Our working assumption is that the origination payment would not vary between mobile OCPs or be required to vary between SPs. However, mobile OCPs may voluntarily waive the origination payment to some SPs (as they have done in the past).

A23.156 As explained above, in their responses to the December 2010 Consultation, some mobile OCPs considered that current retail prices provided a guide to the level of mobile origination payments. However our Impact Assessment Range for origination payments (2.5-3.0ppm) is lower than mobile OCPs' current retail prices for non-geographic calls. In 2009, mobile OCP's average price was 14.1ppm excluding VAT. Our Impact Assessment Range is well below this figure for a number of reasons:

- we consider that current mobile 080 call prices are distorted by the market failures we have identified in Annex 8;
- mobile 080 call prices reflect callers' preferences (albeit in a fashion that is distorted by market failures). They do not take into account SPs' willingness to bear higher mobile origination payments in return for free 080 calls;
- an origination payment of 14.1ppm is very unlikely to satisfy Principle 2 above. It is likely to provoke a large proportion of SPs to get rid of their free to caller numbers (see in particular Table A23.5 above). Moreover it lies well above all of the cost estimates set out in Annex 22. It is unlikely to send appropriate price signals to SPs and may have an adverse effect on competition between fixed and mobile OCPs.

A23.157 The Impact Assessment Range is [✂] than the amounts paid by DWP (see above).[195] However [✂].

A23.158 Finally, in its response to the December 2010 Consultation O2 stated that origination payments in other European countries were a benchmark. [✂].[196]

A23.159 We have considered O2's argument. The preferences of SPs in other countries may well differ from the preferences of those SPs that are currently operating a 080 number in the UK.[197] Indeed there are considerable differences in origination payments between the countries cited by O2.[198] As set out above, evidence is available that relates to the situation prevailing in the UK, including on mobile

[195] [✂].
[196] O2 December 2010 Consultation response, paragraph 167.
[197] To illustrate how SPs' preferences may vary between countries, the 2011 International Study stated at page 27 that "Unlike in the Netherlands and the United States, freephone is not necessarily considered to be a valued tool in Spain, especially among private companies."
[198] Indeed the 2011 International Study stated at page 25 that mobile origination payments in the Netherlands average 25€c/minute. This is [✂] than the figures cited by O2.

OCPs' costs and SPs' preferences. We consider that this UK evidence is particularly relevant and informative about the Impact Assessment Range. We thus consider that it is more reliable and relevant than the overseas origination payments cited by O2.

Mobile origination payments under Option C

A23.160 We now consider whether the Impact Assessment range for mobile origination payments should be different under Option C i.e. if there is also a Maximum Mobile Price number range.[199] In particular the assessment under Principle 2 (i.e. the trade off between the impact on service availability and the price of other mobile services) is slightly different under Option C. This discussion is structured as follows:

- revised assessment of the impact of higher mobile origination payments on availability;
- revised assessment of price signals;
- revised assessment of the impact on competition; and
- our provisional conclusions in relation to the assessment of Principle 2 under Option C.

Impact of higher mobile origination payments on availability

Options for SPs that get rid of their free to caller number

A23.161 Under Option A, if origination payments are too high then SPs are likely to migrate to other number ranges, block calls from mobiles or get rid of their number. In contrast, under Option C they have the option of migrating to a number range which will be free from landlines but have positive mobile call charges. Below we discuss how this may affect each of the possible reactions by SPs and the implications for callers.

A23.162 The 2011 SPs survey suggests that 60% of SPs that said they would get rid of their 080 number(s) would migrate elsewhere:[200]

- For SPs that would migrate to a 03 or 084 number under Option A, instead migrating to the Maximum Mobile Price number range under Option C may be an attractive alternative. The fact that an SP is currently located on 080 or 0500 suggests that it values free calls from landlines.[201] An SP that migrates to the Maximum Mobile Price number range will be able to preserve this feature, whereas migration to 03 or 0845 may not do so.[202]

[199] Under Option B neither 080 nor 0500 is free to caller (for both number ranges we specify a Maximum Mobile Price). We consider the design of a Maximum Mobile Price regime in Annex 24.
[200] 2011 SPs survey, question 18.
[201] 080 SPs were asked "How important is it to your organisation that 080 numbers have [various] features". The most important feature was "The fact that callers from fixed lines don't have to pay for the call" which was "very important" or "fairly important" to 89% of respondents. 2011 SPs survey, question 11.
[202] This depends on how well regarded the Maximum Mobile Price number range is by callers and SPs.

- If the SP migrates to the Maximum Mobile Price number range then, for fixed callers, there would be no change in the price of calls (they remain free). This suggests that migration to that number range will not disadvantage the vast majority of consumers (compared to the situation where the SPs remains on the free to caller number range).[203] For mobile callers the impact is ambiguous – it depends on the level of the maximum price for calls to that number range and how much a particular consumer pays for 03 or 0845 calls.

A23.163 The 2011 SPs survey suggests that 20% of SPs that said they would get rid of their 080 number(s) would block calls from mobiles:[204]

- We have considered whether SPs that would block mobile calls under Option A would instead migrate to the Maximum Mobile Price number range under Option C. By doing so, the SP would incur migration costs but would continue to receive calls from those consumers that are unwilling or unable to call them via a landline. It seems plausible that migration is more attractive than blocking for at least some of these SPs.

- If the SP migrates to the Maximum Mobile Price number range then, compared to blocking, mobile callers are likely to be better off. Those callers that sufficiently value making a (chargeable) call to the SP then will have the option of doing so.

A23.164 Finally, the 2011 SPs survey suggests that 15% of SPs that get rid of their 080 number(s) would get rid of the line entirely:[205]

- We have considered whether SPs that would close their line under Option A would instead migrate to the Maximum Mobile Price number range under Option C. By doing so, the SP would incur migration costs but continue to receive calls. The fact that these SPs were willing to close their line under Option A suggests that they face high migration costs and/or they attach limited value to receiving calls. This may suggest that the majority of them will still get rid of their line under Option C, although a few may migrate to the Maximum Mobile Price number range.

- Insofar as a few of these SPs migrate to the Maximum Mobile Price number range then, compared to getting rid of the line, callers are likely to be better off. It would mean that consumers have the option of calling a non-geographic number.

A23.165 The above discussion suggests that migration to the Maximum Mobile Price range is likely to be a reasonable alternative option for a significant proportion of SPs that are unwilling to pay higher origination payments. As a result, under Option C the negative effects on consumers of high origination payments, namely reductions in the availability of services via the free to caller range, may be smaller.

A23.166 As a caveat, the discussion above assumes that the Maximum Mobile Price range is reasonably well regarded by callers. If callers are suspicious of this range, for example because it is unfamiliar to them, then this makes migration to this number range less attractive. In these circumstances higher origination payments would have a similar effect under both Option A and Option C.

[203] 95% of 080 calls are currently made from landlines. 2010 Flow of Funds study, page 6.
[204] 2011 SPs survey, question 18.
[205] 2011 SPs survey, question 18.

Revised assessment of the trade off between availability and mobile prices

A23.167 Under Option A we considered that an origination payment in the region of 2.5-3.0ppm appears to provide a reasonable trade off between the impact on service availability and the price of other mobile services. Under Option C the outcome of this trade off is potentially differently, given that the negative effects on consumers of reductions in availability on the free to caller range may be smaller.

A23.168 In the Option A analysis we have placed particular emphasis on the survey results set out in Table A23.5 above. This showed that, if the mobile origination payment is 2.5-3.0ppm then 19% of SPs say they will get rid of their number(s) but will reduce retail prices for consumers. A further increase in the mobile origination payment to 3.5-4.25ppm increases the number of SPs that say they'll get rid of their 080 number(s), namely to 28%.[206] This highlights the risks of increasing the origination payment above the 3.0ppm level. However under Option C the consequences of this risk for consumers are smaller.

A23.169 In the 2011 SPs survey we asked 080 SPs whether they preferred 080 to be:

- a Maximum Mobile Price range, with the maximum price of a mobile call set at 7ppm and with no change to the cost of operating that number for the SP; or
- free to caller but with higher charges for the SP.[207]

A23.170 The responses depended on the extent to which SPs' costs increase on a free to caller range. Using the approach explained in paragraph A23.57 above, the relationship between the level of mobile origination payments and SPs' preferences is summarised in Table A23.9 below.

Table A23.9: Preferences for free to caller and Maximum Mobile Price number ranges (% of all 080 SPs)

Implied mobile origination payment (50% from mobiles on free to caller range)	1.5ppm	2.5ppm	3.5ppm	4.5ppm
Implied mobile origination payment (40% from mobiles on free to caller range)	**1.75ppm**	**3ppm**	**4.25ppm**	**5.5ppm**
Prefer free to caller range	51%	47%	35%	29%
Prefer Maximum Mobile Price range	24%	33%	43%	49%
Indifferent	20%	16%	17%	17%
Don't know	6%	5%	6%	6%

A23.171 Again these survey results suggest that raising the mobile origination payment from 2.5-3.0ppm to 3.5-4.25ppm results in a significant drop in the number of SPs that regard a free to caller number range as attractive (from 47% to 35%). However as

[206] As discussed above a similar message emerges if we instead just focus on those respondents that said they were "very likely" to get rid of their 080 number.
[207] 2011 SPs survey, question 20.

discussed above the effect on callers if an SP gets rid of its free to caller number is smaller than under Option A.[208]

A23.172 In the light of this survey evidence we have considered whether a slightly higher upper limit for the Impact Assessment Range would be appropriate under Option C, namely 2.5-3.5ppm.

Revised assessment of price signals

A23.173 We have cross checked the effects of a 2.5-3.5ppm range for mobile origination payments against the costs of mobile OCPs.[209]

A23.174 The difference with the analysis set out above under Option A is that the upper end of this range is higher, namely 3.5ppm. This figure includes an allowance for approximately 75% of mobile OCPs' expenditure on A&R costs. Even if an 0.3ppm adjustment is made to reflect the effects of setting MTRs on a pure LRIC basis, a 3.5ppm origination payment would still include an allowance for just over 55% of mobile OCPs' A&R expenditure. In the light of the discussion above, it seems doubtful that such a high proportion of these costs is beneficial to SPs, rather than simply reflecting customer redistribution expenditure. Moreover increasing origination payments to reflect whatever proportion of expenditure on A&R costs does actually grow the total number of mobile subscribers is likely to be poorly targeted – a large proportion of those payments are likely to leak into other forms of expenditure that does not benefit SPs.

Revised assessment of the impact on competition

A23.175 As explained above, the level of mobile origination payments is likely to have a limited impact on competition in 080 call origination since only 20% of SPs would block calls from mobiles under Option A. The relationship between origination payments and competition is likely to be even weaker under Option C since SPs have the option of migrating to the Maximum Mobile Price range, rather than blocking calls from mobiles.

A23.176 In terms of competition in wider bundles, we considered above whether an origination payment of 3.9ppm would include comparable cost categories to those included in the fixed origination payment. This 3.9ppm figure is likely to be too high and is unlikely to place fixed and mobile OCPs on an equivalent competitive footing. There is a stronger theoretical case for the use of the LRIC differential, namely 1.1-1.2ppm. This implies that an origination payment from the 2.5-3.5ppm range may be unduly high, giving rise to a potential impact on competition. However even at the upper end of this range there is unlikely to be a material distortion of competition since:

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[208] On the other hand, the proportion of calls on the free to caller range is smaller under Option C than under Option A, regardless of the level of mobile origination payments (compare Tables A23.5 and A23.9). This means that the impact on the retail price of other mobile services of an increase in mobile origination payments may be smaller (fewer SPs fund that origination payment). This implies that the benefits for consumers of setting a higher mobile origination payment may be slightly smaller too.

[209] In our analysis of price signals under Option A we also considered incentives for SPs deciding whether or not to block calls from mobiles. Incentivising efficient blocking decisions on the free to caller number range may be even less important under Option C. This is because, rather than blocking calls from mobiles, SPs can instead migrate to the Maximum Mobile Price range if mobile origination payments are too high.

- while there are some competitive interactions between fixed and mobile OCPs, they operate in different retail markets; and

- revenues from origination payments are a comparatively small, compared to overall mobile revenues.

Principle 2 assessment under Option C

A23.177 We have carefully considered whether an Impact Assessment Range of 2.5-3.5ppm for mobile origination payments would be appropriate under Option C.

A23.178 On the one hand, the trade off between the impact on availability and prices for other mobile services points towards slightly higher origination payments.

A23.179 However the change in the trade off between availability and other mobile prices rests upon the assumption that the Maximum Mobile Price range is reasonably well regarded by callers. Moreover, the upper end of the 2.5-3.5ppm range for origination payments implies a fairly high contribution by SPs to mobile OCPs' expenditure on A&R costs. It is doubtful that the proportion of this expenditure that actually benefits SPs is this high. This implies that SPs are funding behaviour from which they do not derive a benefit. In our view, this is not appropriate, particularly given the potential impact of higher mobile origination payments on service availability.

A23.180 Having weighed up these factors, our view is that the Impact Assessment Range for mobile origination payments should be the same under Option C as it is under Option A, namely 2.5-3.0ppm.

Annex 24

Assessment of the maximum mobile price

Introduction

A24.1 This Annex discusses the level of the maximum price of mobile calls to a Maximum Mobile Price number range.[210] This discussion only considers the effects of flexing the maximum retail price for mobile calls. The other effects of making a Maximum Mobile Price number range (e.g. improved price awareness) are not covered except insofar as they are affected by the level of the maximum mobile price. These other advantages and disadvantages are discussed in Section 16.

A24.2 This Annex is structured as follows:

- analytical context;
- potential metrics for the level of maximum mobile prices;
- analytical approach to determining the maximum price of mobile calls;
- sections assessing Principles 1, 2 and 3 under Option B;
- provisional conclusion on the maximum price of mobile calls to a Maximum Mobile Price number range under Option B;
- assessment of the maximum price of mobile calls under Option C; and
- assumptions about mobile origination payments where the maximum call price is equal to the AC.

Analytical context

A24.3 Establishing 080 and/or 0500 as a Maximum Mobile Price range involves setting maximum retail prices using our powers under section 58(1)(aa) of the Act. We would need to clearly and precisely determine what those maximum prices should be. This contrasts with our analysis of mobile origination payments, where we are not proposing to direct regulate the exact level (although we are proposing an access condition, see Section 17) and where we hence used the term Impact Assessment range.

A24.4 There is still the question of what (if anything) the origination payment should be for mobile calls to a Maximum Mobile Price range. For the purposes of the analysis below we have assumed an origination payment of 0.5ppm (same as the current fixed payment) for both fixed and mobile calls.[211] The exception is where the

[210] Not setting any maximum is unlikely to be appropriate. This would effectively maintain the current position on 080 and 0500. As a result, SPs would be unable to clearly and reliably inform consumers about the price of calls. As explained in Annex 8 we have identified a number of market failures that mean the current arrangements are likely to lead to consumer detriment.

[211] This is because mobile OCPs can recover any additional costs through the price of calling the Maximum Mobile Price range.

maximum price of mobile calls is equal to the AC. Our assumed mobile origination payment in these circumstances is discussed at the end of this Annex.

Different potential metrics for the maximum mobile price

A24.5 To provide a context for the following discussion, Table A24.1 below shows various measures of mobile OCPs' costs of originating calls to a Maximum Mobile Price range.[212] Each of these has been converted into a maximum mobile call price that would allow mobile OCPs sufficient retention to cover those costs. Specifically a mobile origination payment of 0.5ppm (the same as fixed) has been deducted and VAT at 20% has been added. All figures have been rounded to one decimal place.

Table A24.1: Potential metrics for maximum mobile prices

Cost metric	Estimated cost	Implied maximum price (incl. VAT)
Mobile pure LRIC	0.7-0.8ppm	0..2-0.4ppm
LRIC differential	1.1-1.2ppm	0.7-0.8ppm
Mobile LRIC+ (no A&R costs)	2.4ppm	2.3ppm
Mobile LRIC+ (50% A&R costs)	3.2ppm	3.2ppm
Mobile LRIC+ (100% A&R costs)	4.0ppm	4.2ppm

A24.6 The other possibility is setting the maximum price as equal to the mobile AC. If mobile OCPs' retention was unchanged from 2009 levels then this would imply an average AC of 16.1ppm (including VAT at 20%).[213] In practice, the AC may be lower than this if increased competitive pressure lowers OCPs' margins on these calls.

Ofcom's approach to determining maximum mobile call prices

A24.7 In order to assess the maximum level of mobile call prices we have applied the same three cumulative principles that we used above for mobile origination payments. This helps us to approach the analysis in a consistent and comparable manner.[214]

- **Principle 1:** mobile OCPs should not be denied the opportunity to recover their efficient costs of originating calls to a Maximum Mobile Price number range.

[212] As explained in Annex 22 these cost estimates include an allowance for bad debt and billing costs. They are thus higher than the equivalent cost measure in the case of a free to caller number range.
[213] Calculated using retention data for 08 calls (apart from 080), 09 calls and 118 calls from the 2010 Flow of Funds study. If 080 calls are also included in this calculation then the average AC (including VAT) is slightly higher, namely 16.4ppm.
[214] We have changed the wording slightly to reflect the context. In particular, this current Annex is considering the maximum price of calls to a Maximum Mobile Price range and hence the language focuses on this. The substance of the principles is unchanged.

- **Principle 2:** the maximum price for mobile calls should, taking into consideration our statutory duties:
  - provide benefits to consumers, taking into account indirect and tariff package effects; and
  - avoid a material distortion of competition either among OCPs or among TCPs.
- **Principle 3:** the maximum price for mobile calls should be reasonably practicable to implement.

Principle 1: recovery of efficient costs of origination

A24.8 Principle 1 is that mobile OCPs should not be denied the opportunity to recover their efficient costs of originating calls to a Maximum Mobile Price number range.

A24.9 All the metrics in Table A24.1 above allow mobile OCPs to recover their incremental costs. Similarly setting the maximum price equal to the mobile AC gives the freedom for mobile OCPs to recover these costs if they wish. Evaluating these metrics involves consideration of what contribution callers should make to mobile OCPs' fixed and common costs. We discuss this in the next sub-section, as part of our evaluation of Principle 2.

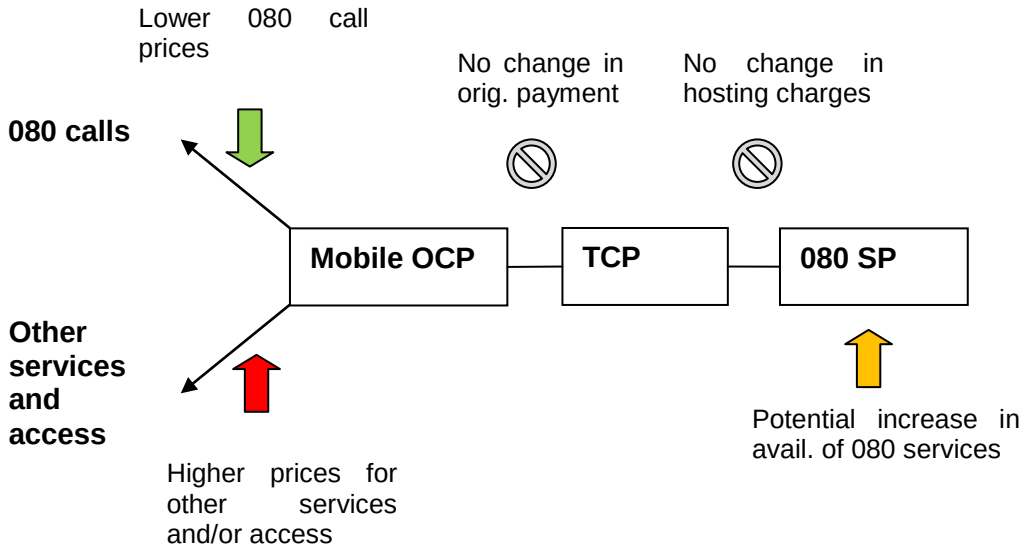
Principle 2: benefits to consumers and avoid material distortions of competition

Introduction to Principle 2

A24.10 We now consider Principle 2, namely that the maximum price for mobile calls should provide benefits to consumers and avoid a material distortion of competition.

A24.11 To help explain the trade-offs that lie at the heart of any decision over mobile call prices, Figure A24.2 below illustrates the impact of reducing the maximum price of mobile calls to a Maximum Mobile Price number range. This figure shows a stylised depiction of the parties involves in a call, namely the mobile OCP, the TCP and the SP. The mobile OCP supplies a variety of services to its consumers: (i) calls to the Maximum Mobile Price number range; and (ii) other services (e.g. calls to other number ranges, text messaging, internet access and access to a mobile phone).

Figure A24.2: Key impacts of reducing the maximum mobile call price



KEY: Green arrows show positive effects for consumers; red arrows show negative effects; amber arrow shows an ambiguous effect

A24.12 The starting point for this Figure is a Maximum Mobile Price number range with some maximum for the retail price of mobile calls to that range.[215] As illustrated in this Figure, a lower maximum mobile call price is likely to:

- **reduce the price of mobile calls to the Maximum Mobile Price range**. This effect will benefit consumers and is depicted by the green downward arrow in Figure A24.2; and
- **increase prices for other mobile services and/or mobile access**. Lower prices for calls to the Maximum Mobile Price number range are likely to reduce mobile OCPs' profits on those calls. This, in turn, is likely to increase prices for other mobile services and/or mobile access via the tariff package effect. These higher prices will disadvantage consumers and are depicted by the red upward arrows in Figure A24.2.

A24.13 Unlike the similar diagram in Annex 23, the mobile origination payment is unaffected by changes in the maximum mobile call price. The link between origination payments and service availability that was a central part of our analysis in Annex 23 therefore does not arise here (as depicted by the grey 'stop' symbols). However there is a less direct relationship. Reducing the maximum price of mobile calls to the Maximum Mobile Price range makes that number range more attractive to SPs. This is likely to attract SPs from other number ranges. As explained below, the impact of this on callers' welfare is ambiguous (because call prices could rise as well as fall depending on the number ranges from which the SPs migrate). This effect is depicted by the amber upward arrow in Figure 24.2.

[215] Figure A24.2 does not capture the effects of introducing a Maximum Mobile Price number range e.g. improved consumer price awareness. It simply isolates the effects of varying the level of the maximum retail price for mobile calls. It also presumes that the maximum call price 'bites' i.e. actual prices generally cluster at or near the maximum.

A24.14 A key part of our analysis of Principle 2 is trading off lower mobile call prices to the Maximum Mobile Price range against higher prices for other mobile services. In other words, what should be the balance of retail mobile prices?[216]

A24.15 The remainder of our analysis of Principle 2 under Option B is structured as follows:

- an overview of the factors that are relevant to an efficient balance of prices between calls to the Maximum Mobile Price number range and other mobile services;
- evidence on the trade off between the price of mobile calls to the Maximum Mobile Price number range and other mobile services;
- price signals for callers;
- the impact on service availability;
- the impact on competition; and
- our provisional conclusions in relation to Principle 2.

The efficient balance of prices

A24.16 In order to help frame the remainder of our analysis of Principle 2, we briefly discuss the factors that are relevant to the efficient balance of prices between calls to the Maximum Mobile Price number range and other mobile services:

- mobile OCPs' marginal costs;
- the contribution to mobile OCPs' fixed and common costs;
- externalities between retail prices and service availability; and
- the benefits to consumers.

A24.17 The starting point for considering the welfare optimal retail price for 080/0500 calls is that it (in conjunction with the origination payment) should reflect the marginal cost of call origination. This means that consumers take this resource cost into account when deciding whether to make a call and SPs take this resource cost into account when deciding whether to use a Maximum Mobile Price number range. As explained in Annex 23, while pure LRIC is not exactly the same as marginal cost, for regulatory purposes pure LRIC is often a better approximation of the economic concept of marginal cost. All of the metrics for the maximum mobile price that we discuss below are sufficient to cover the pure LRIC of originating mobile calls to a Maximum Mobile Price number range.

A24.18 In principle Ramsey pricing is the most efficient way of recovering mobile OCPs' fixed and common costs. This implies that if calls to a Maximum Mobile Price number range are relatively price inelastic then these should attract a higher mark-up than other telecoms services (and vice-versa). In practice, we do not have the information necessary to calculate relative price elasticities and are thus unable to

[216] In terms of our assessment criteria, the key criterion is efficient prices, although there is also an impact on service variety, quality and innovation.

formally adopt this approach. However in our analysis under Principle 2 we do discuss callers' views on the balance of retail prices. See paragraphs A24.24-A24.36 below.

A24.19 Reflecting externalities in prices will improve efficiency. In particular, high retail prices reduce SPs' willingness to use a Maximum Mobile Price number range which, in turn, affects callers' welfare. We have taken this into account in paragraphs A24.37-A24.40 and A24.48-A24.52.

A24.20 Finally, it could be argued that callers should contribute to mobile OCPs' expenditure where it benefits them. Consumers are likely to benefit from expenditure on A&R costs (this contrasts with the discussion in Annex 23, where we explained that SPs may not benefit from much of this expenditure).

Trade off between price of mobile calls to the Maximum Mobile Price number range and other mobile services

A24.21 Below we discuss the trade off between the price of mobile calls to the Maximum Mobile Price number range and other mobile services. We first set out the position based on economic theory. We then discuss evidence on the relative elasticity of different retail mobile services, followed by evidence on SPs' preferences. Finally we set out our conclusions on this topic.

Theoretical position

A24.22 Economic theory suggests that the pattern of prices should depend on relative retail price sensitivity of market demand for different services and the benefits (utility) derived from them:

- This reasoning implies relatively higher prices for relatively price inelastic services. More specifically, if mobile calls to the Maximum Mobile Price range are relatively price inelastic then this points towards a higher maximum price (and vice versa).

- Note also that SPs, as well as callers, are likely to benefit from calls to a Maximum Mobile Price number range.[217]

A24.23 We discuss these two factors in turn below.

Relative elasticity of different retail mobile services

Evidence on consumers' preferences on the balance of retail prices

A24.24 Competition between firms to supply a bundle of services to well informed consumers, where the intensity of competition is similar across all services in the bundle, is likely to produce a structure of prices that reflects consumers' preferences.[218] Suppliers' margins will be higher for those elements which consumers are price insensitive towards and vice-versa.

[217] Indeed SPs are funding free fixed calls to these numbers.

[218] In such circumstances, the relativities of the firm-level elasticities of demand (which affect OCPs' incentives when setting prices) are likely to reflect the relativities of market-level elasticities (which affect the efficient set of prices). But if there is a disparity in competition between different services,

A24.25 However we do not think that the current structure of retail prices is a true reflection of callers' preferences. This is due to the market failures identified in Annex 8, particularly poor price awareness.[219] Historic retail prices for 080 and 0500 calls are likely to be unduly high, meaning they are not a reliable guide to the maximum price that best reflects callers' preferences.[220]

A24.26 We have considered whether the following evidence sheds light on consumers' preferences about the balance of retail prices.

A24.27 First, in the 2010 Consumer survey we asked consumers "If all calls to 0800 numbers were free from mobiles, there would be a cost to the operator. If your total bill stayed the same, would you like to have 0800 numbers free from your mobiles, even if other calls (or line rental) became more expensive?" 15% of respondents said "yes" (i.e. they were in favour of rebalancing prices in this way), a further 15% said "maybe" and 62% said "no".[221] However, as explained in Section 16 we do not think that these responses provide a reliable guide to consumers' preferences over the structure of prices.

A24.28 Second, in the 2010 Consumer survey we asked "If you were considering switching your mobile operator, what elements would be important when choosing a new supplier?"[222] The spontaneous and prompted responses to this question are summarised in Table A24.3 below. To aid interpretation, we have grouped responses into three categories: the overall price of the mobile package, the price of specific call types and non-price contractual features.

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the firm-level elasticity of the less competitive service is relatively too inelastic for the efficient price-setting incentives and the resulting structure of prices involves too high a price for that service.

[219] SPs' preferences are discussed below.

[220] Moreover, as explained in Section 3, the disruption subsequent to the 08x CAT Judgment is an added reason why current 080 call prices are a poor guide to consumers' preferences.

[221] 8% responded "don't know". 2010 Consumer survey, Q39. Note that Q40 and Q42 in this survey asked similar questions about rebalancing retail prices.

[222] 2010 Consumer survey, Q6 and Q9.

Table A24.3: Important elements when choosing a mobile OCP

	Spontaneous	Prompted
OVERALL PRICE		
The cost of calls/texts	66%	74%
The amount of minutes/texts included in the package	51%	66%
Good combined deal with broadband and/or TV	7%	10%
SPECIFIC CALL COSTS		
Free calls to friends/family on the same network	24%	42%
Free evening and weekend calls	17%	35%
Getting a new phone/the type of new phone offered	17%	26%
The cost of calls to 08xx/09 numbers	9%	20%
The cost of using my phone when abroad	9%	18%
The cost of international calls to some counties	8%	14%
NON-PRICE CONTRACTUAL FEATURES		
Length of the contract	18%	33%
Notification when close to end of credit	8%	16%
Notification when close to contract limit	7%	14%

A24.29 This table suggests that for the majority of consumers the price of non-geographic calls is relatively unimportant, even compared to other calls types, when choosing a mobile supplier. When asked why they had not mentioned the cost of calls to 08/09 numbers the most popular responses related to the infrequency with which consumers called these numbers from their mobiles.[223]

A24.30 We recognise that the complexity of the current regime makes it difficult for consumers to take non-geographic call prices into account even if they wanted to, which may discourage them from considering this at the point of subscription. Moreover the low importance attached to non-geographic calls when selecting a mobile OCP may simply reflect the infrequency with which consumers make these calls from a mobile, rather than their relative elasticity. This makes it difficult to draw strong conclusions from this survey evidence. Nonetheless it tentatively suggests that there may be less competitive intensity on non-geographic calls, including mobile calls to a Maximum Mobile Price number range, than other services in the wider bundle.

A24.31 Third, a small number of mobile OCPs offer bolt-ons that allow subscribers to trade off a higher monthly fee in return for cheaper non-geographic calls.[224] Take up of these has been limited. In particular:

[223] The five most popular answers were “Don’t use these numbers” (30%), “Don’t use a mobile for these numbers” (22%), “Rarely use these numbers” (16%), “Expensive” (10%) and “Would use a landline” (6%). 2010 Consumer survey, Q10.
[224] [✂].

- Vodafone offers a bolt-on that incorporates 080, 0845 and 0870 calls within bundles of inclusive ('free') minutes for £5/month.[225] In November 2011 approximately [✂] of Vodafone's post-pay subscriber base purchased this bolt-on.[226]

- T-Mobile previously offered a bolt-on that incorporated 08 calls within bundles of inclusive minutes. It withdrew this offer primarily due to the level of termination rates but also due to a "lack of significant consumer demand".[227]

- O2 has never offered a bolt-on in relation to non-geographic calls. [✂].[228]

A24.32 We recognise that evidence from bolt-ons needs to be treated with caution. The market failures that we identify in Annex 8 mean that current retail prices do not reflect callers' preferences. For example, poor price awareness means it is hard for consumers to judge whether purchasing a bolt-on is worthwhile.

A24.33 In summary, it is difficult to make inferences from current consumer behaviour and current prices about the relative market elasticity of non-geographic calls and other services. This is a consequence of the current market failures. Nonetheless, there does appear to be an absence of evidence showing that consumers would strongly prefer a structure of prices with maximum prices at the lower end of the range set out in Table A24.1 and higher prices for other mobile services in the wider bundle.

The access charge

A24.34 As highlighted in the above discussion, determining callers' preferences about call prices is not straightforward. However the AC should broadly reflect callers' preferences provided that:

- callers are reasonably aware of the AC; and

- competitive constraints on the AC are as effective as for other mobile services in the wider bundle.

A24.35 If these criteria are met then setting the maximum price equal to the AC has significant attractions.[229] It mitigates the risk that the maximum price fails to reflect callers' preferences. It is more flexible since it is likely to be relatively simple for an OCP to change its AC if circumstances change. It is also capable of reflecting the diversity of callers. For example, the minority of callers that highly value cheap non-geographic calls are likely to select a package with a relatively low access charge.

A24.36 One drawback of using the AC is that it may not fully reflect SPs' preferences (see below for further details). There may also be adverse effects on competition between fixed and mobile OCPs – see below. Note also that since there will only be a single AC associated with each package then that blended price will also reflect conditions on other 08 and 09 numbers, rather than just on the Maximum Mobile Price number range.

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[225] Vodafone December 2010 consultation response, paragraph 3.7. Email from Vodafone to Ofcom dated 12 August 2010.
[226] Vodafone response dated 11 November 2011 to information request dated 21 October 2011, question 9(iii).
[227] EE December 2010 consultation response, Q4.3 paragraph 12(d) on page 26.
[228] [✂]. Email from O2 dated 6 January 2012.
[229] These parallel our reasons for generally preferring unbundling to a system of maximum call prices.

SPs' preferences and call externalities

A24.37 SPs with 080 and 0500 numbers presumably benefit from receiving calls (given that they are paying an origination payment). Reflecting this, in the 2011 SPs survey a significant proportion of respondents expressed a preference for cheap or free mobile calls:

- we asked SPs how important it is that 080 numbers have various features. 36% of respondents said that free mobile calls were "very important", 36% said they were "fairly important", 16% said they were "not very important" and 11% said they were "not at all important". It was the fourth most important of the six features we asked about;[230]

- to gauge the relative importance of this factor we asked SPs "If you could only change one of the following aspects of 080 numbers, what would it be?" From the list of three options that we presented, 45% said "The price that callers from mobile phones pay for the call". The other options were "How much your organisation has to pay to receive the call" (favoured by 39%) and "Being able to advertise the exact cost of the call to customers" (favoured by 11%);[231] and

- as shown in Figure A23.3 in Annex 23, 47% of SPs consider that mobile charges are a disadvantage in terms of the number of calls that they receive. However, approximately a third of these were not willing to pay anything more in return for mobile charges being reduced to zero so the disadvantage for these SPs may be small.[232]

A24.38 Callers generally only take into account their own utility from making a call, not the utility of the call recipient. Even if callers do not strongly dislike higher prices for calls to the Maximum Mobile Price number range, SPs may do so. As a result, SPs may provide an inferior range and quality of services on 080/0500 numbers to the detriment of callers. This raises the question of whether the maximum mobile call price should be adjusted downwards to reflect the benefits of cheaper calls to SPs.

A24.39 An important factor is what other price points are available. To illustrate:

- suppose that there are three SPs that highly value receiving calls and have a strong preference for low mobile call prices. A further two SPs only moderately value receiving calls and only have a weak preference for low mobile call prices;

- if there is both a free to caller number range and a Maximum Mobile Price number range (Option C) then the three SPs that value low mobile call prices are likely to locate on the free to caller range. As a result, the Maximum Mobile Price number range only needs to cater for the two SPs that have a weak preference for low mobile call prices. This points towards a higher maximum price for mobile calls;[233]

- in contrast, if there is only a Maximum Mobile Price number range (Option B) then all five SPs are likely to locate on it. There is thus a stronger case for setting

[230] 2011 SPs survey, Q11.
[231] 2011 SPs survey, Q13.
[232] 2011 SPs survey, Q14 and Q16.
[233] In other words, allowing SPs to choose between a wide variety of retail price points allows any call externalities (i.e. the benefits of being called for the SP) to be internalised in the price that callers pay.

a lower maximum price for mobile calls to reflect the large benefits to three of the SPs from being called.

A24.40 We recognise that, in principle, an SP on a Maximum Mobile Price number range could strike agreements with OCPs to secure cheaper (or free) calls to its number. However, as explained in Annex 20, we consider that there are significant impediments to such agreements.[234]

Provisional conclusion on the trade off between the price of mobile call prices to a Maximum Mobile Price number range and other mobile prices

A24.41 As explained above, it is difficult to make inferences from current consumer behaviour and current prices about the relative elasticity of non-geographic calls and other services. That said, there does appear to be an absence of evidence showing that consumers would strongly prefer a structure of prices with maximum prices at the lower end of the range set out in Table A24.1 and higher prices for other mobile services in the wider bundle. Given this uncertainty, there are significant attractions to instead setting the maximum price as equal to the AC.

A24.42 However, a significant drawback is that the AC may not reflect SPs' preferences. In particular, under Option B there is not a free to caller number range (we discuss Option C separately at the end of this Annex). As a result, the significant numbers of SPs that value free or very cheap mobile calls will be unable to achieve this objective which may result in an inferior range and quality of 080/0500 services to the detriment of callers.[235]

A24.43 In the following discussion we keep open both of these approaches of a maximum price (i) equal to the AC; and (ii) up to 4.2ppm.

Price signals for callers

A24.44 The price of mobile calls to the Maximum Mobile Price number range sends price signals to consumers, reflecting the costs associated with originating mobile calls. Typically when Ofcom is setting charge controls it allows a contribution to reflect the fixed and common costs of an efficient supplier, although there are exceptions (e.g. controls on MTRs).

A24.45 In Annex 23 we explained why SPs do not benefit from some expenditure by mobile OCPs, in particular customer redistribution expenditure. In contrast, callers do directly benefit from expenditure on handset subsidies, advertising and marketing, sales and discounts and incentives. This is consistent with the treatment of CARS in relation to controls on MTRs where the CC stated that: "In the case of CARS costs, our view was that the principal beneficiaries were mobile subscribers who received, for example, lower prices, better customer care or more information about the

[234] One of the barriers to reaching such agreements at present is that mobile OCPs may demand a high origination payment, particularly given the high margins that they can currently earn on 080 and 0500 calls. We accept that this may be less of a concern if the maximum price of mobile calls is set at a low level. However the other impediment that we have identified, transaction costs, would remain.

[235] We recognise that the likely tendency of the AC not to reflect SPs' preferences applies to all unbundled number ranges. However we consider that it is a particularly important issue in the case of 080 and 0500 given the value that these SPs attach to receiving calls.

product that they have purchased. We therefore thought it appropriate that these were the people from whom any costs should be recovered."[236]

A24.46 From the perspective of sending price signals to callers it seems reasonable to include an allowance for fixed and common costs, including CARS, in the maximum retail price. This is for two reasons. First, it is consistent with Ofcom's practice of generally including an allowance for fixed and common costs. Second, given that callers to a Maximum Mobile Price number range benefit from mobile OCPs' expenditure on fixed and common costs (including CARS) it seems reasonable that they should contribute to those costs. Based on Table A24.1, this would imply a maximum price of around 4.2ppm (including VAT). This increases to around 4.6ppm (including VAT) if an allowance is added to reflect the fixed and common costs that are not recovered from MTRs.

A24.47 An alternative way to send price signals to callers would be to set the maximum price of calls to the Maximum Mobile Price number range as equal to the AC. In determining its AC an OCP is making a judgement about what proportion of its fixed and common costs will be recovered from non-geographic calls. As explained in paragraph A24.34 above, if consumers are aware of prices and if competition on ACs is as effective as for other mobile services then the resulting price signals will reflect callers' underlying preferences.

The impact on service availability

A24.48 Lowering the maximum price of mobile calls to the Maximum Mobile Price number range is likely to make that number range more attractive to SPs (and vice-versa). As a result, more SPs are likely to locate on the Maximum Mobile Price number range and fewer SPs are likely to locate on other number ranges with a low call price.[237]

A24.49 Assessing the impact on consumers of this change in the pattern of service availability is particularly complicated. Indeed even the direction of the impact on consumer welfare is ambiguous:[238]

- For SPs that switch to the Maximum Mobile Price number range from 03, post-pay mobile callers are likely to pay higher prices. For these consumers, the majority of 03 calls are likely to be part of a bundle of inclusive ('free') call minutes whereas calls to the Maximum Mobile Price number range attract a direct charge. For pre-pay mobile callers it depends on whether the maximum price of calls is lower than the typical price of 03 calls. Fixed callers will tend to be better off, since calls to the Maximum Mobile Price range are free whereas 03 calls can sometimes be charged for.

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[236] *Mobile phone wholesale voice termination charges*, Determination, Competition Commission, 16 January 2009, paragraph 8.71; see also 8.109. Available at: http://www.competition-commission.org.uk/appeals/communications_act/mobile_phones_determination.pdf

[237] This is for a number of reasons. First, SPs located on other number ranges may choose to migrate to the Maximum Mobile Price number range. Second, SPs located on the Maximum Mobile Price number range that were considering migrating elsewhere may choose not to do so. Third, SPs that are considering establishing a new number may choose to do so on the Maximum Mobile Price number range rather than on another number range.

[238] Under Option C there is also a free to caller number range. If an SP chooses to locate on the Maximum Mobile Price number range rather than the free to caller number range then mobile callers will be worse off (since they are either charged for calls or instead need to make that call via their landline) but fixed callers will be unaffected (these calls remain free).

- For SPs that switch to the Maximum Mobile Price number range from (unbundled) 084 numbers, fixed consumers are likely to pay lower prices since these calls are free rather than attracting an AC and SC. Mobile consumers are also likely to pay lower prices. Even if the maximum price were equal to the AC, it would still mean that callers are no longer charged a SC.

A24.50 Weighing up these factors would involve reaching a judgement on the number ranges that SPs are drawn away from. Moreover we would also need to reach a view on the scale of movement. In other words, how many additional SPs would choose to locate on the Maximum Mobile Price number range as a result of a lower maximum mobile call price?

A24.51 Given the absence of evidence on these factors, we have instead approached this issue in another way. As a starting point, we take the view that it is desirable to have a range of retail price points, in order to reflect the variation in SPs' preferences. In contrast, if there are few retail price points then SPs are less likely to find something that suits their particular business needs and are thus ultimately less likely to make use of non-geographic numbers. This is essentially a reformulation of the proposition set out in paragraph A24.39 above about whether SPs' preferences are reflected in retail prices. If the range of non-geographic numbers meets SPs' needs then this will support service variety and availability which, in turn, will benefit callers.

A24.52 This implies that it is advantageous for price points to be distinctive so that they are more likely to fill a niche where SPs' preferences are unmet, rather than largely duplicating an existing price point. This in turn implies that the analysis depends on whether or not a free to caller number range is available:

- Under Option B there is no free to caller number range. This implies that there is more likely to be a 'gap' in the market for the provision of a number range that is very cheap to call from mobiles. This is important in the light of the above evidence that there are a significant number of SPs that have a preference for cheap or free mobile calls. This strengthens the case for setting a fairly low maximum price for mobile calls to the Maximum Mobile Price number range.

- In contrast, under Option C there is also a free to caller range. Setting the maximum price of mobile calls to the Maximum Mobile Price number range at 1ppm (for example) would mean that there is little difference between that number range and the free to caller number range. Accordingly a higher maximum price for mobile calls to the Maximum Mobile Price number range may be appropriate.

The impact on competition

A24.53 Principle 2 involves avoiding a material distortion of competition. In considering this issue we have focused on competition between fixed and mobile OCPs.[239] Below we first explain the framework that we have used for this assessment. We then set out our assessment of the impact on competition.

[239] The maximum price of calls to a Maximum Mobile Price number range will apply to all mobile OCPs and will not depend on the identity of the TCP hosting a particular number. As a result, competitive asymmetries between different mobile OCPs or between TCPs in the supply of hosting to SPs are not relevant to the level of that maximum.

Framework for assessing the impact on competition

A24.54 If the price of mobile calls to the Maximum Mobile Price range is high then:

- mobile OCPs are likely to be disadvantaged relative to fixed OCPs in the retail origination of 080 and 0500 calls;[240] but
- mobile OCPs are likely to enjoy an advantage in the retail supply of wider bundles of telephony services. Higher 080 and 0500 call prices would support lower prices for other services (the tariff package effect).

A24.55 If regulation permits mobile OCPs to retain more on 080/0500 calls then this allows them to support lower prices for other, more prominent telecoms services. This potentially gives them an advantage at the retail level that stems from differential regulation (rather than greater efficiency, say). As a result, competition may be distorted.[241]

A24.56 If consumers were equally aware of the price of 080/0500 calls as the price of other telecoms services then there would be no distortion of competition (since high prices on one are matched by lower prices on another). As explained in Annex 8, this is not the case at present. However designating 080/0500 as Maximum Mobile Price number ranges is likely to improve price awareness (see Section 16). As a result, we have placed less weight on the impact on competition.

A24.57 To assess the impact on competition we have considered two metrics:

- the outcome if the methodology used to determine fixed retention (i.e. the fixed origination payment) were also applied to mobile retention; and
- allowing mobile OCPs to recover the same ppm contribution to their fixed and common costs as fixed OCPs do (i.e. the LRIC differential approach). There are theoretical reasons why a maximum price at this level is unlikely to distort competition. If fixed and mobile OCPs earn the same ppm margin on calls to 080/0500 numbers then they must recover the rest of their fixed and common costs from other, more prominent services. As a result, the price of those other telecoms services reflects any differences in fixed and mobile OCPs' underlying costs.

A24.58 In terms of the first metric, as was the case in Annex 23, a comparison between fixed and mobile OCPs is not straightforward.

- The fixed origination payment to BT is calculated on a FAC basis. This would suggest that adopting an equivalent methodology would involve mobile OCPs' retention being set on a LRIC+ basis.
- Since mobile calls to a Maximum Mobile Price number range are charged for this implies that, unlike fixed OCPs, mobile OCPs incur bad debt and retail billing costs on these calls. This might suggest that mobile OCPs' retention should include an allowance for these costs.

[240] Even if a mobile OCP chose to price below the maximum price, it is questionable whether consumers would be aware of this. It seems plausible that if mobile consumers are told that the mobile price is no more than Xppm they will tend to assume that they are being charged that amount.
[241] We note that one way of addressing any competitive imbalance would be adjusting the level of fixed origination payments.

- A&R costs comprise handset subsidies, discounts and incentives, sales costs and advertising and marketing. As explained in Annex 23, BT's origination payment includes an allowance for marketing costs. However BT does not fund handset subsidies or incur the same sales costs that mobile OCPs' do (such as a network of high street stores). Accordingly the concern is that if mobile OCPs were able to recover these costs from less prominent services such as 080/0500 calls then this might give them a competitive advantage over fixed OCPs.

- Table A22.6 in Annex 22 indicates substantial differences in terms of "other" CARS costs (0.46ppm for mobile OCPs compared to 0.06ppm for fixed OCPs) and customer care (e.g. call centre costs) (0.23ppm compared to 0.02ppm). As noted in Annex 23, the data that we have used to produce our cost estimates in Annex 22 is not in sufficient detail to allow us to be confident that the various cost items are being treated on a consistent basis.

A24.59 Using the LRIC+ approach with a 100% allowance for A&R costs implies mobile retention of 4.0ppm and maximum price of 4.2ppm (including VAT). However, in the light of the preceding paragraph, we are concerned that this figure may be unduly high.

A24.60 In terms of the second metric, the LRIC differential approach implies that mobile OCPs should retain 1.1-1.2ppm and thus that the maximum price should be 0.7-0.8ppm (including VAT).

Assessment of competitive impact

A24.61 Above we identified two candidates for the price of calls to a Maximum Mobile Price number range: a maximum price based on the AC or, alternatively, a maximum price of 4.2ppm. We have compared both of these candidates with the maximum price:

- if fixed and mobile retention were set on a similar basis (i.e. the metric discussed in paragraphs A24.58-A24.59 above); and

- if it were set on a LRIC differential basis (i.e. the metric discussed in paragraph A24.60 above).

A24.62 Where the maximum mobile price is equal to the AC then (depending on the extent of competition in the AC) it is likely to be higher than both of the metrics discussed above. For example, if mobile OCPs' retention was unchanged from 2009 levels then this would imply an average AC of 16.1ppm (including VAT).[242] This is considerably greater than the 4.2ppm figure above (and anyway that figure is likely to overstate the maximum price if mobile retention were set on the same basis as fixed retention). The gap with the (theoretically attractive) 0.7-0.8ppm LRIC differential figure is even larger. There is thus a risk of competitive distortions in favour of mobile OCPs.

A24.63 We have considered how material the distortion of competition might be.

- To indicate the potential scale of these effects we use an illustrative example. We have assumed that mobile retention is 5ppm higher (excl. VAT) than the

[242] Calculated using retention data for 08 calls (apart from 080), 09 calls and 118 calls from the 2010 Flow of Funds study.

equivalent retention of fixed OCPs.[243] If 080 mobile call volumes do not change from the current level (just under 5%) then the additional mobile retention would equate to £26m per annum. If the proportion of mobile calls to 080 numbers rose to 10% or 20% the level of would be £56m and £112m respectively.[244]

- Clearly the scale of any distortion to competition depends on the volume of calls to the Maximum Mobile Price number range and the level of the AC. However, as highlighted by our illustrative example, there is the potential for these sums to be large.

- On the other hand, overall mobile retail revenues are large (£15.1bn in 2010).[245] If designating 080/0500 as Maximum Mobile Price number ranges makes consumers more aware of the price of these calls then this will reduce the competitive advantage from using high 080/0500 call prices to support lower prices for other telecoms services. Moreover, while there are some competitive interactions between fixed and mobile OCPs, they operate in different retail markets. This suggests that if mobile OCPs' effective retention is a little higher or lower than the equivalent amount for fixed OCPs then any distortion of competition is unlikely to be material.[246]

A24.64 Having weighed up these factors, we do have some concerns that setting the mobile maximum mobile price equal to the level of the AC may lead to a material distortion in competition between fixed and mobile OCPs. However these concerns are tentative, given the uncertainty about the level of the AC and the volume of mobile calls to a Maximum Mobile Price number range.

A24.65 A maximum price of 4.2ppm is in line with the LRIC+ cost of mobile origination (including 100% of A&R costs). However, as explained above, this figure may overstate the level of mobile retention if it were set on the same basis as fixed OCPs' retention. It is also higher than if mobile retention were set on a LRIC differential basis. This suggests that a maximum price of 4.2ppm for 080/0500 calls may distort competition in favour of mobile OCPs. However, any gap between the competitively neutral price and the maximum mobile price is much smaller. In the light of the discussion in paragraph A24.63, any distortion of competition is unlikely to be material.

Provisional conclusion on Principle 2

A24.66 We now set out our views under Principle 2 for Option B:

- In terms of callers' preferences about the pattern of retail call prices, it is difficult to make inferences from current consumer behaviour and current market prices, given the market failures we have identified. Given this uncertainty, there are significant attractions to instead setting the maximum price for calls as equal to the AC. Use of the AC potentially allows for market forces to lead to a level of prices that reflects consumers' preferences.

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[243] Given the equivalent figure is no higher than 4.2ppm (including VAT) this implies an average AC of 9.2ppm (including VAT) or less.

[244] There were 11.2bn minutes of 080 calls in 2009 (source: 2010 Flow of Funds study, Figure 5.7 on page 30).

[245] *Communications Market Report 2011,* August 2011, Ofcom, Figure 5.1 on page 245.

[246] In addition, as explained in Annex 8 the tariff package effect is unlikely to be complete. Thus not all of additional profits for mobile OCPs are used to fund lower prices for other services, although a significant proportion are likely to be used in this way.

- However, under Option B, there would be no free to caller number range. For SPs that value a low price for calling their service the Maximum Mobile Price number range is likely to be an attractive option.[247] Moreover, while the evidence that competition would be materially distorted is uncertain, we do have concerns about allowing mobile OCPs to charge their AC when fixed OCPs are limited to retention of 0.5ppm.

- In terms of price signals for callers, callers benefit from both network and retail expenditure by mobile OCPs (including CARS). It seems reasonable that they should contribute to these costs. This suggests that either a maximum of 4.2ppm or the AC would be appropriate. The absence of evidence showing that consumers would strongly prefer a structure of prices involving a maximum price towards the lower end of our cost benchmarks (and higher prices for other mobile services in the wider bundle) also tends to support this 4.2ppm figure as reasonable.

A24.67 We found it difficult to choose between a maximum based on the 4.2ppm figure or a maximum based on the AC. We thus consider both variants in our assessment of Option B in Section 16.

A24.68 We have also considered the impact on price awareness of the level of the maximum mobile call price that we set. We recognise that the main way in which a Maximum Mobile Price number range improves price awareness is that it allows SPs to communicate a clear and reliable guide to call prices in adverts and other communications to callers.[248] However the particular level of the maximum price chosen can also affect awareness. In particular, we have considered whether the 4.2ppm maximum price should be expressed as a round number i.e. a whole ppm figure with no decimal places.

A24.69 Currently mobile OCPs sometimes set prices that are expressed to one decimal place.[249] However, notwithstanding current practice, intuitively a whole ppm figure is easier for callers to remember and understand.

A24.70 If the maximum is expressed as a whole ppm figure, there are some attractions to rounding upwards (to 5ppm, including VAT). An upwards adjustment is consistent with the absence of evidence that consumer have a preference these calls being towards the lower end of our benchmarks. Intuitively, a maximum of 5ppm may be more memorable for callers than the 4ppm figure produce by rounding down. A 5ppm maximum would also allow mobile OCPs to recover those fixed and common costs that are no longer included in (regulated) MTRs. Such a slight increase (from 4.2ppm to 5ppm, including VAT) is unlikely to materially distort competition.

A24.71 Accordingly under Option B we consider three different levels for the maximum price of mobile calls to the Maximum Mobile Price ranges:

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[247] In particular fixed calls are free. This is not always the case if the SP instead selected an 03 number.

[248] In particular, a maximum mobile price is likely to 'bite' i.e. to be a reliable guide to the actual price of calls. In August, 2010 mobile 080 call prices were generally well above 5ppm (see Section 14), with the exception of the minority of mobile calls that were entirely free. There is also little incentive for mobile OCPs to cut prices below the maximum given the difficult of making callers aware of that price reduction (with the possible exception of free calls).

[249] As of December 2011, prices to mobile subscribers on the following packages pay amounts that are expressed to one decimal place for 080 and 0500 calls: O2 post-pay subscribers (20.4ppm), Orange "Panther Extra" subscribers (7.4ppm) and T-Mobile subscribers (up to 7.4ppm).

- 4.2ppm (including VAT);
- 5ppm (including VAT); or
- the AC.

Principle 3: practicality

A24.72 Principle 3 is that the maximum mobile price should be reasonably practicable to implement.

A24.73 Any maximum would apply to all mobile OCPs and to all calls to the Maximum Mobile Price number range. We therefore do not believe that it raises practicality concerns.

Provisional conclusion on the maximum price of calls to the Maximum Mobile Price number ranges under Option B

A24.74 Our assessment of Principles 1-3 above suggests a maximum price of either 4.2ppm or 5ppm (including VAT) or the AC for mobile calls under Option B.

Maximum price of mobile calls under Option C

A24.75 We now consider whether the maximum price of mobile calls to a Maximum Mobile Price range should be different under Option C, i.e. if there is also a free to caller number range.

Changes to the assessment under Principle 2

A24.76 Under Principle 2 we considered the trade off between the price of calls to the Maximum Mobile Price number range and the price of other mobile services. This assessment is slightly different under Option C.

A24.77 In the analysis above we explained that the choice between a maximum price of 4.2ppm and the AC was difficult (see paragraphs A24.66-A24.67). However under Option C:

- In terms of SPs' preferences, the Maximum Mobile Price number range is likely to cater for those that do not highly value free mobile calls (meaning they are unwilling to fund the higher origination payments associated with the free to caller range).
- In a related point, having a diverse range of retail price points is likely to help serve the varied preferences of SPs.

A24.78 We consider that these factors suggest that the maximum price should be equal to the AC under Option C.

A24.79 As discussed above, setting a maximum price for mobile calls equal to the AC does raise concerns about the impact on competition between fixed and mobile OCPs. However, under Option C the volume of calls on the Maximum Mobile Price number range will be significantly smaller than under Option B. Under Option C, the SPs will split between the Maximum Mobile Price number range and the free to caller

number range. In contrast, under Option B all 0500 and 080 SPs are located on Maximum Mobile Price number ranges.

A24.80 Using our Impact Assessment Range of 2.5-3.0ppm for origination payments for mobile calls to the free to caller range, the 2011 SPs survey indicates that 33% of 080 SPs prefer a Maximum Mobile Price number range (a further 16% are indifferent).[250] Moreover this question asked about a Maximum Mobile Price number range where the maximum call price was 7ppm. If the typical AC is higher than this figure then the number of SPs that prefer the Maximum Mobile Price range is likely to be reduced.

A24.81 Since call volumes on the Maximum Mobile Price number range under Option C are likely to be significantly lower than under Option B, this significantly reduces the effect on mobile OCPs' total profits of allowing them charge their full AC. As a result the tariff package effect is smaller. This reduces the scale of any potential distortion in competition between fixed and mobile OCPs.

Provisional conclusion

A24.82 Under Option C, the balance of arguments under Principle 2 is different. Accordingly our view is that the maximum price of mobile calls to the Maximum Mobile Price range should be equal to the AC under Option C.

Mobile origination payments when the maximum price is equal to the access charge

A24.83 Elsewhere in this Annex we have assumed an origination payment of 0.5ppm for calls to the Maximum Mobile Price number range i.e. the same as current fixed origination payments. However, if mobile OCPs are able to charge their full AC for calls to the Maximum Mobile Price number range we do not consider that this assumption would be appropriate. This is for two reasons:

- SPs benefit from making an origination payment to OCPs if it results in lower call prices. This is not the case if mobile OCPs are able to charge their full AC for calls to the Maximum Mobile Price number range.
- It would mean that mobile OCPs are actually earning higher retention on calls to the Maximum Mobile Price number range than on calls to unbundled number ranges (since they are also receiving a 0.5ppm payment from SPs).

A24.84 Accordingly, under Options B and C, when the maximum price is equal to the AC we have assumed an origination payment of zero for mobile calls to the Maximum Mobile Price number range (for fixed calls it is still 0.5ppm, as at present).

[250] 2011 SPs survey, Q20.

Annex 25

Selection of free to caller and maximum mobile price range

Introduction

A25.1 This Annex considers which number ranges should be free to caller and which should be a Maximum Mobile Price range under Option C. In other words, should 080 be free to caller and 0500 be a Maximum Mobile Price range or should it be the other way around?

Responses to the December 2010 Consultation

A25.2 In its response to the December 2010 Consultation, EE did not consider that changes to the regulation of 080 or 0500 numbers were necessary or appropriate. However, if one of these ranges were to be mandated as free to caller then EE favoured 0500, with 080 remaining unchanged.[251] EE's reasons for preferring this configuration were:[252]

- the limited usage of 0500 would mean that only a small number of SPs would need to migrate if the higher origination payments associated with a free-to-caller range did not suit their business plans; and
- the current limited recognition of the 0500 range by callers would provide a "clean base" for establishing the brand perception that the range is free to caller, untainted by historical associations.

Ofcom's position

A25.3 We have weighed up three factors as part of our assessment of how this aspect of Option C should be designed:

- SPs' preferences;
- callers' current beliefs about call prices; and
- our policy preference about the extent of free calls.

SPs' preferences

A25.4 0500 is a legacy number range and new number allocations are currently closed. The 080 number range is much larger than the 0500 number range, in terms of call volumes and numbers of SPs.[253] This means that if the majority of 080 SPs

[251] EE consultation response, Summary paragraph 8(c) and Q6.6 paragraph 8.
[252] EE consultation response, Q6.6 paragraph 7. EE's arguments in favour of Option C (set out in EE consultation response, Summary paragraph 8(c) and Q6.6 paragraph 8) are considered in
[253] As explain in a footnote above, in 2010 there were under [✂] of calls to 0500 numbers (source: C&W consultation response, 31 March 2011, annex 4). This compares to approximately 11.2bn minutes of 080 calls in 2009 (source: 2010 Flow of Funds study, Figure 5.7 on page 30). [✂] estimated that there were 40,000 SPs on the 080 number range [✂]). Figures provided by C&W

preferred 080 to be free to caller rather than a Maximum Mobile Price number range, for example, then this is likely to outweigh the preferences of the much smaller number of 0500 SPs. Moreover, selecting the option that the majority of 080 SPs prefer is likely to reduce the scale of migration and hence the associated migration costs.

A25.5 One of EE's reasons for favouring 0500 as the free to caller range was the impact on migration costs. However EE's reasoning only appears to refer to the preferences of 0500 SPs, rather than taking into account the preferences of the much larger number of 080 SPs. Accordingly we do not agree with this point in EE's reasoning.

A25.6 We turn now to the preferences of 080 SPs.

A25.7 In the 2011 SPs survey we asked 080 SPs whether they preferred 080 to be a Maximum Mobile Price number range with a maximum mobile price of 7ppm or to be free to caller but with higher charges for the SP.[254] The responses associated with a mobile origination payment to the free to caller number range of 2.5-3.0ppm (i.e. our Impact Assessment Range) are summarised in Table A25.1 below.

Table A25.1: 080 SPs' preferences between free to caller and Maximum Mobile Price number ranges

Prefer free to caller range	Prefer Maximum Mobile Price range	Indifferent	Don't know
47%	33%	16%	5%

A25.8 This implies that more 080 SPs would prefer 080 to be free to caller. Moreover this question may somewhat overstate SPs' preference for a Maximum Mobile Price number range since respondents were told that the maximum mobile price would be 7ppm, rather than the AC, which might be higher.

A25.9 Thus, in summary, the evidence on 080 SPs' preferences points towards 080 being the free to caller number range under Option C.

Callers' current beliefs about call prices

A25.10 We now consider consumers' current beliefs about call prices. In the following discussion we focus on their beliefs about mobile calls prices since, under Option 3, fixed calls to 0500 and 080 are free regardless of how this option is designed.

A25.11 Clearly it is desirable for consumers' current beliefs to change (a key motivation for intervention is to address poor price awareness). However we have looked at current beliefs about 0500 and 080 call prices to see if there is a configuration of Option C that is likely to be easier for callers to grasp.

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suggest that it has [✂] SP customers on the 0500 number range (source: email from C&W dated 17 January 2012).

[254] 2011 SPs survey, question 20.

A25.12 In the 2011 Consumer survey we asked respondents which statement best described what they know about the cost of calling a number starting with 080 from their mobile.[255] Responses are summarised in Table A25.2 below.

Table A25.2: Beliefs about 080 mobile call prices

	Responses
I have never heard of 080 numbers	6%
I know how much it costs per minute	13%
I do not know how much it cost per minute but think it's expensive	42%
I do not know how much it cost per minute but do not think it's expensive	11%
I do not know how much it cost per minute and don't know whether it's expensive	29%

A25.13 The 13% of respondents that claimed that they knew how much 080 calls cost per minute were then asked "How much per minute do you think it costs to call a number starting with 080, during peak hours, in the daytime on a weekday, from your mobile?"[256] The responses are summarised in Table A25.3 below.

Table A25.3: Beliefs about mobile 080 call prices of consumers that claim to know the ppm price

	Free	1-5ppm	6-10ppm	11-25ppm	26+ppm	It depends	Don't know
Responses	35%	1%	11%	7%	17%	17%	12%

A25.14 Respondents to the 2009 Consumer survey gave similar answers. In that survey we asked "How much do you think it costs to call the following types of telephone numbers from your mobile phone during the daytime on a weekday?"[257] The responses are summarised in Table A25.4 below. Note that this question was asked to all respondents with a mobile phone, rather than just those that claimed to know the ppm call price.

[255] 2011 Consumer survey, question GL01.
[256] 2011 Consumer survey, question GL02.
[257] 2009 Consumer survey, question 44.

Table A25.4: Consumers' beliefs about mobile 080 call prices

	Free	1-5 ppm	6-10 ppm	11-25 ppm	26+ ppm	It depends	Don't know
Response	11%	3%	7%	12%	20%	1%	46%

A25.15 These survey results show that only a small minority of callers currently believe that 080 mobile calls are free. If 080 were designated as free to caller then the vast majority of consumers would have to change their beliefs. On the other hand, those callers that expect to be charged for 080 calls have fairly dispersed beliefs about what the price is. The majority of these callers will also face a learning exercise if 080 is made into a Maximum Mobile Price range.

A25.16 That said, as shown in Table A25.5, currently most consumers believe that mobile 0800 calls are more expensive than fixed 0800 calls.[258] This suggests that the distinguishing feature of a Maximum Mobile Price number range, namely that mobile calls are charged for whereas fixed calls are not, broadly fits with consumers' expectations about 0800 calls.

Table A25.5: Callers' beliefs about relative 0800 call prices

	Landline more expensive	Mobile more expensive	The same	Don't know
Response	2%	78%	8%	12%

A25.17 We have not asked callers about what they expect to pay for a 0500 call. However it seems plausible that very few of them know what the price is. EE's characterisation of this number range as a 'blank slate' from callers' perspective seems plausible.

A25.18 Based on the above material our view on this factor is as follows:

- EE argued that since there is little recognition of 0500 then this suggests that it should be the free to caller range. We agree that consumer awareness of 0500 prices is likely to be limited. However, only 13% of respondents to the 2011 Consumer survey claimed that they knew how much mobile 080 calls cost. This suggests that 080 not far from being a 'blank slate' for mobile callers too.[259]

[258] 2010 Consumer survey, question 33.

[259] Moreover the 'blank slate' nature of 0500 in relation to fixed calls might slightly weigh against it being the free to caller number range under Option C. There is some awareness that fixed 080 calls are free, although awareness is still poor. In the 2009 Consumer survey, 62% of respondents thought that fixed 0800 calls were free (question 43). The 2011 Consumer survey asked a different question. In that survey, 29% of respondents said that they knew how much fixed 0800 calls cost per minute and, of these, 72% thought these calls were free (this equates to 21% of all respondents) (questions GL01 and GL02). It seems plausible that consumers' awareness that fixed calls are free is slightly higher for 080 than for 0500. This might make it slightly easier for consumers to learn that mobile 080 calls are also free, in the event that 080 were the free to caller range under Option C. This is because a minority of consumers could build on their pre-existing knowledge in relation to fixed calls.

- There is currently considerable dispersion in callers' beliefs about the price of mobile 080 calls. As a result, these are also of limited assistance in determining the design of Option C since whichever option is picked will require a learning process of the part of most callers. That said, 78% of callers currently believe that mobile 0800 calls are more expensive that fixed calls. This provides a tentative indication that, under Option C it may be simpler to establish the proposition that 080 is a Maximum Mobile Price number range and 0500 is free to caller than the converse.

- We have placed limited weight on this factor given that, even if 080 is designated as a Maximum Mobile Price range, callers' beliefs about the level of mobile 080 prices would still need to change. Similarly, if 080 were instead designated as the free to caller range, free 080 mobile calls (the same as fixed 080 calls) would be a relatively simple price point to learn.

Ofcom's policy preference about the extent of free calls

A25.19 Where an SP is largely indifferent about whether it is located on a free to caller number range or on a Maximum Mobile Price number range, Ofcom would prefer that SP to be on a free to caller number range.[260] This is because consumers will benefit from free mobile call prices.

A25.20 As shown in Table A25.1, 16% of 080 SPs are indifferent between free to caller and Maximum Mobile Price number ranges. Moreover, even for those SPs that did express a preference between the options, we would expect at least some of them to remain on 080 if the other option was chosen. This is because of the costs associated with migration.[261]

A25.21 Table A25.1 above suggests that:[262]

- if 080 were the free to caller range then up to 33% of SPs might migrate to the Maximum Mobile Price 0500 range.[263] As a result, calls to around 67% of the SPs currently located on 080 are likely to be free to caller; and

- if 080 were the Maximum Mobile Price range then up to 47% of SPs might migrate to the free to caller 0500 range.[264] As a result, calls to around 47% of the SPs currently located on 080 are likely to be free to caller.

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[260] This is not to imply that a free to caller range is inherently superior to a Maximum Mobile Price range or that, where an SP has a strong preference against a free to caller range, then that preference should be disregarded. Rather our preference focuses on those SPs that are essentially indifferent between the two options.

[261] We discuss migration costs in Annex 12. The material set out in that Annex suggests that migration costs could vary substantially between SPs. Further, SPs with very high migration costs would tend not to migrate. This implies that the £1,000-£2,500 average migration cost range identified in that Annex may not be reflective of the costs that would be incurred by some SPs that are very reluctant to migrate.

[262] These calculations focus on 080 SPs. This because 080 is currently considerably larger than 0500 in terms of call volumes and number of SPs.

[263] This percentage may be upwardly biased once migration costs and the fact that the maximum mobile call price on 0500 is the AC (rather than the 7ppm mentioned in the 2011 SPs survey question) are taken into account.

[264] This percentage may be upwardly biased due to the costs of migrating to 0500. On the other hand, a factor that might slightly bias it downwards is the fact that the maximum mobile call price on 080 is the AC, rather than the 7ppm mentioned in the 2011 SPs survey question.

A25.22 Selecting 080 as the free to caller number range and 0500 as the Maximum Mobile Price number range is thus likely to result in a significantly larger number of SPs adopting a free to caller number. This, in turn, is likely to benefit callers. As a result, we have a policy preference in favour of configuring Option C in this way.

Assessment

A25.23 In terms of our assessment of the design of Option C, callers' current beliefs about call prices tentatively points towards 080 being the Maximum Mobile Price range. However, for the reasons explained above, we have placed limited weight on this factor. In contrast, SPs' preferences suggest that 080 should be free to caller. Moreover, making 080 the free to caller range is likely to lead to significantly more SPs operating free to caller numbers. This, in turn, benefits consumers through lower mobile call prices.

A25.24 Thus, we consider that under Option C:

- 080 should be the free to caller range; and
- 0500 should be the Maximum Mobile Price range.

Annex 26

Estimating the tariff package effect

Introduction

A26.1 The two leading options for 080 are either making this a free to caller range or a Maximum Mobile Price range. Both these options involve setting a maximum price for mobile calls and are likely to affect both call volumes and 080 revenues. Insofar as OCPs' incremental profits on 080 calls fall then the price of other telecoms services is likely to rise (the tariff package effect).

A26.2 The purpose of this Annex is to explain how we have estimated the size of the 080 tariff package effect. We discuss the interpretation of these results in Section 16.

A26.3 This Annex is structured as follows:

- first, we set out various calculations relevant to the effects of making 080 free to caller; and
- second, we estimate the size of the tariff package effect for mobile and fixed OCPs if 080 becomes a Maximum Mobile Price range.

A26.4 All calculations in this Annex are relative to the status quo.[265]

Impact of making 080 free to caller

A26.5 Below we set out the following calculations that are relevant to the effects of making 080 free to caller:

- the impact on mobile OCPs and SPs assuming no change in overall 080 call volumes. These calculations assume there is no change in SPs usage of 080 e.g. no migration to other number ranges;
- the impact on mobile OCPs if overall 080 call volumes increase slightly. This explores the impact of increased volumes of calls to 080 SPs, for example due to greater consumer price awareness, but does not model factors such as migration to other number ranges;
- the impact on fixed OCPs. This calculation allows for a slight increase in the overall volume of calls to 080 SPs but does not model factors such as migration; and
- the impact on mobile OCPs taking changes in SPs' usage of 080 numbers into account.

A26.6 In summary, given our Impact Assessment Range, making 080 free to caller is likely to significantly increase costs for those SPs that remain on the number range (by 73% to 115% in the calculations below). For mobile OCPs, the impact on their profits from 080 calls (and hence the tariff package effect) is generally positive. This

[265] Note that for the status quo base case our data relates to 2009 and is taken from the 2010 Flow of Funds study.

implies that prices for other mobile telecoms services may fall. In contrast, the impact on fixed OCPs' profits from 080 calls appears likely to be negative due to extensive fixed to mobile substitution. To illustrate, the size of the negative effect modelled for fixed OCPs is between £14m and £20m.

Impact on mobile OCPs and SPs assuming no change in overall 080 call volumes

A26.7 In Table A7.2 of the December 2010 Consultation we provided an indication of the impact of making 080 free to caller, taking into account different levels of mobile origination payments. An updated version of that Table is set out below. This shows the impact on mobile OCPs' profits from 080 calls (and hence the magnitude of the tariff package effect) and the impact on SPs' payments to TCPs (in absolute amounts and as a percentage). These impacts are relative to the status quo.

Table A26.1: Free to caller 080 assuming unchanged overall call volumes – impact on mobile OCPs and SPs (compared to status quo)

Mobile origination payment		40% of 080 calls originated from mobiles	50% of 080 calls originated from mobiles
2.5ppm	Change in mobile OCPs' 080 profits	+£5m	+£24m
	Change in SP costs	+£87m (+73%)	+£109m (+91%)
3.0ppm	Change in mobile OCPs' 080 profits	+£27m	+£52m
	Change in SP costs	+£110m (92%)	+£137m (115%)

A26.8 This Table was calculated as follows:

- in the base case, total 080 call volumes are 11,188m minutes of which 5% are originated from mobiles.[266] Mobile retention was £78m (excluding VAT).[267] SPs paid TCPs £120m in relation to 080 calls;[268]
- we have assumed that mobile OCPs' incremental costs of originating 080 calls are 0.75ppm;[269]
- in practice, improved consumer price awareness and confidence may place upward pressure on 080 call volumes while some 080 SPs may change how they use non-geographic numbers (e.g. migrating to another range or closing their 080 service) which will place downward pressure on 080 call volumes. However for

[266] 2010 Flow of Funds study, page 6 and Figure 5.7 on page 30.
[267] 2010 Flow of Funds study, page 44.
[268] Origination payments to OCPs accounted for £61m of this. 2010 Flow of Funds study, Figure 5.23 on page 45.
[269] Table A22.1 in Annex 22 gives a range of 0.7-0.8ppm for the pure LRIC of mobile call origination. For simplicity, we have selected the midpoint of this range.

simplicity the above Table does not model these effects and we have instead assumed that total 080 call volumes remain unchanged if it is made free to caller. We relax this assumption below; and

- we have assumed that making 080 free to caller increases the proportion of calls originated from mobiles to either 40% or 50%.[270]

A26.9 These calculations suggest that, given our Impact Assessment Range for mobile origination payments, the tariff package effect for mobile OCPs may be positive. Increased origination payments from SPs, combined with increases in the proportion of calls from mobiles, may more than offset the reduction in mobile OCPs' retail 080 call revenues. As a result, other telecoms prices may fall.

A26.10 These calculations also suggest that the costs for SPs of operating a 080 number are likely to rise significantly.

Impact on mobile OCPs assuming a slight increase in overall call volumes

A26.11 Improved price awareness, greater consumer confidence and lower mobile call prices will tend to increase call volumes for those SPs that remain on 080. This, in turn, will tend to boost mobile OCPs' profits. To indicate the likely magnitude of these effects, Table A26.2 shows the impact on mobile OCPs' profits (relatively to the status quo) repeating the calculations set out in Table A26.1 above but assuming that overall 080 call volumes increase slightly.[271]

A26.12 We discuss the impact of making 080 free to caller on total 080 call volumes in Section 16. That evidence does not provide a clear indication of the extent to which demand may rise. Accordingly we have conservatively assumed that overall 080 call volumes rise by 1% and 5%. It should be stressed that these figures are used for modelling purposes, in order to explore the materiality of this factor.

Table A26.2: Free to caller 080 assuming increased overall call volumes – impact on mobile OCPs (compared to status quo)

Mobile origination payment	Increase in total 080 call volumes	40% of 080 calls originated from mobiles	50% of 080 calls originated from mobiles
2.5ppm	1%	+£5m	+£25m
	5%	+£9m	+£29m
3.0ppm	1%	+£28m	+£54m
	5%	+£32m	+£59m

[270] As explained in Annex 23, in the medium term it is reasonable to assume that between 40% and 50% of call minutes to a free to caller range would be originated from mobiles.

[271] Unlike Table A26.1 we have not shown the impact on SPs' costs. This is because simply focusing on the change in SPs' costs risks being misleading. 080 SPs presumably benefit from being called. Accordingly, higher overall call volumes will tend to increase SPs' costs (since they have to fund origination payments on more calls) but will also tend to provide additional benefits to SPs.

A26.13 Comparing Tables A26.1 and A26.2 suggests that a 1% increase in overall demand as a result of making 080 free to caller might increase mobile OCPs' profits on 080 calls by up to £2m. A 5% increase in overall demand increases them by £4m to £7m. These are comparatively small figures, given the range of estimates in these Tables. In other words, small increases in overall 080 demand are only likely to have a moderate impact on the scale of the tariff package effect for mobile OCPs.

Impact on fixed OCPs

A26.14 In 2009, 95% of calls to 080 numbers were originated on fixed networks. Making 080 free to caller is, over the medium term, likely to lead to a large increase in the proportion of 080 calls from mobile networks. This is likely to lead to a significant fall in fixed 080 call volumes. The origination payment received by fixed OCPs is likely to exceed their incremental costs of originating 080 calls and thus lower fixed 080 call volumes will reduce fixed OCPs' incremental profits on 080 calls. This, in turn, is likely to result in higher prices for other fixed telecoms services (the tariff package effect). Table A26.3 sets out an indication of the size of this effect compared to the status quo.

Table A26.3: Free to caller 080– impact on fixed OCPs (compared to status quo)

Change in overall 080 call volumes	40% of 080 calls originated from mobiles	50% of 080 calls originated from mobiles
0%	-£16m	-£20m
1%	-£16m	-£20m
5%	-£14m	-£19m

A26.15 The Table was calculated as follows:

- the base case is the same as in Table A26.3 above.[272] It was assumed that fixed OCPs earn an average incremental profit of 0.4ppm on 080 calls;[273]
- we have assumed that making 080 free to caller increases the proportion of calls originated from mobiles to either 40% or 50%; and
- making 080 free to caller is assumed to either leave total 080 call volumes unchanged or to increase them by either 1% or 5%.

A26.16 The large amount of fixed to mobile substitution is likely to outweigh any increase in overall 080 call volumes. As a result, fixed 080 call volumes are likely to significantly decline. This, in turn, is likely to result in a negative tariff package effect for fixed OCPs i.e. higher prices for other fixed telecoms services. This contrasts with the position of mobile OCPs which, where the tariff package effect may be positive.

[272] Specifically, total 080 call volumes are 11,188m minutes of which 5% are originated from mobiles.
[273] As explained in paragraph A22.52, the fixed origination payment is approximately 0.5ppm and we have used a figure of 0.1ppm for the incremental costs of fixed 080 call origination.

Impact on mobile OCPs taking changes in SPs' usage of 080 into account

A26.17 Given our Impact Assessment Range for the mobile origination payment of 2.5-3.0ppm, making 080 free to caller is likely to significantly increase the costs of operating a 080 number for SPs. As a result, perhaps between 11% and 19% of current 080 SPs may cease operating their 080 number(s).[274] These SPs might migrate to another number range, block mobile calls or cease providing a service via non-geographic numbers altogether.[275]

A26.18 Insofar as SPs change how they operate their 080 numbers, the impact on mobile OCPs' profits depends on precisely what SPs do. It may also be the case that some SPs migrate services to 080 or launch new services on this number range. Where SPs either cease providing a service or block calls from mobiles then this will tend to depress mobile OCPs' profits relative to the status quo. As a result, other mobile prices are more likely to rise. However where SPs migrate to another number range, the effect depends on whether calls to that new number range are more or less (incrementally) profitable than calls to 080 under the status quo.

A26.19 It is difficult to robustly estimate the magnitude of these effects, particularly given the uncertainty about the impact of migration on mobile OCPs' profits. To illustrate:

- Suppose that an SP migrates away from 080 to 03. The retail price of 03 calls is the same as for geographic calls. For post-pay mobile subscribers, 03 calls are likely to be part of a bundle of inclusive minutes and it could thus be argued that the incremental revenue associated with these calls is low or zero. But if post-pay mobile subscribers make more calls to 03 then this may increase the likelihood that they exceeds their monthly allowance of inclusive ('free') minutes (or that they choose to purchase a larger monthly allowance). As a result, 03 calls may make it more likely that subscribers pay an incremental charge for making other calls. Pre-pay mobile subscribers are charged for 03 calls. In 2009, mobile OCPs' average revenue from chargeable (out of bundle) 03 calls was 11.5ppm (excluding VAT). Their average revenue across all 03 calls was far lower (under 1ppm) since only 8% of these mobile calls were charged for.[276]

- In contrast, suppose that an SP migrates away from 080 to an (unbundled) 084 number with a low SC. For such calls the mobile OCP would earn its access charge. In 2009, mobile OCPs' average retention was 13.4ppm (excluding VAT) on the number ranges that we are proposing to unbundle.[277] However the level of the AC may be lower than implied by this figure. Unbundling is likely to increase price awareness and competitive pressures which is likely to place downward pressure on OCPs' margins on non-geographic calls.

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[274] 2011 SPs survey, question 17. This range comes from the looking at those respondents that said they were "very likely" to get rid of their 080 number(s) and those that said they were "very likely" or "fairly likely" to do so.

[275] We have not calculated the impact on this on SPs. However, SPs will presumably only migrate, block mobile calls or cease offering a service if it is more profitable than the alternative of remaining on 080 and paying increased origination payments. In other words, the effect on SPs is likely to be smaller than the figures given in Table A26.1 above, where we assumed that SPs' behaviour remained unchanged.

[276] Data underlying 2010 Flow of Funds study. Page 38 of this study stated that "…our revenue figures do not include any notional element of bundle revenues where a call is covered in bundle."

[277] Specifically the 08 ranges (other than 080), 09 and 118. Calculated using data underlying 2010 Flow of Funds study.

- It is also necessary to make an assumption about the proportion of calls to former 080 SPs that migrate elsewhere that are originated from mobiles. Unlike 080, where fixed and mobile calls have the same price (free), on other number ranges the price of mobile calls is likely to be different from the price of fixed calls. This will affect the proportion of mobile calls to those other ranges.

A26.20 Notwithstanding these concerns, given some stakeholders' criticisms of the proposal in the December 2010 Consultation to make 080 free to caller, we have carried out some further calculations to try and shed some light on these factors.[278] The results are set out in Table A26.4.

Table A26.4: Free to caller 080 taking SPs' reactions into account – impact on mobile SPs (compared to the status quo)

Mobile 080 origination payment	Assumptions about calls to migrated SPs	40% of 080 calls originated from mobiles	50% of 080 calls originated from mobiles
2.5ppm	2ppm profits, 30% from mobiles	-£2m	+£14m
	8ppm profits, 20% from mobiles	£11m	+£27m
	8ppm profits, 30% from mobiles	+£22m	+£38m
3.0ppm	2ppm profits, 30% from mobiles	+£16m	+£36m
	8ppm profits, 20% from mobiles	+£29m	+£50m
	8ppm profits, 30% from mobiles	+£40m	+£61m

A26.21 This Table was calculated as follows:

- the base case is the same as in Table A26.1 above;[279]
- we have assumed that mobile OCPs' incremental costs of originating 080 calls are 0.75ppm;
- if 080 is made free to caller then SPs accounting for 19% of 080 call volumes are assumed to change their behaviour. Of these, 63% migrate elsewhere, 21% block calls from mobiles and 16% withdraw their service altogether;[280]

[278] EE December 2010 Consultation response, summary, paragraph 8(c). O2 December 2010 Consultation response, paragraph 4. Virgin Media December 2010 Consultation response, Q6.6 on pages 23-25. Vodafone December 2010 Consultation response, "Freephone" summary on p1-2.

[279] Specifically, total 080 call volumes are 11,188m minutes of which 5% are originated from mobiles. Mobile retention was £78m (excluding VAT).

[280] For those SPs that said they would get rid of their 080 number(s), 60% said they would migrate elsewhere, 20% said they would block calls from mobiles and 15% said they would get rid of their 080 line completely (source: 2011 SPs survey, question 18). These numbers have been adjusted upwards on a pro rata basis to reflect the 5% of respondents that stated "don't know". Note that the sample size for this question was low (65) and which creates some uncertainty about the precise figures.

- for those SPs that migrate elsewhere, we have used three different scenarios to explore the impact on mobile OCPs:
    - 30% of migrated call volumes are originated by mobile OCPs and mobile OCPs earn an incremental profit of 2ppm on calls to migrated numbers. This could reflect the situation where most migrating SPs move to the 03 number range;
    - 20% of migrated call volumes are originated by mobile OCPs and mobile OCPs earn an incremental profit of 8ppm on calls to migrated numbers. This could reflect the situation where most migrating SPs move to the 084 number range;
    - 30% of migrated call volumes are originated by mobile OCPs and mobile OCPs earn an incremental profit of 8ppm on calls to migrated numbers. This could reflect the situation where most migrating SPs move to the 084 number range and a fairly high proportion of these calls are made from mobiles;
- for those SPs that block calls from mobiles or withdraw their service, the mobile OCP earns no revenue and incurs no call origination costs; and
- we have assumed that making 080 free to caller increases the proportion of 080 calls originated from mobiles to either 40% or 50%.

A26.22 If we were instead to use an assumption that SPs accounting for 11% (rather than 19%) of 080 call volumes change their behaviour then the impact on mobile OCPs will be partway between the effects shown in Tables A26.4 and A26.1.[281]

A26.23 We recognise that these calculations are built upon a number of assumptions, particularly about migrated calls. However a number of messages emerge from the above Table:

- for those SPs that either block 080 calls or discontinue their service, there is a negative effect on mobile OCPs' 080 profits (relative to the status quo);
- mobile calls to other number ranges may, on a ppm basis, be less profitable than mobile 080 calls currently are. However the proportion of mobile calls is likely to be higher. Conversely, calls to SPs that migrate elsewhere may be more profitable on a ppm basis than mobile calls to a free to caller range but the proportion of mobile calls may be lower than to a free to caller range. This makes it difficult to be definitive about the impact on mobile OCPs of migration; and
- nonetheless these calculations suggest that, even once the change in SPs' behaviour is taken into account, the impact on mobile OCPs may be small or even positive. In other words, given our Impact Assessment Range for mobile origination payments, the tariff package effect for mobile OCPs is generally likely to be positive. This suggests that prices for other telecoms services may fall. This is the same broad conclusion that arose from the simpler analysis set out above where we assumed that overall 080 call volumes did not change.

[281] 11% of respondents that said they were "very likely" to get rid of their 080 number(s) 2011 SPs survey, question 17.

Impact of making 080 a Maximum Mobile Price range

A26.24 One of our leading policy options is making 080 a Maximum Mobile Price number range i.e. setting a maximum price of zero for fixed 080 calls but a non-zero maximum price mobile calls. Below we set out estimates of the tariff package effect associated with this policy option for both mobile and fixed OCPs.[282]

Impact on mobile OCPs

A26.25 Table A26.5 indicates the impact on mobile OCPs of making 080 a Maximum Mobile Price range. The cells show the impact on mobile OCPs' profits from 080 calls (and hence the magnitude of the tariff package effect) relative to the status quo.

Table A26.5: Maximum Mobile Price 080 – impact on mobile OCPs (compared to the status quo)

Maximum price of mobile calls (incl. VAT)	Percentage of 080 calls originated from mobiles			
	5%	10%	20%	30%
4.2ppm	-£55m	-£37m	-£1m	+£35m
5ppm	-£52m	-£30m	+£14m	+£58m
AC of 10ppm	-£31m	+£11m	+£96m	Omitted
AC of 16.1ppm	-£3m	+£68m	Omitted	Omitted

A26.26 This Table was calculated as follows:

- in the base case, total 080 call volumes are 11,188m minutes of which 5% are originated from mobiles.[283] Mobile retention is £78m (excluding VAT);[284]
- we have assumed that mobile OCPs' incremental costs are 0.75ppm;
- we do not know what average AC mobile OCPs will set. For illustrative purposes we have used 10ppm and 16.1ppm (including VAT at 20%). The latter figure is based on mobile OCPs' retention in 2009 and is thus likely to be an upper bound;[285]

[282] Under this option, mobile origination payments are assumed to either be the same as fixed origination payment or to be zero (if the maximum price of mobile calls is equal to the AC). Since SPs' expenditure on origination payments is thus unlikely to materially change, we have not attempted to estimated this effect. This also implies that 080 SPs are unlikely to migrate elsewhere, so we have not modelled the effects of migration either.
[283] 2010 Flow of Funds study, page 6 and Figure 5.7 on page 30.
[284] 2010 Flow of Funds study, page 44.
[285] This figure was calculated by taking mobile OCPs' retention on 084, 087, 09 and 118 calls and adding VAT at 20%. If we instead take OCPs' retention on all 08, 09 and 118 calls (i.e. including 080) then this rises to 16.4ppm (including VAT), which would have a small positive impact on the figures in

- we have assumed a mobile origination payment of 0.5ppm for when the maximum call price is 4.2ppm or 5ppm. When the maximum call price is equal to the AC we have instead assumed a mobile origination payment of zero (see Annex 24 for further details of our reasoning on this point);

- for simplicity we have assumed that total 080 call volumes remain unchanged if it is made into a Maximum Mobile Price number range. Further:

    - we have looked at four scenarios for the proportion of 080 calls originated from mobiles: 5% (same as at present), 10%, 20% and 30%. Note that these are lower than the proportion of mobile calls to a free to caller number range that we modelled above (namely 40% or 50%). This is because mobile calls to a Maximum Mobile Price number range are likely to be more expensive than fixed calls (which are free), so less fixed to mobile substitution is likely to occur; and

    - where the maximum mobile price is relatively high the increase in the proportion of mobile calls is likely to be smaller. We have thus deliberately omitted the cases where the maximum price is equal to the AC but a high level of fixed to mobile substitution occurs. These cases are less plausible (they all involved an increase in mobile 080 profits of over £150m).

A26.27 These calculations suggest that the tariff package effect may be small or even positive for mobile OCPs but is sensitive to the proportion of calls that are originated from mobiles.[286] Even with a low maximum mobile price, if the proportion of mobile calls rises to 20% or more then this offsets the effects of lower call prices (the overall impact on mobile OCPs' profits from 080 calls is almost zero or positive). If mobile call volumes do not significantly increase then there may be a reasonably sized negative tariff package effect.

Impact on fixed OCPs

A26.28 If 080 becomes a Maximum Mobile Price range then, as discussed above, the proportion of calls originated from mobiles may rise. Since the fixed origination payment is greater than the incremental cost of fixed 080 calls, the fall in fixed call volumes will tend to reduce fixed OCPs' incremental profits on 080 calls. This is similar to the effect that occurs if 080 is made free to caller and we have thus modelled it in the same way as Table A26.3 above. The difference that in the scenarios we have considered, the proportion of mobile calls is lower: 5% (same as at present), 10%, 20% and 30%.[287] These correspond to the scenarios we looked at when analysing the impact on mobile OCPs above.

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the final row of Table A26.5. Retention figures calculated using data from the 2010 Flow of Funds study.

[286] The suggestion that a maximum price may actually be profitable for mobile OCPs begs the question of why they do not cut call prices now. However current mobile OCPs face a coordination problem. If a single mobile OCP cuts its 080 call price then this may have little or no effect on the volume of calls received by that OCP (this is consistent with the evidence in Annex 8). In contrast, if all mobile OCPs cut their prices to the same level then this allows SPs to confidently and accurately inform callers (e.g. in adverts) that "mobile calls cost no more than Xppm". As a result, callers are more likely to be aware of the price change and are more likely to react to it.

[287] We have also not considered the impact of an increase in overall 080 call volumes. However, as with the case where 080 is free to caller, the effect of a small increase in overall call volumes is likely to be comparatively small.

Table A26.6: Maximum Mobile Price 080 – impact on fixed OCPs (compared to status quo)

Proportion of 080 calls from mobiles	5%	10%	20%	30%
Impact on fixed OCPs' 080 profits	£0m	-£2m	-£7m	-£11m

A26.29 This Table suggests that the impact on fixed OCPs' profits of making 080 into a Maximum Mobile Price range are likely to be smaller than making it into a free to caller range. As a result, the increase in the price of other fixed telecoms services (via the tariff package effect) is likely to be smaller. Note also that if the maximum mobile price is relatively high (for example equal to the AC) then the proportion of mobile calls to 080 is likely to be lower. As a result the impact on fixed OCPs will tend to be smaller.

Annex 27

The 116XXX Harmonised European numbers for services of social value

Introduction

A27.1 In Section 16 we set out a detailed assessment of the options for the Freephone ranges. We noted that one of the current 116XXX Harmonised European Numbers was designated as Freephone (and there was the potential for future allocations to be designated as Freephone).

A27.2 Because the 116XXX range is somewhat different from the 080 and 0500 ranges, given that it is pan-European and subject to specific regulation, we have set out our specific assessment of this range separately below. However, as indicated in Section 16, our proposed conclusion is that this range should be treated the same as 080 and be designated as always free to caller.

A27.3 This Annex is structured as follows, we set out:

- first the background to the 116XXX range;
- then our analysis in the December 2010 Consultation;
- followed by stakeholder comments received in response to the consultation;
- the options for the 116XXX range and our evaluation of those options using our assessment criteria; and
- finally our conclusions on our proposed approach for the 116XXX range.

Background to the 116XXX range

A27.4 Harmonised European numbers for services of social value are an initiative of the European Commission, which aims to introduce "same number – same service" for certain "services of social value" across Europe. The Commission issued a decision on 15 February 2007[288] requiring all Member States to harmonise their national numbering range beginning with '116' for this purpose. The Commission reserves 116XXX numbers for specified services and requires Member States to take the necessary action to make these numbers available for allocation.[289]

A27.5 The Commission's 2007 decision stated that these numbers should be 'Freephone'.[290] However, it is worth highlighting that the Commission originally

[288] Commission decision of 15 February 2007 http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:049:0030:0033:EN:PDF
[289] Further Commission information on 116 numbers is available at: http://ec.europa.eu/information_society/policy/ecomm/current/pan_european/index_en.htm
[290] See recital 3 of the Commission decision on reserving the 116 range, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:049:0030:0033:EN:PDF

intended for 116XXX numbers to be free to caller.[291] The requirements of the final decision were changed to 'Freephone' in recognition of the different arrangements that apply in different countries, for example in the UK. The Commission nevertheless made clear that these numbers should 'ideally' be free to caller regardless of where the call originated from.[292]

A27.6 In the 116XXX February 2009 Statement,[293] we decided that 116XXX numbers in the UK should be either "Freephone" or "free to caller". We said that the intention underlying these charging arrangements was that consumers should not be deterred from contacting the service. We also noted, however, that the cost of conveyance would be covered by the SP and the OCP would be likely to receive an origination payment, because OCPs are not obliged to carry calls to 116XXX numbers at their own expense.

A27.7 Charging arrangements form part of each 116 number's service designation[294] in the NTNP and are attached as rights of use of the number in the form of Additional Specific Service Conditions.[295] OCPs are required specifically by GC17.15 to comply with these designations and this ensures that OCPs comply with the charging designation.[296] As a consequence, SPs operating on that number are not permitted to change the charging arrangement.

A27.8 In deciding whether to designate a 116 number as 'Freephone' or 'free-to-caller', we set out three determining factors:

- the level of social value or need met by the service;
- the likely situation of the caller when he/she needs to call the service; and
- the market environment in which the service operates.[297]

A27.9 At present, four of the five numbers that have to date been 'reserved' by the Commission in the 116XXX range have been designated "free-to-caller" i.e. the call is free from whichever telephone the caller chooses to call from, including mobiles. These are:

- 116 000: Hotline for missing children (allocated to Missing People);

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[291] See the original draft of the decision, http://circa.europa.eu/Public/irc/infso/cocom1/library?l=/public_documents_2005/cocom05-33_116pdf/_EN_1.0_&a=d

[292] http://circa.europa.eu/Public/irc/infso/cocom1/library?l=/public_documents_2006/cocom06-30_annex/_EN_1.0_&a=d

[293] See http://ww.ofcom.org.uk/consult/condocs/116/116statement/

[294] The service designation is Ofcom's description of the service. It is set out in Part A1 of the Numbering Plan.

[295] Additional Specific Service Conditions are conditions attached by Ofcom to the use of a particular '116' number. These are in addition to conditions of use attached by the Commission and are subject to consultation. Charging arrangements are an example of an Additional Specific Service Condition.

[296] Compliance with the charging arrangement is a requirement in accordance with paragraph 17.15 of General Condition 17 on the Allocation, Adoption and Use of Telephone Numbers. General Conditions 17 is available as an annex to the Numbering Plan.

[297] A more detailed description of these criteria is set out in Figure 1 (page 5) of the July 2010 116 Statement, available here: http://stakeholders.ofcom.org.uk/binaries/consultations/harmonised_eu_numbers/statement/harmonised-eu-numbers.pdf.

- 116 111: Child helpline (allocated to Childline);
- 116 123: Emotional support helpline (allocated to the Samaritans); and
- 116 117: Non-emergency medical on-call service (this number has not yet been allocated to a service provider and is therefore not yet operational in the UK).

A27.10 However, we have designated one 116 number as 'Freephone' – 116006 for a 'Helplines for victims of crime' service. Under this designation, the service would be provided on the same basis as current Freephone calls (i.e. that OCPs would be able to charge for such calls as long as a PCA was in place to warn the caller).[298] The main reason for this decision was concern over the funding feasibility of a 'free to caller' arrangement, which implied that there was a real risk that the service would not be provided. In its response to the 116 consultation, Victim Support (a potential SP for the 116006 number) noted that funding was very unlikely to be made available for it to be able to offer its Victim Supportline as a 'free to caller' service.[299]

A27.11 The 116006 Helpline for victims of crime number has not yet been allocated to a SP, and is therefore not yet operational in the UK.

A27.12 Currently awareness of the 116 range is very low. A recent European Commission research report found that awareness of the range in the UK was only 5% (compared to 13% across the EU).[300] In addition, when asked what number they would call if they needed one of the services currently provided on the 116 ranges, none of the respondents spontaneously mentioned the 116 numbers.[301]

Analysis in the December 2010 Consultation

A27.13 In the December 2010 Consultation, we noted that because this range had been recently opened and very few numbers assigned, it was not yet well known and little used.

A27.14 In terms of the particular areas of consumer harm, we noted concerns about:

- **poor consumer price awareness**: calls to some 116 numbers would be "free-to-caller" and others might incur charges from a mobile;
- **efficient prices**: callers to some 116 services are likely to be in distress or in an emergency, with calls that could last many minutes. We noted we would be particularly concerned if a pattern of high prices for some calls to 116 was to emerge as the range became more utilised and highlighted the potential risk of the entire number range being damaged if that were to happen; and
- **service availability**: we highlighted there was the risk that uncertainty about retail call prices might deter SPs from using this range in the future.

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[298] http://stakeholders.ofcom.org.uk/telecoms/numbering/guidance-tele-no/116-euro-numbers
[299] 116 July 2010 Statement, p.17: http://stakeholders.ofcom.org.uk/binaries/consultations/harmonised_eu_numbers/statement/harmonised-eu-numbers.pdf
[300] Special Eurobarometer 367, *Harmonised numbers for services of social value*, October 2011, http://ec.europa.eu/public_opinion/archives/ebs/ebs_367_en.pdf, p.32.
[301] Ibid, pp.53-61.

A27.15 In view of the concerns summarised above, we took the view that considering intervention at this stage was warranted. We concluded that the policy objectives in relation to consumers for 116 were largely the same as those for 080. For 116, we considered that the issue of service availability was of particular importance given that the range provides consumers with access to services of social value.

A27.16 Based on the above, we identified the following two policy options and assessed them against our criteria:

- **Option 1: Maintain the status quo, which allows different pricing regimes:** Our view was that there was likely to be very little detriment for this range at present (although there could be some) and therefore we could choose not to intervene. We were concerned, however, that if we did not provide a clearer pricing framework for 116XXX calls, the same problems affecting 080 would also emerge in this range. This would lead to greater consumer detriment as the range became more used. We also noted that the detriment for each caller could be worse given that callers to these services might be in a distressed state.

- **Option 2: Apply the same policy approach as for 080 calls:** We noted that, for the reasons discussed in relation to 080, there were advantages to setting a maximum price of zero for 116XXX calls. We considered that making all calls to 116XXX "free-to-caller" would remove any confusion in the way 116XXX services are charged, would protect the reputation of the number range and would allow SPs to clearly state the price of calls. This in turn would lead to a better outcome in terms of price awareness, particularly as use of the number range grows. We also noted it would remove any impacts on access by low income mobile-only households to services of social value. However, we also noted that would potentially impact on the provision of future 116XXX services and the one existing service which had been designated as 'Freephone' rather than 'free to caller'.

A27.17 We proposed in the December 2010 Consultation that our preferred approach for the 116XXX range was to apply the same policy as for 080, i.e. true "free-to-caller". We considered that adopting "free-to-caller" for 116XXX had some clear benefits for consumers, including removing the impact on more vulnerable households that use these social services. We also considered that since the 116XXX number range was still new, there was an opportunity for us to promote clearer pricing and a true "free-to-caller" message. It would allow us to implement a consistent policy towards 080, 0500 and 116XXX, reducing the potential for confusion over charges.

A27.18 We acknowledged the possibility that adopting "free-to-caller" for all calls to 116XXX might deter some SPs, and therefore harm consumers with reduced service availability. However, that depended on the origination payment and clear pricing from the inception could potentially boost the adoption of the range and strengthen its brand, boosting service availability in the future. Therefore our provisional view was that the impact on future service availability was likely to be uncertain.

Stakeholder comments in response to the December 2010 Consultation

A27.19 Antelope Consulting said that the past considerations by Ofcom of whether particular 116XXX numbers should be free-to-caller were likely to elude callers. It noted that currently no 116XXX numbers that were not free-to-caller appeared to be

actively promoted, so making 116XXX free-to-caller would not have an immediate adverse effect on any organisation.

A27.20 EE said it understood the special legal and public interest policy considerations that applied to calls to 116XXX numbers. It said it therefore appreciated that there would be some (but not necessarily all) cases in which it was most appropriate for a 116XXX service to be designated as being free-to-caller from all OCPs, with the SP/TCP rather than the caller covering the costs of call origination, conveyance and termination.[302] However, it considered that Ofcom had already reached a balanced and reasonable position on charging in its February 2009 Statement on 116XXX numbers, by deciding that the numbers should either be designated free-to-caller or Freephone (free-to-caller unless there is a PCA) on a case by case basis according to the service criteria.

A27.21 EE said it was therefore quite surprised at Ofcom's proposed change in this position, so shortly after our statement in February 2009. It also questioned whether the change in Ofcom's position could be considered objectively justified and proportionate, given:

- the current very low usage of these services and resulting lack of evidence of consumer detriment;
- the fact that no comments on the 116XXX range were received in response to Ofcom's call for inputs;
- the observations in the December 2010 Consultation that Ofcom's proposals could result in Victim Support, in the event that it was designated as a service provider for the 'Hotline for victim support service on 116006 , it would not actively seek to promote the service; and
- that the proposal might in future deter other SPs from using the 116XXX range, resulting in reduced service availability for consumers. In this respect, EE considered that the proposal could therefore result in the opposite outcome to that which Member States were required to achieve as per the amended Article 27a(1) of the Universal Services Directive, namely that they must "*encourage the provision within their territory of the services for which such numbers are reserved.*"[303]

A27.22 No other stakeholders commented specifically on the 116XXX range, although some (for example C&W and BT) agreed that all Freephone ranges (including 116XXX) should be treated the same.

Options for the 116XXX range

A27.23 As with the 080 and 0500 ranges, and as set out in the December 2010 Consultation, we consider that maintaining the status quo is not an appropriate option for the 116 range. We acknowledge EE's comments that there is currently very low usage on this range and therefore very little evidence of existing consumer detriment at the current time (which we acknowledged in the December 2010 Consultation). Moreover we recognise that all the 116XXX numbers that have been

[302] EE, December 2010 Consultation Response, pp. 60-61.
[303] Ibid.

allocated to date are free to caller (as explained above the Freephone "Helpline for victims of crime" number has not yet been allocated).

A27.24 However, we would expect that call volumes to 116XXX numbers are likely to increase in the future once more services are available on this range and existing services are more widely used. Without a clearer pricing framework for these numbers the same issues around consumer confusion and, in particular, the concerns about access by vulnerable consumers, could become present on the 116XXX range.

A27.25 In our view, consumers are protected by a simple, consistent numbering system. Currently consumers struggle to appreciate the differences between similar looking numbers (see for example the discussion of the confusion between 0844 and 0845 numbers and between 0870 and 0871 numbers in Part B). This suggests that consumers are likely to find it difficult to recognise different subcategories of number (free to caller and Freephone) within the 116XXX number range. These difficulties in understanding call prices are likely to be compounded by the infrequency with which most consumers are likely to call 116XXX numbers.[304]

A27.26 We also recognise that we have only recently developed the procedure for designating the charging arrangements for 116XXX numbers (in our 116 February 2009 Statement), which involves balancing the different factors outlined in paragraph A27.8 above. However, this approach was developed under the existing regime. It was only necessary because of the UK's particular interpretation of 'Freephone'.The introduction of the free to caller charging designation in the NTNP at that time was a new intervention made on the basis of consumer protection. In our February 2009 Statement, we recognised that where the 116 number related to calls of 'extreme social value', this justified a departure from the Freephone status where particular criteria were present.[305] We are now proposing to change the status quo, and therefore this alters the position that would have been reached under the 2009 decision.

A27.27 If, as we are proposing in this consultation, we make wide ranging changes to the non-geographic numbering regime, and to the 080 range in particular, we consider it would be counterintuitive, and cause confusion to consumers, if we were to leave 116XXX numbers with two different potential charging arrangements, particularly given that these numbers are clearly designated for services of social value.

A27.28 Taking into account the points outlined above, we are therefore consulting on the following two options for the 116XXX range:

- **Option 1:** We designate all as free to caller and all future 116XXX ranges will also be designated as such without the need for a specific assessment; or

- **Option 2:** in line with Option 2 for the 080 ranges, we set a maximum price for mobile calls to those 116XXX numbers that are designated as Freephone.

A27.29 We are not proposing any changes to the 116XXX numbers that have been designated as free to caller.

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[304] 76% of UK consumers said they had never been in need of calling one of the types of services currently allocated to the 116 range - http://ec.europa.eu/public_opinion/archives/ebs/ebs_367_en.pdf, p.65.

[305] See paragraph A6.30 of the 2009 Statement.

A27.30 The attractiveness of Option 1 depends on our assumptions about the level of mobile origination payments. In the case of 080 calls, we assumed an origination payment of 2.5-3.0ppm. In the case of 116XXX calls, different considerations are likely to apply. In particular, these are numbers for services of obvious (and sometimes extreme) social value and where the SP is allocated by Ofcom. The SP's ability to pay origination payments may be limited compared to commercial services on 080 such as sales enquiry lines. Indeed, as explained above, we designated 116006 as a Freephone number due to concerns over the funding feasibility of a 'free to caller' arrangement. We also note that some mobile OCPs voluntarily choose not to charge for calls to certain helplines for social responsibility reasons (e.g. Childline, and members of Telephone Helplines Association) and they have historically not required any origination payments from these SPs. In the light of these considerations, we have adopted a different Impact Assessment Range in relation to 116XXX calls. Specifically we have assumed that the origination payment covers the incremental cost of originating mobiles calls but does not include a contribution to mobile OCPs' fixed and common costs. In Annex 22 we estimated that the pure LRIC of mobile call origination was 0.7-0.8ppm and have adopted this as our Impact Assessment Range under Option 1.

A27.31 In considering the two options for 116XXX numbers that are designated as Freephone, we have evaluated them against our assessment criteria below and taken account of the potential negative effects highlighted by EE.

Assessment of options for the 116XXX ranges

Consumer price awareness

A27.32 We consider that Option 1 would provide the greatest benefits in terms of consumer price awareness, because, as noted in Section 16, free is the easiest price point to remember. Having a consistent price message for all the 116XXX numbers will therefore make it easier for consumers to develop an understanding of this range as it develops and becomes more widely used. This option would therefore protect the integrity of the 116XXX range in the future and allow SPs to provide a clearer pricing message when they promote their services. In particular, it avoids the risk of consumer confusion between those 116XXX numbers that are free to caller and those which attract charges from mobiles.

A27.33 Option 2 would enable future service providers using a 116XXX number with a 'Freephone' designation (of which none have yet been launched) to provide a clearer pricing message than under the current system. Consumer price awareness is thus likely to be high in situations where the cost of calls is communicated alongside the number (e.g. in promotional material). However, Option 2 would be a more complicated message compared to Option 1. Accordingly those callers that are not told the price of calls, and therefore have to try and remember the price or infer it from other 116XXX numbers that they have called, are more likely to make errors.[306]

[306] Where a consumer calls a "Freephone" 116 number from a mobile under Option 2 they would receive a PCA informing that they would be charged. That PCA could potentially communicate what the maximum call price was. However callers using a landline or considering calling a different, free to caller 116 number might be deterred because they (incorrectly) believe they will be charged. In other words, the risk is that a "Freephone" 116 number taints consumers' perception of other, free to caller 116 numbers.

Efficient prices

A27.34 A free to caller price has been set for all existing services on the 116XXX range and therefore these will not be affected by Option 1.

A27.35 For any future 116XXX Freephone numbers, retail prices are likely to be more efficient if the vertical and horizontal externalities are addressed:

- Both options would address the vertical externality by capping the mobile price for calls to those services (to either zero, or the above zero price discussed for Option 2). Arguably Option 2 may better address this externality since, under this Option, Ofcom would still be free to designate particular 116XXX services as free to caller (depending on their specific circumstances). In contrast, Option 1 implies a 'one size fits all' approach to 116XXX, even if an SP would prefer calls to its service to be chargeable from mobiles.

- However, there might be a risk under Option 2 that if some future 116 'Freephone' services were charged from mobiles, it might damage the pricing message for other 116 numbers (the horizontal externality). In contrast, the consistent pricing message of Option 1 would not create this potential for confusion.

A27.36 As explained in Section 16, the existence of a tariff package effect does not imply that a particular intervention leads to an inefficient pattern of retail prices. However, given that there are no active 116 numbers with a 'Freephone' designation, neither option would lead to any rebalancing of fixed or mobile telecoms prices, relative to current levels.[307]

Service quality, variation and innovation

A27.37 As highlighted by EE's comments above, the question of service availability is particularly relevant for this range. There is a concern that Option 1 may result in fewer SPs choosing to offer a service on the 116XXX range, or having to offer a reduced quality of service, because they would not be able to afford the increased costs (i.e. any higher mobile origination charge) for a free to caller range compared to a Freephone range. This is supported by the comments from Victim Support in response to the 116XXX Consultation where it indicated that it would not have the necessary funding to be able to support a free to caller service. This was one of the primary factors which led to the designation of the 116006 range as 'Freephone'.

A27.38 There are also indications that existing 116XXX providers which are 'free to caller' have had difficulties with reaching an agreement with mobile OCPs on an origination charge which they find affordable. Another factor that is adding to these difficulties is the potential volumes of calls (particularly mobile calls) to a free to caller number. The Samaritans has provided evidence to show that its pilots of its 116XXX number have resulted in a huge increase in 116XXX calls between Q2 2010 and Q3 2011, without an active promotion of the number.[308] It has indicated

[307] Of course, absent intervention then in the future OCPs would be free to charge whatever they wished for calls to future "Freephone" numbers on 116. Thus both Option 1 and Option 2 are likely to lead to tariff package effects relative to future pattern of prices that would emerge absent intervention. Clearly it is very difficult for us to estimate the magnitude of these effects, since it would involve forecasting future patterns of prices and demand both absent intervention and under Options 1 and 2.
[308] From close to zero calls in Q2 2010 to just under 150,000 calls in Q3 2011. Samaritans submission to Ofcom, October 2011, page 7.

that full roll out of the number will be difficult without securing additional ongoing income to support it, which so far they have not been able to obtain.

A27.39 We therefore acknowledge that Option 1 has risks attached in terms of fewer services being provided on 116XXX numbers due to the increased costs to SPs of a free to caller number compared to a Freephone number. However:

- A relatively low mobile origination payment will help mitigate this risk. As explained above, our Impact Assessment Range for the mobile origination payment under Option 1 is 0.7-0.8ppm. This is only slightly higher than the origination payment that applies to fixed calls under both options, namely approximately 0.5ppm.

- There is a negative effect on service availability only where a 116XXX number would be used if it were Freephone (or under Option 2) but not where it is free to caller. We note that 116 006 number has not yet been allocated to a SP despite being designated as a Freephone number. If no SP would operate this number under the status quo then Option 1 will not lead to any further reduction in service availability. [✂]; and

A27.40 Option 2 would not carry the same risks around service availability, because the origination payments are likely to be lower (perhaps similar to a 080 number). However, it is difficult to know whether in practice service availability would be greater under Option 2 than under Option 1 because there are no services currently operating a 116XXX 'Freephone' number.

Access to socially important services

A27.41 As we have outlined above, services on 116XXX numbers are clear examples of socially important services. Since actual mobile call prices are lower under Option 1 and expected call prices are also likely to be lower, access to these services is likely to be easier for vulnerable consumers under this option. We noted concerns about this impact in our statement on the 116006 number, in particular highlighting that the charge for calling from a mobile might act as a deterrent to calling the service and callers who had no alternative to using a mobile to a call were more likely to be those with financial constraints and would be most concerned about the cost of the call. These callers might, however, be those who are most in need of accessing the service. We also highlighted that there might be an additional need to use a mobile for the 116006 service in particular because of any discussions relating to a crime and its effect on an individual would be likely to require privacy and confidentiality, often resulting in the need to use a mobile and for the number not to appear on an itemised phone bill.[309]

A27.42 As set out in Section 16, evidence from the Samaritans provides some indications that the introduction of its 116XXX number has increased total call volumes (although we are somewhat cautious about this evidence given the other factors that may be affecting call volumes). This suggests that the cost of the call might be acting as a deterrent to some of Samaritans callers. It seems plausible that call deterrence could similarly occur for other socially important services.

[309] July 2010 116 Statement, p.16.

A27.43 However, the benefits of Option 1 in addressing this concern have to be weighed against the risk that it will lead to reduced service availability because of the increased costs for SPs, as discussed under the previous criterion.

A27.44 Option 2 would provide a cap on the amount vulnerable consumers might be charged for access to any 116 'Freephone' services, thereby reducing the extent of any negative impact. Option 2 is therefore also likely to improve access to these services relative to the situation where Ofcom did not intervene, albeit not to the same extent as Option 1.

Regulatory burden

A27.45 In terms of the regulatory costs, under both Options only the existing 'Freephone' designation of the 116006 Helpline for victims of crime service would need to be changed in the NTNP. The designation of the other existing 116 numbers would not need to change. Option 1 would be likely to lead to greater costs for a SP that wanted to use the 116006 number, or for future numbers that might have been designated as 'Freephone'. However, as noted above, the level of these costs would depend on the origination payment and there is a risk, which similarly applies to 080, that origination payments will be higher than our Impact Assessment Range. Nevertheless, as set out in more detail in Section 17 in relation to our approach to wholesale regulation, we are proposing to implement an access condition which will also apply to 116XXX numbers which is likely to reduce this risk.

A27.46 Having a consistent charging approach for the 116XXX range under Option 1 would also remove the need for Ofcom to consult on the charging regime for each 116XXX number, instead all designated 116XXX numbers would automatically be free to caller.

A27.47 Option 2 would be unlikely to lead to increased costs to SPs. However, there may be an additional regulatory burden caused by the need to regularly review any cap on the maximum charge for calls to these numbers (although this would not apply if the cap was linked to the AC), as set out in relation to the options for 080 ranges.

Conclusion and preferred option for the 116 range

A27.48 Taking account of the above analysis, and the need to read this assessment in tandem with our preferences for the 080 range, we remain of the view that Option 1 would offer the greatest benefits overall.

A27.49 We acknowledge that there is a risk of reduced service availability as highlighted by the comments from Victim Support. However, we consider that adopting a single 'free to caller' approach will offer clear benefits for consumers in terms of promoting a clear and simple pricing message for consumers. Avoiding different regulatory regimes within the 116 number range, based on the particular number that is being called, is consistent with our approach to the 080 range and our overarching strategy of simplifying the non-geographic numbering system. Option 1 will thus help minimise the risk that this range does develops the same issues with consumer confusion which are present on the 080 range. Option 1 is also most likely to facilitate access to these services by vulnerable households.

A27.50 We consider that any negative impacts on service availability have the potential to be mitigated by lower origination payments (in line with our Impact Assessment Range as highlighted in paragraph A27.30) for these services, in recognition of the social value of the services being provided and their not-for-profit nature.