



Simplifying Non-Geographic Numbers

Improving consumer confidence in 03, 08, 09, 118
and other non-geographic numbers

Consultation

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Foreword

Non-geographic calls are those made to 03, 05, 070/076, 080, 0845, 0870, 083/4, 0871, 09, 116 and 118 numbers. People use these numbers to call businesses and Government agencies, to get information, make payments for services and vote on TV shows.

How does Ofcom regulate them at the moment?

Ofcom decides how these numbers can be used. For most numbers, there is a limit on how much BT can charge for calls. Other providers are not restricted as to how much they can charge, but in many cases the landline providers set their call charges around BT's prices. From mobiles, charges are typically much higher.

In 2009, consumers paid around £1.9 billion for calls to these numbers. They accounted for around 12% of the total call traffic volume, and generated 10% of the total revenue.

The current system does not work for consumers

Consumers face problems when making calls to these numbers including:

Confusion about the price. People are confused about what these numbers mean and how much calls cost. As a result, they lack confidence and trust in these services.

Consequently, consumers make fewer calls and sometimes go to great lengths to contact organisations in other ways, possibly at higher cost or inconvenience. The lack of scrutiny by consumers means that phone companies can set prices with less concern about the impact on consumers.

Impact on low-income households. The cost of calling these numbers is generally significantly more from mobiles. The impact of the higher cost on mobiles is particularly pronounced for people on lower incomes who are more likely to live in mobile-only households, and use their mobile to call essential services on these numbers; such as some benefit offices, councils, utility services and doctor surgeries.

Call charges are not clearly advertised. Under the current system, those providing services via a non-geographic number can not easily advertise the price of calls to their service (since the price varies between phone companies). This leaves consumers unsure, and prevents competition between providers from working as well as it might.

Wide-ranging changes to benefit consumers

We are consulting on options for wide-ranging changes to the current regulation of non-geographic numbers, and we have set out two sets of proposals today:

- **Simpler numbering ranges:** The aim of this is to make non-geographic numbers and their prices more intuitive. For example, making calls to 0800 numbers (Freephone) free from mobiles as well as landlines; encouraging the use of 03 (which is charged like 01/02 numbers and usually included in call bundles) through removing the less consistently charged 0870 range, and changing the role of 0845. We also propose to make the division between number ranges clearer.
- **Standardised charges** - phone company charge and service provider charge: Our preferred option to address many of the current problems is to split the

charges paid to the phone company and the charges paid to the service provider - so that consumers can see exactly how much they are paying, and to whom. We think this could help ensure that consumers will be able to compare phone company costs for calls to non-geographic calls. In addition when call costs are advertised, for example on a TV show, it will state clearly the amount charged to call the service (which would be added to the amount charged by the phone company). For example: "This call will cost £1.50 per minute plus your phone company's charge."

We are also considering the alternative of maximum prices for each number range applying to all phone companies. While this has some attraction, we do not consider that it fully addresses consumer issues.

These proposals can only be implemented if planned changes to the Communications Act occur (these are currently being consulted on by the Government and expected to be introduced in May 2011). Subject to these changes taking effect, and once we have considered the responses to this consultation, we intend to implement our proposals over the next two years.

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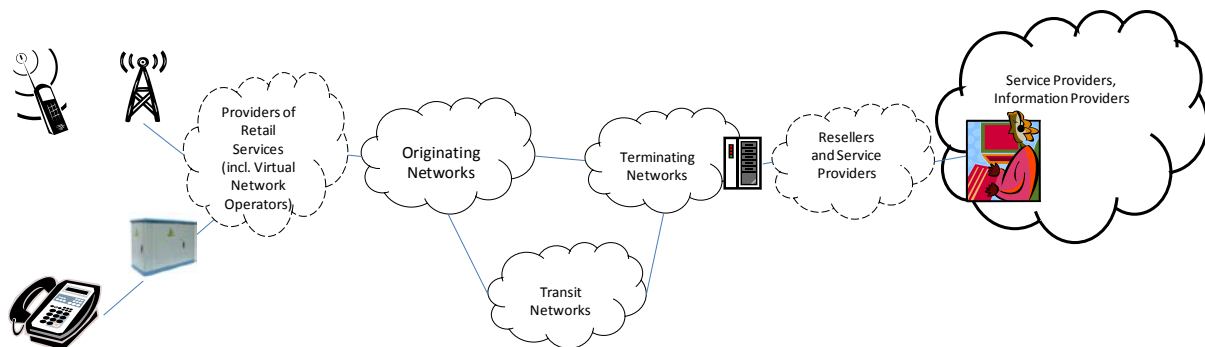
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Section 1

Executive Summary

- 1.1 Non-geographic calls are those made to 03, 05, 070/076, 080, 0845, 0870, 083/4, 0871, 09, 116 and 118 numbers. Consumers use these number ranges to call businesses, financial institutions, helplines and government agencies, to get information and to make payments for services.
- 1.2 With the increased use of the internet, fixed and mobile broadband and smartphones, there are an increasing number of alternative ways to access these services (for example, via the internet). However, the option to call organisations directly remains valued by consumers. For the significant proportion of the population to whom these alternatives are not readily available or affordable, voice calls are the only form of contact for these services.
- 1.3 In 2009, revenues from calls (that is, the amount paid by consumers for calls to non-geographic numbers) were around £1.9bn¹, and accounted for around 12% of the total call traffic volume, and generated 10% of the total revenue.

Figure 1.1 The parties involved in delivering a non-geographic call



Source: Ofcom

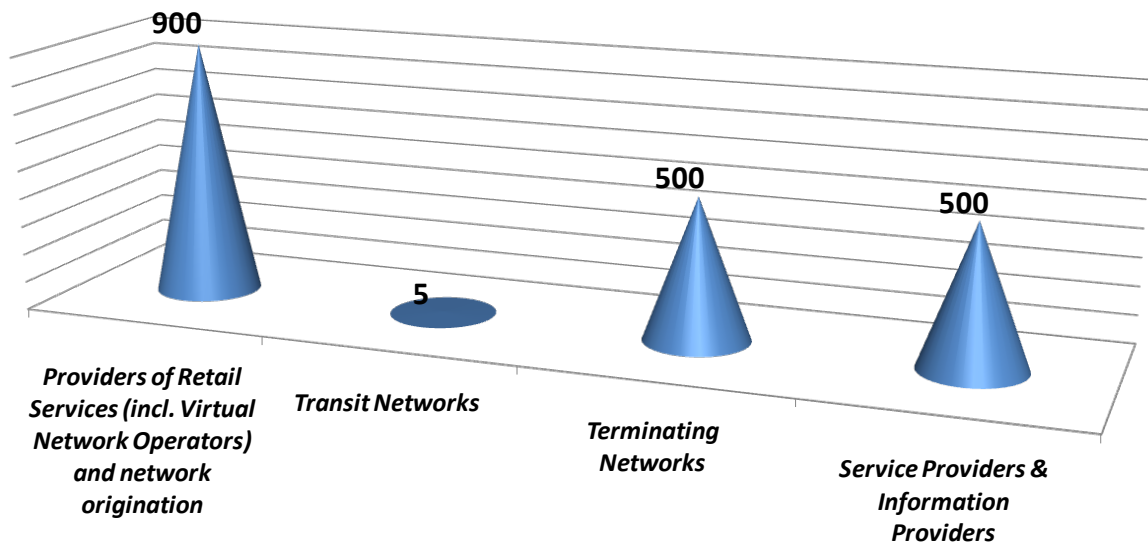
- 1.4 Just under half of this revenue (around £900M) is retained by the phone companies serving the calling consumers, with the remainder going to the provider of the service being called and the phone companies who 'host' those numbers (£1bn).² Only around 11% of calls to these numbers are from mobiles, but because these calls are more expensive than calls from fixed lines, calls from mobiles generate about a third (35%) of the revenues from non-geographic calls. Figure 1.2 shows how the revenues for 2009 from non-geographic calls were divided among the different actors in the value chain.³

¹ Excluding VAT.

² The phone companies serving the calling consumers are referred to as the '*originating*' providers (and there may be both wholesale and retail providers involved). The companies carrying calls from an originating provider may pass that call on immediately (in which case they are a *transiting* provider) or host the number themselves (in which case, they are the '*terminating*' provider, because they complete (terminate) the call). The recipient of the call (for example, a company operating a call centre) is the *service provider*.

³ See the AM Flow of funds study. A link to the published report is provided in Annex 16.

Figure 1.2 How the £1.9bn of revenues from Non-Geographic calls were split between the different parties in the value chain, £M, 2009



Source: The 2010 Flow of Funds study

- 1.5 However, our main concern is not revenue distribution but how well the current market is serving consumers. Our preliminary view is that the market is failing consumers.
- 1.6 The evidence shows that there is little transparency and low consumer price awareness. As a result, most consumers do not know with confidence the cost of calling most non-geographic numbers. Even consumers' understanding of 080 numbers (freephone) is low. While 080 has always been free on all landlines, in our most recent survey in 2010 only 46% of respondents claimed that they confidently knew the price of a freephone call on a landline. Confidence about the prices for other number ranges is much lower.
- 1.7 For consumers, finding out the price of calls can be difficult and complex. Each phone company chooses its own structure of prices (per call, per minute, in or out of a bundle, and so on) and complex information is often presented in ways that make it difficult to navigate. Recent evidence from Consumer Focus suggests that, even when it is available, the information provided to consumers by phone companies is frequently wrong – evidence of the difficulty even their staff have in understanding, and explaining, how much any given call is likely to cost.
- 1.8 The situation has been getting worse. In our 2009 Consumer Experience survey a majority of consumers claimed to know the cost of 080 on a landline while as noted our most recent survey suggests that confidence in the price is under 50%. Declining consumer confidence in these numbers has coincided with increased mobile use.

- 1.9 As a result, some consumers have found themselves with far higher bills than they expected (termed 'bill shock'). The complaints we receive from consumers in relation to non-geographic calls are often from consumers facing higher bills than they expected.

Consumer experience example 1.1

A consumer made call on his landline to 118 directory enquiry services between July and August 2009 requesting to be connected by the service. He received a bill for £350 and was upset that he was not advised about the costs in advance.

Source: complaints to Ofcom

- 1.10 When consumers do try to estimate the cost of calls, they generally over-estimate. For example, consumers we asked estimated, on average, that the cost of 0871 from a landline was 41 pence per minute (ppm). In fact, these calls are generally priced at 10 ppm.⁴
- 1.11 Our preliminary view is that this lack of confidence, bill shock and over-estimation is a consequence of complex charges and the relative infrequency with which any individual consumer is likely to call these numbers.
- 1.12 These effects mean that consumers are increasingly reluctant to make calls to these numbers. Our research shows that 18% of respondents claim that they do not make calls to non-geographic numbers from their phones, either fixed or mobile.⁵ For some consumers, this seems to be leading to reduced access (that is, not calling numbers as often as they might, if they felt more confident about costs, for services they want or need) or efforts to avoid making calls (such as making a visit to, say, a bank in person rather than making a call). The inefficiency and inconvenience of these steps may, in many cases, exceed the cost of the call itself.

Consumer experience example 1.2

“A Hampshire Citizens Advice Bureau reported a case in which their client, who had recently been discharged after a four month stay in hospital, came to the bureau for help in resolving some problems about his benefit entitlement. The client had initially tried phoning Jobcentre Plus [a freephone 080 number] to sort this out himself by calling them from his mobile phone but had been forced to give up after being put on hold and incurring substantial costs. In total, the client had spent £20 credit trying to contact them”

Source: CAB

- 1.13 This seems to be a particular problem for low-income households. According to Ofcom's 2010 Communications Market Report⁶, 26% of consumers in socio-economic groups (DE households) rely on mobile for making all their calls, compared to only 9% of ABC1 households. Access to broadband is also less well distributed with only 54% of DE households having a broadband connection at home in 2010, compared to 88% of AB households. Mobile-only households, in particular, risk losing

⁴ Plus a call set up fee of around 11 pence.

⁵ See 2010 CMR survey, section 4.8. See Annex 16 for a link to the published report.

⁶ See Annex 16 for a link to the published report.

easy or free access to some services as the cost of calling such numbers from pay-as-you-go mobiles (compared to landlines) can be very high.

- 1.14 Nor does the current system appear to work well for the companies being called (or providing services by means of the call). High charges mean lower volumes of calls (hence fewer customer calls to a business), and potentially less revenue and, as a consequence, reduced incentives to provide new or innovative services. For businesses using these calls to offer a service of their own, there is concern is that they cannot control the prices paid by consumers, particularly on mobiles. This means that these firms do not compete with each other on price. For example, a company wishing to offer a low-cost directory enquiries service to consumers is unable to ensure that the prices paid by consumers are lower than those of a rival.
- 1.15 The current regime also sets up tensions between originating phone companies and those managing the numbers. These have led to a series of disputes being brought to Ofcom, and subsequent legal appeals of our decisions resolving those disputes. As part of our analysis, we have considered how the market would work without regulation. It appears that this situation is unlikely to improve (with future disputes likely), reinforcing the need to develop a policy framework that clearly sets the expectations and incentives on industry players, so that their commercial choices drive good outcomes for consumers.
- 1.16 Though they seem to be worsening, many of these problems are not new. Ofcom has in the past focused on the specific problems of individual number ranges, and looked for specific solutions that deal with those problems. We now think that a wider-reaching approach makes sense. The decline in consumer confidence in specific number ranges is now affecting overall consumer confidence in the numbering scheme. Regulation designed at a time when there was a single incumbent provider of fixed line services (ie BT) needs to be adapted for today's more complex market. Most significantly, the rules should reflect the fact that mobile phones now account for the majority of phone calls.
- 1.17 Therefore, we see a strong case for wide-reaching regulatory reform. Currently, individual phone companies, particularly mobile companies, have little incentive to lower the prices for non-geographic calls. Each company has little individual capacity to increase demand and, as such, has only very limited interest in working with the providers of services to promote those services.
- 1.18 We have estimated the cost to consumers of these problems, and while many elements are not easily quantified, our preliminary view is that it may be above £500M per annum. With so much at stake for consumers, it is right to consider measures that will lead to substantial restructuring of existing arrangements.
- 1.19 Our proposals can be grouped under two main headings:
- **A new general tariff structure for non-geographic calls:** this would apply across most non-geographic number ranges (except for freephone and 03) and would ensure greater transparency for consumers and enhanced competition among communication and service providers; and
 - **Rationalisation of the non-geographic number ranges:** with the aims of making the pricing structure clearer and removing confusing and misleading inconsistencies.

- 1.20 Both proposals anticipate changes to UK legislation linked to the revision of the EC Telecommunications Framework which will clarify our right to set regulations in this area. This is discussed in more detail in Section 2.

The Tariff Structure Options

- 1.21 We consider that the current arrangements do not further the interests of citizens and consumers. The current regime is based on rules that apply mostly to BT. We have recently concluded that BT no longer holds significant market power⁷ in the retail narrowband market, and BT has suggested that these rules might no longer be appropriate. In addition, BT's retail share of originated traffic has reduced over the years, and is now only around half of all traffic for these calls. Any set of rules applying mainly to BT, therefore, only serves the interests of at best half of callers. The current rules do not therefore address the major harm being experienced by consumers.
- 1.22 We have identified and considered the four broad options discussed below.

Deregulation

- 1.23 We could remove the existing NGC-specific rules on BT⁸ and not replace them with any other regulations. As a matter of regulatory principle, we think that it is important to consider de-regulation alongside options for regulatory reform. That said, in this case, we think de-regulation would widen and deepen the problems associated with the current regime.

Reliance on improved price information measures

- 1.24 We could seek to improve the price information available to consumers, such as pre-call announcements, to ensure that consumers know how much calls will cost. While there are benefits to this approach, it is not clear that this would result in real competitive pressure on prices and it appears that setting up this capability under the current regime could be difficult in practice and could be very costly.

Setting maximum retail prices

- 1.25 We could set a price limit on calls to particular number ranges. The new EU Framework empowers us to do so, if we consider it is necessary to protect consumers.
- 1.26 This would go some way to addressing the identified consumer concerns. It would, at least, limit the potential for consumers to pay more for calls than they expected. It should also increase consumer transparency and awareness, as consumers learn to associate the maximum prices with the relevant number range. Service providers would be able to give clearer guidance on the likely cost of the call. Competition between service providers could potentially increase to the extent that service providers would be free to select a number range that corresponded to their preferred price point (though the strength of competition would depend on the number of separate price points set).

⁸ The price guidance in the NTNP, the NTS Call Origination Condition, and the regulation of BT's Bad Debt Surcharge.

⁸ The price guidance in the NTNP, the NTS Call Origination Condition, and the regulation of BT's Bad Debt Surcharge.

- 1.27 However, we also recognise that this would be a highly interventionist approach, as it would involve Ofcom setting a maximum permissible price for each number range. There is a risk that maximum prices act not simply as maximum limits, but that they become a signal around which actual prices would be set. This could not only raise prices, with the actual prices of calls set, not by competition, but by the regulator. There would also be limited scope for phone companies to compete by offering consumers a range of packages trading-off the prices of these calls with those of other services (such as line rental or a bundle of minutes). In the longer-term, this could harm consumers' interests in having a vibrant and healthy competitive market for access and calls.
- 1.28 It is also unclear whether any limits should be the same or different for calls from fixed and mobile phones – and setting these limits could favour one platform over another. Lastly, maximum prices would also leave open or potentially even increase the potential for conflicts between phone companies and those companies that host these services as discussed in this consultation.
- 1.29 We consider that the balance between the benefits and the costs of maximum retail prices is different for different number ranges. For most of the number ranges we think, on the basis of the evidence we have seen so far, that other approaches may be better for consumers. But we consider that maximum retail prices may have a valuable role to play for a limited set of numbers (in particular for Freephone calls and non-geographic calls charged at the same rate as calls to geographic numbers).

Unbundling non-geographic call tariffs

- 1.30 Finally, we could split the charges of the phone company offering the call, and the service provider being called. Both charges would form part of the phone bill (or pre-pay credit used) but the consumer would be able to see how much they are paying, and to whom. This would change the price *structure* for non-geographic calls with the overall aim of improving consumer information and competition in calls – and services accessed via a call.
- 1.31 Under this approach, the charges for these calls would comprise two components: an Access Charge and a Service Charge:
- The Access Charge would be charged to cover the cost and profit of the phone company for originating the call; and
 - The Service Charge would be paid to the terminating companies and service providers to cover or contribute towards their costs. For example, callers voting for a contestant in a TV programme would know how much money from the call charge will go to the programme company and how much will go to the caller's phone company.
- 1.32 For the reasons set out in this consultation, we think this appears to be the best option for consumers, based on the evidence we have seen so far. Consumers would know how much they had paid, and to whom (increasing consumer transparency). Unbundling the charges would also reduce the scope for disputes between phone companies and service providers as to how to share the retail charges.
- 1.33 For example, it would mean that consumer information about how much it costs to call non-geographic numbers from phone companies would be made clearer and in so doing, help them get the deal that is best for them. Moreover, it potentially provides a framework within which competition can take place to the benefit of

consumers. Phone companies would have to compete with each other to offer a service package with a competitive Access Charge in order to attract consumers. For this to be effective the Access Charge may be a more conspicuous – and easier-to-understand - element of the price offered to them. To aid this transparency, we are currently proposing that the Access Charge should be a same charge for all non-geographic calls within any given tariff package. That substantially simplifies the information that consumers need to know in order to choose the phone company that is best for them.

1.34 Similarly, because the Service Charge is set directly by service providers, it would allow them to compete on the prices they offer to consumers for their services.

1.35 For example, we would move from a situation where the announcement or advertisement about the cost of the call is, for example:

‘This call will cost you 15 pence per minute from a BT line, possibly more on other providers and considerably more on a mobile’

to:

‘This call will cost you X pence per minute plus your phone company’s access charge’

1.36 We also propose that the divisions between lower cost 08 and higher cost 09/118 calls remained through overall limits on Service Charge for some of the ranges.

1.37 Ultimately, however, the success of this option (if adopted) would depend on how well the proposed price structure could be understood and used by consumers. As well as other work to assess the costs and benefits of reform, we will be undertaking research to test this.

1.38 Based on the evidence we have seen so far, if we were not confident that this option should be implemented, our next preference would be to consider setting maximum prices on some or all ranges. For either option we would be likely to require improved price publication such that either the maximum retail price or the service charge was always displayed when a number is advertised.

Rationalising the Non-Geographic numbering structure

1.39 While the overall concerns that we identified above vary by number range, the evidence is that consumers have little confidence in and disengaged from the the non-geographic calls system as a whole. We propose to respond to this by addressing concerns about specific numbers and restructuring the system to restore consumer confidence.






1.40 We see scope for a simpler structure of the caller’s experience:

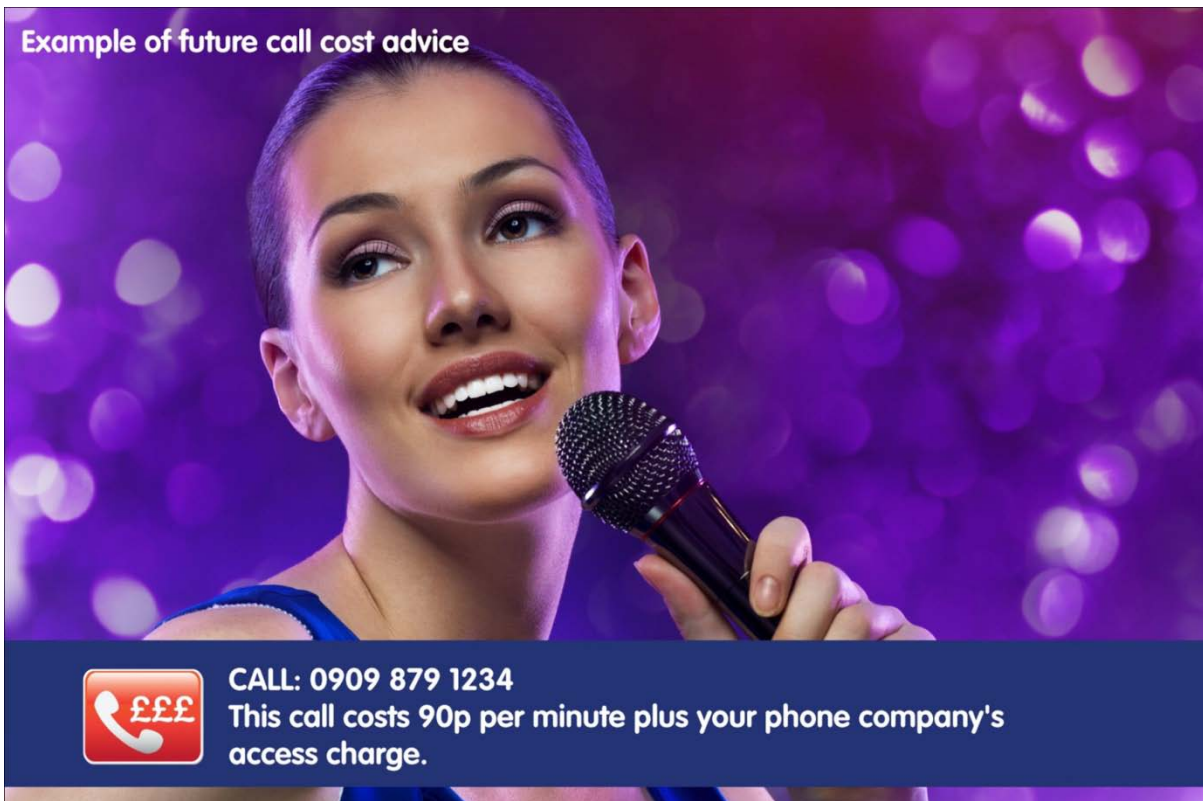
- Delivering a more intuitive division of call types;
- Ensuring simplicity in the presentation of pricing information;
- Offering fewer opportunities for fraud;
- Removal of existing confusion; and

- Providing greater incentives for innovation and competition.
- 1.41 In pursuing this, we are seeking to create an overall numbering scheme that is simpler for consumers, while minimising changes needed to be undertaken by phone companies and service providers – particularly avoiding migration to different numbers where we can. To this end, we intend to maintain and capitalise on those parts of the numbering scheme that consumers are most aware of, and conversely, change those parts of the numbering scheme where there is most consumer confusion.
- 1.42 We do not envisage that we will be able to deliver all the changes simultaneously. Rather we will be setting out a strategic plan which will inform both the most pressing changes and a longer term programme of rationalisation.
- 1.43 Recognising that further work will need to be done, and subject to transposition of the revised EU Framework into UK legislation, in this consultation our proposal in summary, are as follows:
- Freephone (080/050/116⁹) should be free to callers from all phone companies;
 - We should maintain a non-geographic range charged at the same rate as geographic numbers. Ideally this should be confined to the 03 range, whose proximity to the geographic ranges would make it easily recognisable as a geographically rated number.
 - The other number ranges aligned with geographic pricing should be rationalised. We recommend that 0845 and 0870 should be delinked from geographic rates either through closure of one or both the ranges or re-alignment with the principles that will apply to other 08 numbers;
 - An unbundled tariff structure should apply to calls to revenue sharing ranges (087/084/09) and for directory enquiries;
 - The 070/076 ranges should be reformed by aligning the charges for these calls more closely with calls to mobiles, removing the incentives for revenue sharing and fraud; and
 - Consideration should be given to increasing the maximum call charge limit for calls to 09 numbers, at least in some cases and subject to additional information requirements.
- 1.44 We also propose to work with industry to promote a new code for describing the numbers – see below a potential example of how the new range might be promoted and explained.

⁹ 116 is subject to slightly different considerations than 080 and 050 which is set out in more detail in the analysis,

Example imagery for new non-geographic structure

Geographic 01 02 03	
Mobile 07	
Free 0800	
Business Rate 0843/4/5 0871/2/3	
Premium Rate 090/1 098	



Consultation and next steps

- 1.45 This consultation sets out our preliminary views and evidence on whether the current arrangements work in the interest of citizens and consumers. We set out the options available for reform, our preliminary estimate of the impact of these changes and possible options for implementation.
- 1.46 In our analysis we have drawn on:
- recent and past market research;
 - a detailed review of the flow of funds in the market;
 - technical survey;
 - stakeholder responses to our Call for Inputs on the market in May and follow-up discussions;
 - survey of service providers; and
 - analysis of the consumer complaints we have received.
- 1.47 We are not, in this document, proposing immediate regulatory changes. Any detailed regulatory proposals will be the subject of further consultation, which we expect will be in mid-2011. Implementation of any proposals could occur (including, if required, further consultation) after the transposition of the new EU Framework into UK legislation. The UK Government has until 25 May 2011 to complete the transposition into UK law.

Section 2

Background, rationale for the review and legal framework

Introduction

- 2.1 Non-geographic call services cover a wide variety of services, provided by both private organisations and public bodies which can be accessed via the consumer's telephone. They provide a number of benefits both for consumers and the organisations involved including: single points of contact for diverse organisations, flexible call routing, opportunities for micro payments for services and, in some cases such as Freephone, reduced calling costs for their customers.
- 2.2 When NGC services were first introduced fixed lines accounted for almost all calls, with BT being the one major provider. With the emergence of many fixed line competitors, and the huge rise in the use of mobile phones, the system has become increasingly complex. Consumers now face a complex range of prices and services.
- 2.3 Over time different regulations have been introduced in an attempt to cater for these changes. This has resulted in today's piecemeal and BT focussed, regulatory framework, that arguably does not focus on consumers' needs and provides scope for commercial disputes and challenges.
- 2.4 We consider that it is now an appropriate time to undertake a comprehensive review of whether the framework is currently working to further citizens' and consumers' interests. In this we are also supported by the adoption of the new European regulatory framework (currently expected to be transposed into and become UK law by 25th May 2011) which has clarified our position with respect to intervening to ensure consumer protection in this area.
- 2.5 In this Section we highlight:
- The scope of this review;
 - The history and background of NGC services and the rationale for a review;
 - the relevant legal framework;
 - our framework for analysis, including our approach to the Impact Assessment for this review; and
 - the structure of this document.

Scope of the review

- 2.6 This review covers all non-geographic number ranges, with the exception of mobile numbers. Figure 2.1 below shows the specific ranges covered and their designation in the National Telephone Numbering Plan (NTNP).

Figure 2.1 Ranges in scope, overview of designation in the National Telephone Numbering Plan¹⁰

	NTNP designation	Price Guidance
03	UK-wide numbers at a geographic rate	Calls at geographic call rates from all originating networks – no revenue share with end-users
055	Corporate numbers	None
056	Location Independent Electronic Communications	None
070	Personal Numbering Services	None
076	Radiopaging Service	None
0500/5	Special services	Free to callers except where there is a Pre Call Announcement (PCA)
0800/8	Special services	Free to callers except where there is a PCA
0843/4	Special services basic rate	Up to 5ppm* for BT customers
0845	Special services basis rate	Local call price for BT's customers
0870	Non-Geographic Number	Charged at geographic prices, except where call charges have been published in accordance with General Condition 14.2
0871/2/3	Special services higher rate	Up to 10ppm* for BT customers
090/1	Special services at Premium Rate	Up to £1.50pm/pc* for BT customers
098	Sexual entertainment services	Up to £1.50pm/pc* for BT customers
116	Harmonised European numbers for harmonised services of social value	Free-to-caller or Freephone
118	Directory Enquiry Services	None

* including VAT¹¹

2.7 The number ranges are primarily differentiated by the level of the retail rate imposed on BT and the revenue that can be gained from that range.

2.8 While the NTPN does offer guidance for the use of a given range or sub-range, the actual use is driven by the revenue levels available. Key distinctions in the use of NGCS are:

- whether the number has a direct cost to a SP (e.g. 080 or 03);
- whether some small revenue can be gained by the SP (revenue share) (for example on calls to 0844, 0845 and 0871): this is frequently used to offset the cost of the service; or
- whether the cost of calls provides a micro-payment mechanism for the underlying services (e.g. 09, 118).

2.9 Below is a brief indicative description of the different ranges:

- **Freephone numbers (0800, 0808 and 0500)** are principally used to access private and public sector voice services such as sales, enquiries and help lines. Calls are free from landlines but, with some exceptions, are generally charged from mobiles;
- **03 numbers** were introduced in 2007 to provide a range where the charges for calls to this range were linked by all retail CPs to the price of geographic calls and discounted (including inclusion in bundled minutes) in exactly the same way. In addition, revenue sharing was not permitted. Ofcom reserved a part of this

¹⁰ <http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/numplan280710.pdf>.

¹¹ See <http://stakeholders.ofcom.org.uk/consultations/addendum-numbering-plan/>.

range for public sector bodies and not-for-profit organisations. The remainder is available for use by other organisations and provisions have been made for services to migrate from numbers in the 08 ranges to identical numbers in 03 - e.g. from 0845 1234567 to 0345 1234567;

- **0843, 0844 and 0845 numbers** have been designated as “Special Services basic rate” and are used to access a wide range of lower cost services that require a revenue share, including pre- and post-sales enquiry lines, public sector services, transaction services and information services, as well as legacy pay-as-you-go dial-up narrowband internet services (predominantly using 0845 numbers);
- **0870 numbers** were re-designated in 2009 as non-geographic numbers charged at geographic prices with calls to 0870 counting towards inclusive minutes, except where call charges have been published in accordance with General Condition 14.2¹². Revenue sharing is not banned on this range, as it is for 03 numbers, but the lower call charges do not support any significant share. For this reason, 0870 numbers are used to provide access to voice and data services that are no longer dependent on a revenue share in a similar way to 03 numbers;
- **0871/2/3 numbers** have been designated as “Special Services higher rate” and are principally used to provide access to higher cost pre- and post-sales enquiry lines, some public sector services and services such as the international telephony services provided by resellers;
- **Premium rate (09)** numbers are used mainly to access competitions, TV voting lines, scratch cards, adult entertainment, chat lines and some post-sales services such as technical support. Call prices vary widely and calls can be charged by time duration or per call, or a combination of both. Prices are currently capped at £1.50 per minute or per call from most landlines;
- **116 numbers** were recently introduced to provide free-to-caller access from fixed and mobile phones to non-emergency helpline services including ‘Missing Children’, ‘Victims of Crime’ and Medical On-Call Services;¹³
- **118 numbers** are used to provide access to the wide range of competing Directory Enquiries services offered by specialist providers such as ‘The Number’, telecoms companies such as BT and directory services offered by specific social interest groups;
- **055 numbers** are termed ‘corporate numbers’. These were introduced for firms (larger firms in particular) to have their own numbers allocated to them by Ofcom

¹² General Condition 14.2 states that: “Within two months of this Condition entering into force, all Originating Communications Providers who provide Premium Rate Services, NTS calls, calls to 0870 numbers or calls to Personal Numbers, as appropriate shall:

(a) establish and thereafter maintain a Code of Practice for the provision of information relating to Premium Rate Services for its Domestic and Small Business Customers, which conforms with the Guidelines set out in Annex 1 to this Condition;

(b) establish and thereafter maintain a Code of Practice for NTS Calls, calls to 0870 calls and calls to Personal Numbers for its Domestic and Small Business Customers, which conforms with the Guidelines set out in Annex 2 to this Condition; and

(c) comply with the provisions of the Codes of Practice referred to at 14.2 (a) and (b) above.”

¹³ See Ofcom’s page on numbering for a link to all documents relevant to the 116 range:

<http://stakeholders.ofcom.org.uk/telecoms/numbering/guidance-tele-no/116-euro-numbers>.

rather than renting them from telecoms providers. We have seen little use of this range;

- **056 numbers** are designated for use by “Local Independent Electronic Communications”. These are used by providers of “Voice over Internet Protocol” (VoIP) services so that users can make and receive VoIP calls without the use of the fixed telecoms network. Again, they have experienced little use, with many VoIP operators preferring to use geographic numbers;
- **070 numbers** are designated as Personal Numbers providing follow-me services on a single number where an individual can receive calls on both fixed and mobile numbers and messaging services and thus remain in contact wherever they go. Callers did not need to identify the specific network to call. For this reason they were included within the 07 (mobile) number range and call prices were expected to be similar to calls to mobile phones; and
- **076 numbers** have been designated for calls made to mobile radio-paging services. Call charges are generally cheaper than calls to mobiles from fixed lines.

History and background

- 2.10 The regulatory regime in its present form was put in place in 1996 by the, then, telecoms regulator Oftel in a determination entitled “*Interim Charges for BT’s Initial Standard Services for year ending 21 March 1996*”¹⁴. Prior to this, a less structured set of numbers was used to provide non-geographic calls both by BT and the few call provider competitors to BT.
- 2.11 Key to BT’s behaviour, as the dominant originating communications provider (OCP) at the time, was to ensure that it retained the same amount of call revenue for a non-geographic call as it did for a national geographic call. It did this by ensuring that the terminating communications provider (TCP) received the maximum possible difference between the cost of the call and the cost of a standard national geographic call (even when the call was made at a time of day that the standard geographic call rate did not apply) i.e. for 0800 Freephone calls the full retail national call rate was charged or the difference between local and national call prices for ‘Lo-Call’ rate, now 0845.
- 2.12 After consultation with the industry, Oftel recognised there needed to be a change to these arrangements to encourage a wider range of enhanced services paid for, or subsidised by, call charges. Oftel introduced the new Number Translation Services (NTS) regime governing the provision of non-geographic calls in the first of its determinations of BT’s wholesale charges (see above) published in January 1996¹⁵. The impact of this change was to ensure that the greater share of the retail surplus from calls was returned to the service providers and that BT’s retention was restricted to the recovery of the costs of originating the calls.
- 2.13 For calls originated by other OCPs, this NTS regime was underpinned by voluntary commercial agreements that allocated the retail revenues from consumers making the calls between OCPs and TCPs, based on BT’s retail prices and regulated

¹⁴ http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_01036/BTs_Interim_charges.pdf

¹⁵ http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/pricing/btiss.htm

originating retention. This agreement held until 2009, see below. After its creation, volumes of calls grew rapidly as more services became available.

- 2.14 In 1999, a CP named Energis (now part of Cable and Wireless) created the first pay-as-you-go, dial-up internet access service, known as Freeserve, which set the pattern for pay-as-you-go and unmetered internet access for the next 5 or so years until broadband services started to become widely available and affordable. Volumes of calls and revenues to 0845 numbers soared.
- 2.15 Another factor in the evolution of NTS was the tendency of retail prices for geographic and NTS calls to diverge as the former were subject to retail price controls whereas NTS prices were not. This meant BT's local and national geographic call prices, which were identical to local and national NTS prices in 1996, reduced significantly over time under RPI-X controls whereas NTS prices changed much more slowly. BT has historically targeted discounts mostly at 0845 calls and, to a lesser extent, 0870. This led to a desire by TCPs to have access to ranges where revenue could be guaranteed. Oftel, therefore, opened the 0844 and 0871 ranges where terminators could select their required retail price and know that their revenues would reflect these without being reduced by discounts. However, by introducing number ranges similar in appearance (0845/0844 and 0870/0871) but quite distinct in prices there was clearly an increased risk of consumer confusion.
- 2.16 In the event, these ranges remained largely unused until relatively recently because SPs valued being able to refer to calls to their services as costing local or national rate. In fact the prices actually paid by consumers for these calls increasingly no longer reflected those of equivalent geographic calls. Ofcom became aware of increasing consumer disquiet about NTS call prices and what was perceived as a growing tendency of businesses to migrate from geographic to expensive NTS number ranges to help offset the costs of staffing call centres and providing other types of services. Many consumers considered it wrong to have to pay higher prices to access services which either offered little perceived added value or where they had little or no option but to make the call: examples being banks, utilities and essential public services. Individual consumers and lobby groups such as "Saynoto0870"¹⁶ became increasingly vocal in their opposition to the use of NTS numbers, the principle of revenue sharing and perceived incentives for firms to deliberately prolong call durations (our investigations found no evidence of deliberate prolonging of calls).
- 2.17 Another major concern was the emergence of sophisticated scams and other types of fraud using 08 NTS and 09 PRS numbers. An example of these being 'rogue diallers' where a computer virus switched the internet dial-up number from 0845 to expensive 09 numbers.
- 2.18 Consumers' concerns about some aspects of NTS coupled with a series of disputes between communications providers (CPs) led Ofcom to embark on the first of its NTS policy reviews. After a series of consultations, we published the "NTS: A Way Forward" statement¹⁷ in April 2006 and removed 0870 from the scope of the NTS regime in the "Changes to 0870" statement¹⁸ in April 2009.

¹⁶ <http://saynoto0870.com/>

¹⁷ http://www.ofcom.org.uk/consult/condocs/nts_forward/statement/

¹⁸ <http://www.ofcom.org.uk/consult/condocs/0870calls/0870statement/>

- 2.19 In 2004 Ofcom had consulted on a set of proposals as part of the Market Review of NTS call termination¹⁹. At that time, we proposed that BT alone had market power. In the meantime, BT made a departure from one of the voluntary principles underpinning the NTS formula: that the retail price used to calculate termination charges should always reflect BT's prices inclusive of any applicable discounts. In recognition of the fact that many other OCPs charged higher retail prices, BT issued a pricing notice (NCCN500) which increased the amount OCPs had to pay to access BT's 0845 and 0870 numbers.
- 2.20 This action by BT led C&W to seek an investigation by Ofcom of BT's actions, under the Competition Act 1998 ("the CA98 investigation"). Because of the evident conflict this raised with the incomplete NTS call termination Market Review the latter was suspended indefinitely and has never been completed. The CA98 investigation ultimately found that BT was dominant in NTS call termination for the period NCCN500 was in existence (20 months) but that it had not abused that dominance in that instance.
- 2.21 Another of the key findings in the initial NTS policy review was the extent to which consumers were largely unaware of the prices charged for NTS calls. This led to our removing of 0870 from the NTS regime to enable OCPs to charge their actual geographic prices for the calls while no longer having to provide additional revenue for revenue sharing. At that time we also considered the appropriateness of retaining revenue sharing in the 0845 range. However, as 0845 supported the then still important dial-up industry full consideration was deferred, but we committed to a subsequent review of the range (now subsumed within this review).

Rationale for this review

- 2.22 The existing regime for the operation of Number Translation Services (NTS), Premium Rate Services (PRS), Directory Enquiries (DQ) and other non-geographic numbers is under significant strain.
- 2.23 Previous reviews of NTS carried out by both Oftel and Ofcom have tended to focus on specific areas of concern either for consumers or industry. We have responded with changes to the Numbering Plan for specific ranges; with changes to the General Conditions with respect to communication provider responsibilities for price transparency; and with modifications to the role of PhoneyPayPlus.
- 2.24 Despite these interventions, the evidence (as discussed later in the document) is that consumer confidence in the system continues to decline, prices do not appear to be constrained effectively by competition and the range of services available is stagnating. Of major concern is the impact of the current regime on low income mobile only households who appear to be particularly affected by the weaknesses of the current system.
- 2.25 The original framework relied heavily on the position of BT in the retail market to establish levels of call charge (through the Numbering Plan) and to enforce revenue flows to the service providers (via a wholesale origination condition which impacted on retail freedom of BT). With the removal of BT's retail SMP²⁰, this aspect of the numbering framework no longer appears well-founded. The NTS retail uplift blends retail and wholesale controls for a wholesale remedy which appears inconsistent with

¹⁹ <http://www.ofcom.org.uk/consult/condocs/ntsctmr/?lang=ixocadachi>

²⁰ See the regulatory Statement entitled Narrowband Wholesale Markets Review. See Annex 17 for a link to this publication.

a policy view that BT should be able to operate under the same constraints as other communication providers in its retail operations. Also, it is clear that targeting regulation on BT does not address the behavior of other market participants, thus it is of limited effectiveness in protecting consumers.

- 2.26 Some SPs (including DQ providers) have strongly expressed their unhappiness with their inability to control or even notify accurately the retail prices of their services. They argue that this is undermining the market for their services and poses a risk to future investment in the business.
- 2.27 At the wholesale level, commercial agreements that have up to recently maintained stability in the termination rates charges for NGC numbers have begun to break down. This has already led to a series of the disputes (plus legal appeals of some of our decisions on these disputes) and we expect further disputes to arise.
- 2.28 Finally, with the changes to the new EC Telecommunications Framework (discussed below) we expect soon to have greater clarity in UK legislation as to our powers to intervene with respect to consumer welfare concerns in this area.
- 2.29 The later sections of this consultation and the Annexes explore the issues noted above in more detail.

The legal framework

Ofcom's duties

- 2.30 The legal framework is underpinned by EU Directives that are implemented into UK law through the Communications Act 2003 ('the Act').
- 2.31 Section 3(1) of the Act sets out Ofcom's principal duty:
- a) to further the interests of citizens and consumers in relation to electronic communications matters; and
 - b) to further the interests of consumers in relevant markets, where appropriate by promoting competition.
- 2.32 Under Section 3(2) of the Act Ofcom is required, by virtue of its duties under section 3(1), to secure, amongst other things, the availability throughout the UK of a wide range of electronic communications services.
- 2.33 Under Section 3(3) Ofcom must have regard in all cases to:
- (a) the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed; and
 - (b) any other principles appearing to Ofcom to represent the best regulatory practice.
- 2.34 Under Section 3(4) Ofcom must have regard, in performing those duties set out in Section 3(1), to such matters as:
- the desirability of promoting competition in relevant markets (s.3(4)(b));

- the desirability of encouraging investment and innovation in relevant markets (s.3(4)(d));
 - the vulnerability of those whose circumstances appear to Ofcom to put them in need of special protection (s.3(4)(h));
 - the needs of persons with disabilities, of the elderly and of those on low incomes (s.3(4)(i)); and
 - the opinions of consumers in relevant markets and of members of the public generally (s.3(4)(k)).
- 2.35 Section 3(5) requires that Ofcom, in performing its duty to further the interests of consumers, must have regard, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money.
- 2.36 Section 63 of the Act makes it a duty of Ofcom to ensure that the best use is made of numbers, with Sections 56-62 covering Ofcom's more specific numbering-related duties.
- 2.37 Ofcom's duty to ensure that the 'best use' is made of numbers must be applied in a way that reflects our broader responsibility to benefit citizens and consumers.

Numbering policy and the consumer interest

- 2.38 Consistent with our duty in Section 3(1) of the Act, Ofcom's policy is that consumer interests can, in general, be best served by promoting effective competition. Numbering policy is relevant to this as the following conditions are necessary for competition to be effective:
- there must be sufficient availability of numbers, so that scarcity of numbering resource does not create barriers to entry for new providers (Section 63(1) of the Act);
 - those numbers which are available must, as far as is practicable, be allocated in a technology neutral manner that does not unnecessarily favour one form of network or technology over another (Section 4(6) of the Act);
 - those numbers which are available must be allocated in a manner that does not discriminate between individual providers (Section 60(2)(b) of the Act); and
 - numbers must be managed in such a manner that consumers can understand what service they are purchasing when they call a number and at what price, so that they can make informed choices²¹.
- 2.39 Alongside these duties, Ofcom must also consider the potential harm to consumers caused by abuse of those measures which Ofcom has set in place to promote competition. This harm may take the form of financial loss, in the case of 'scams', but it may also take the form of annoyance or inconvenience, in the case of unsolicited communications. Section 3(4) of the Act sets out a number of further principles to which Ofcom must have regard in the context of furthering the interests of

²¹ This relates to General Condition of Entitlement 10, which applies to all communications service providers and was set under Section 45 of the Act.

consumers, including the particular needs of vulnerable consumers and the desirability of preventing crime and disorder⁷.

- 2.40 Ofcom recognises that numbering is not the only, and may not be the principal, means of protecting consumers from harm in relation to telecommunications services.
- 2.41 Finally, a number of other agencies have responsibilities for protecting consumers from harm, chiefly PhonepayPlus (formerly ICSTIS). Ofcom recognises the need to work closely with PhonepayPlus and any other agency in cases of overlapping responsibility.

Numbering policy and the citizen interest

- 2.42 Ofcom's policy with respect to citizens' interests is concerned with ensuring that the outcome delivered by the communications market is fit for the purpose of meeting broader societal objectives. An example is the provision of universal service in order to protect against social exclusion. Using current technology, numbers are an essential requirement to access telecommunications services.
- 2.43 Telephone numbers are administered by Ofcom using a complex rules-based system. The aim is to secure the best use of numbers and to encourage efficiency and innovation for that purpose²².
- 2.44 The Act provides, amongst other things in relation to numbering, for the publication by Ofcom of the Numbering Plan and the ability for Ofcom to set General Conditions of Entitlement relating to Telephone Numbers. The Act also sets out statutory procedures that apply when Ofcom wishes to make modifications to the General Conditions or to the Numbering Plan and the processes for the giving of directions under conditions such as the Numbering Conditions.

The National Telephone Numbering Plan ('the NTNP')

- 2.45 Section 56(1) of the Act states that:
- "It shall be the duty of OFCOM to publish a document (to be known as "the National Telephone Numbering Plan") setting out:
 - a) the numbers that they have determined to be available for allocation by them as telephone numbers;
 - b) such restrictions as they consider appropriate on the adoption of numbers available for allocation in accordance with the plan; and
 - c) such restrictions as they consider appropriate on the other uses to which numbers available for allocation in accordance with the plan may be put."
- 2.46 The Act provides for Ofcom to review and revise the Plan. Section 56(2) states that:
- "It shall be OFCOM's duty –
 - a) from time to time to review the National Telephone Numbering Plan; and

²² Section 63 of the Act.

- b) to make any modification of that plan that they think fit in consequence of such a review;

but this duty must be performed in compliance with the requirements, so far as applicable, of Section 60."

2.47 Section 60 of the Act relates to the modification of conditions which have effect by reference to provisions in the Plan. Section 60(2) of the Act provides that:

- "OFCOM must not revise or otherwise modify the relevant provisions unless they are satisfied that the revision or modification is -

- a) objectively justifiable in relation to the matters to which it relates;
- b) not such as to discriminate unduly against particular persons or against a particular description of persons;
- c) proportionate to what the modification is intended to achieve; and
- d) in relation to what it is intended to achieve, transparent."

2.48 Section 60(3) sets out the process Ofcom must follow before revising or otherwise modifying the relevant provisions.

General Conditions of Entitlement

2.49 General Conditions 8, 10, 14 and 17 are specific to non-geographic call services. These Conditions set out requirements on transparency, Code of Conducts and use of numbers, and PRS co-regulation with PhonepayPlus.

2.50 General Condition 8 (GC8) governs the provision of operator assistance, directories and directory enquiry services. GC8 is set in accordance with Section 58(3) of the Act, which allows conditions imposing requirements with respect to the provisions of information for purposes connected with the compilation of directories and the provision of directory enquiry facilities.

2.51 Section 51(1)(a) of the Act allows Ofcom to set conditions it considers appropriate for protecting the interests of end-users. Accordingly, General Condition 10 (GC10) sets out information that must be published by Communication Providers in the interests of transparency, including information relating to applicable prices and tariffs and special and targeted tariff schemes.

2.52 Under Section 52(1) of the Act Ofcom must set conditions requiring providers to establish and maintain procedures, standards and policies with respect to securing effective protection for their customers. General Condition 14.2 (GC14) sets out obligations in relation to establishing a Code of Practice setting out the information that must be published under GC10 for Premium Rate Services (PRS), Number Translation Services (NTS) calls, calls to 0870 and 070 numbers.

2.53 Finally, in accordance with Section 58(1) of the Act General Condition 17 (GC17) sets rules governing the allocation, adoption and use of telephone numbers:

- 2.53.1 GC17.3 limits the use or adoption of particular telephone numbers to the terms of the designation for those numbers; and

- 2.53.2 GC17.12 sets requirements in connection with the use of UK-wide and non-geographic numbers.

Pricing guidance in the National Telephone Numbering Plan (NTNP)

- 2.54 Under GC17, BT is subject to price guidance in respect to calls to non-geographic number ranges in the NTNP. At the same time, GC17 sets out price guidance for all OCPs for 03, 0800/8, 0550/5 and 0870 (See Figure 2.1).

Regulation of Premium Rate Services ('PRS')

- 2.55 Sections 120(7) and 120(8) of the Act define PRS:

(7) A service is a premium rate service for the purposes of this Chapter if—

- (a) it is a service falling within sub-Section (8);
- (b) there is a charge for the provision of the service;
- (c) the charge is required to be paid to a person providing an electronic communications service by means of which the service in question is provided; and
- (d) that charge is imposed in the form of a charge made by that person for the use of the electronic communications service.

(8) A service falls within this sub Section if its provision consists in—

- (a) the provision of the contents of communications transmitted by means of an electronic communications network; or
- (b) allowing the user of an electronic communications service to make use, by the making of a transmission by means of that service, of a facility made available to the users of the electronic communications service.

- 2.56 Section 120 of the Act provides Ofcom with the power to set conditions for the purpose of regulating the provision, content, promotion and marketing of PRS:

- i) The PRS Condition²³: Ofcom requires communications providers falling within the scope of the PRS Condition to comply with directions given by PhonepayPlus (PP+) in accordance with its Code of Practice and for the purposes of enforcing the provisions of that Code. The application of the PRS Condition is limited to 'Controlled PRS', so that only a specific subset of PRS are subject to Ofcom's enforcement powers for breach of the PRS Condition; and
- ii) The PhonepayPlus Code of Practice²⁴: The Code is approved by Ofcom under Section 121 of the Act and outlines wide-ranging rules to protect consumers as well as the processes that PhonepayPlus applies when regulating the PRS industry.

- 2.57 Ofcom determines which PRS should be capable of enforcement by Ofcom through the definition of a 'Controlled PRS' in the PRS Condition:

²³ http://stakeholders.ofcom.org.uk/binaries/telecoms/policy/narrowband/PRSCondition_2_.pdf

²⁴ <http://stakeholders.ofcom.org.uk/consultations/ppp/>

A Premium Rate Service is a service:

- obtained through a Special Services Number (except 0870) and costs more than 5p per minute from a BT landline;
- obtained other than through a Special Services Number and costs more than 10p;
- a Chatline Service;
- a Sexual Entertainment Service; or
- an internet dialler.

2.58 The practical effect of these definitions is that PhonepayPlus ('PP+') regulates through a range of instruments²⁵ calls to the following non-geographic number services: 09, 0871, 118 (DQ), and mobile shortcodes. PP+ also regulates 070 and 076 calls where the service is operating as a CPRS in contravention of the NTNP.

BT's SMP in call origination & single transit

2.59 In complying with its duties under the Framework, Ofcom initiated a review of the retail and wholesale narrowband markets in 2009. The review was completed with the publishing of the regulatory Statement on *Narrowband Wholesale Market Review* on 5 February 2010²⁶ ('the 2010 WNMR Statement').

2.60 In the 2010 WNMR Statement, Ofcom found that BT had SMP in wholesale call origination on fixed narrowband networks in the UK excluding the Hull area. As a result of the SMP finding on BT in the markets for originating and transiting all calls, we considered that we should also impose the requirement for BT to provide NTS Call Origination and Single Transit at regulated terms and conditions, including prices.

NTS Call Origination Condition

2.61 The NTS Call Origination Condition (Condition AAA11) applies to calls to 0500, 080, 082, 0843, 0844, 0845, 0871, 0872, 0873, 090, 091 and 098 numbers.²⁷ Condition AAA11.3 of the SMP conditions placed on BT in the Wholesale Narrowband Statement states that BT:

"shall pass the Net Retail Call Revenue to the Third Party that is purchasing the NTS Call Origination, less the charges referred to in Condition AAA11.4 below."

2.62 The Net Retail Call Revenue is:

²⁵ <http://www.phonepayplus.org.uk/output/about-phonepayplus.aspx>

²⁶ http://www.ofcom.org.uk/consult/condocs/wnmr_statement_consultation/statement/

²⁷ Condition AAA11 ("Requirement to provide NTS Call Origination"). The NTS Call Origination Condition does not apply to calls to 0844 04 and 0808 99 numbers, which are used for Surftime Internet access and fixed rate internet access call origination ("FRIACO") respectively. See the definition of "NTS Calls" set out in *Review of the fixed narrowband wholesale services markets*, 15 September 2009 (the "Wholesale Narrowband Statement"), Annex 7, Schedule 1 available at: http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/summary/main.pdf.

“the retail revenue for calls, excluding VAT and after any applicable discounts”.

2.63 Condition AAA11.4 states that BT:

“shall make no charges for providing NTS Call Origination covered ... except for: (a) a charge for the Call Origination Service used to originate the NTS Call; (b) a charge for the NTS Retail Uplift; and (c) a charge for bad debt relating to the retailing by the Dominant Provider of Premium Rate Services calls.”²⁸

2.64 The levels of all of these permissible charges are regulated.²⁹

Single Transit SMP Conditions

2.65 In addition, we have found that BT continues to have SMP in the market for single transit and have imposed conditions AAA(ST)1(a) to AAA(ST)6(b).4 which require BT to provide a regulated single transit product, including for NTS and other non-geographic calls³⁰.

The revised EU Framework

2.66 The current EU Framework for electronic communications markets was put in place in 2002. A revised EU Framework for electronic communications was approved on 4 November 2009 by the EU Parliament (‘the revised EU Framework’). This is required to be transposed into national legislation across EU member states by 25th May 2011. The UK Government is currently consulting on the implementation of such legislation³¹.

2.67 Without prejudice to the final wording of the UK implemented legislation, the following additions to the revised EU Framework are potentially relevant for considering different options in respect of non-geographic numbers which this review is concerned with.

²⁸ Wholesale Narrowband Statement, Annex 7, Schedule 1 available at: http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/summary/main.pdf.

²⁹ “Call Origination Services” are defined in 2(d) of Part 1 of the Wholesale Narrowband Statement, Annex 7, schedule 1. This definition states that these services are covered by condition AAA1(a) and, pursuant to condition AAA3.1, the charge for all such services is derived from the costs of provision. In September 2005, we published a statement setting the level of the NTS Retail Uplift and the bad debt surcharge. *Charges between Communications Providers: Number Translation Services Retail Uplift charge control and Premium Rate Services bad debt surcharge*, 28 September 2005 available at http://stakeholders.ofcom.org.uk/binaries/consultations/NTSfin/statement/statement_nts_uplift.pdf

³⁰ Wholesale Narrowband Statement, Annex 7, Schedule 1 available at: http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/summary/main.pdf.

³¹ The Department of Business, Innovation and Skills (‘BIS’) issued a public consultation on 13 September titled *implementing the revised EU Electronic Communications Framework, Overall approach and consultation on specific issues*. The consultation closes on 3rd December 2010 and can be found on BIS website: www.bis.gov.uk.

- 2.68 Firstly, Part C to the Annex to the revised Authorisation Directive as amended by the revised EU Framework, specifies the Conditions which may be attached to rights of use for numbers. In particular, paragraph 1 of Part C³² provides for:

“Designation of service for which the number shall be used, including any requirements linked to the provision of that service and, for the avoidance of doubt, tariff principles and maximum prices that can apply in the specific number range for the purposes of ensuring consumer protection in accordance with Article 8(4)(b) of Directive 2002/21/EC (Framework Directive).”

- 2.69 Secondly, changes to the substantive provisions in Article 21 of the Universal Services Directive build upon the basic obligations as to transparency of information set out in the original Universal Services Directive, where information to be made available was set out at Annex II. This information includes *“standard tariffs indicating the services provided and the content of each tariff element”*³³. In particular, national regulatory authorities must be able to ensure that providers of public ECNs (“PECNs”) and publicly available telephone services (“PATS”) publish information on *“applicable prices and tariffs”*³⁴. Article 21(3) requires Member States to ensure that national regulatory authorities can require PECN and PATS providers amongst other things to *“provide applicable tariff information to subscribers regarding any number or service subject to particular pricing conditions; with respect to individual categories of services, [NRAs] may require such information to be provided immediately prior to connecting the call”*.

- 2.70 Thirdly, the Authorisation Directive in the revised EU Framework sets out the following articles specifically for dealing with Directory Enquiries (‘DQ’) services:

Article 5 – Directory enquiry services and directories

1. Member States shall ensure that:

(a) at least one comprehensive directory is available to end-users in a form approved by the relevant authority, whether printed or electronic, or both, and is updated on a regular basis, and at least once a year;

(b) at least one comprehensive telephone directory enquiry service is available to all end-users, including users of public pay telephones.

2. The directories referred to in paragraph 1 shall comprise, subject to the provisions of Article 12 of Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications), all subscribers of publicly available telephone services.

3. Member States shall ensure that the undertaking(s) providing the services referred to in paragraph 1 apply the principle of non-discrimination to the treatment of information that has been provided to them by other undertakings.

Article 25 – Telephone directory enquiry services

³² http://ec.europa.eu/information_society/policy/ecomm/index_en.htm.

³³ Paragraph 2.2, Annex II, revised Universal Services Directive, http://ec.europa.eu/information_society/policy/ecomm/index_en.htm

³⁴ Art.21(1), revised Universal Services Directive, http://ec.europa.eu/information_society/policy/ecomm/index_en.htm.

1. Member States shall ensure that subscribers to publicly available telephone services have the right to have an entry in the publicly available directory referred to in Article 5(1)(a) and to have their information made available to providers of directory enquiry services and/or directories in accordance with paragraph 2.
2. Member States shall ensure that all undertakings which assign telephone numbers to subscribers meet all reasonable requests to make available, for the purposes of the provision of publicly available directory enquiry services and directories, the relevant information in an agreed format on terms which are fair, objective, cost oriented and non-discriminatory.
3. Member States shall ensure that all end-users provided with a publicly available telephone service can access directory enquiry services. National regulatory authorities shall be able to impose obligations and conditions on undertakings that control access of end-users for the provision of directory enquiry services in accordance with the provisions of Article 5 of Directive 2002/19/EC (Access Directive). Such obligations and conditions shall be objective, equitable, non-discriminatory and transparent.
4. Member States shall not maintain any regulatory restrictions which prevent end-users in one Member State from accessing directly the directory enquiry service in another Member State by voice call or SMS, and shall take measures to ensure such access in accordance with Article 28.
5. Paragraphs 1 to 4 shall apply subject to the requirements of Community legislation on the protection of personal data and privacy and, in particular, Article 12 of Directive 2002/58/EC (Directive on privacy and electronic communications).

Analytical framework for this review

- 2.71 In Annex 1, we set out in full the analytical framework we have used to assess how the market is serving the interests of consumers and citizens with respect to non-geographic call services.
- 2.72 In summary, we have considered first in Annexes 2 and 3 how the market is currently working at the retail level (status quo) and also considered how it would work if deregulated. In particular, in Annex 2 we have considered the impact on the market of removing the retail obligations on CPs through the GCs imposed specifically to improve price transparency and consumer protection for non-geographic calls. These are: GCs 8, 10, 14 and 17.
- 2.73 In Annex 3, we have considered how the market would work if deregulated by considering the effect of removing BT's obligations imposed by the 2009 Statement completing the Wholesale Narrowband Market Review which have a direct bearing on non-geographic calls. These are: SMP Conditions: AAA11 ('NTS Call Origination Condition'), AAA(ST)1(a) to AAA(ST)6(b).4 ('Single Transit Condition').
- 2.74 In doing so, we have had regard for the relevant consumer and citizens interests identified for this review, as set out in Annex 1. These are:
 - **Consumer's interests:** our primary focus is on the consumer intended as the caller and/or subscriber; we have also had regard for the impact on SPs and the other market participants insofar as it has a bearing on the welfare of consumers; and

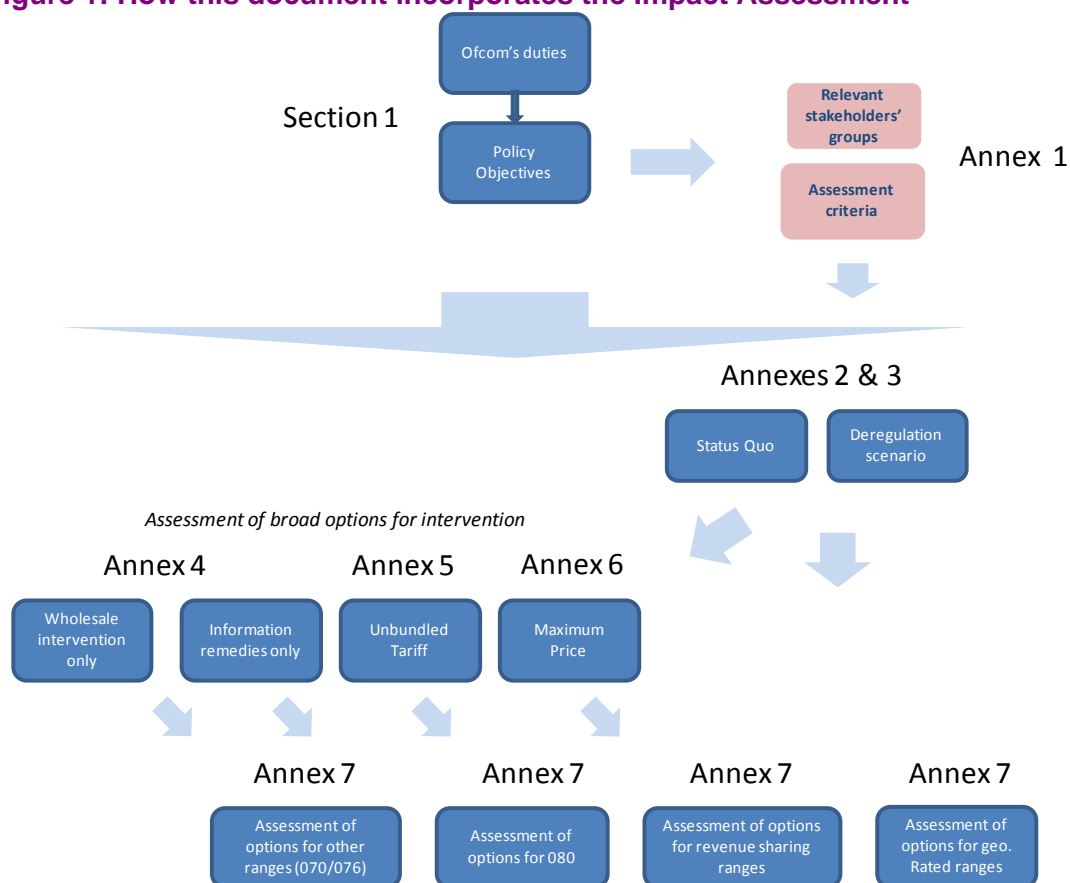
- **Citizens' interests:** we have also considered the specific impact that the different scenarios have on low income mobile only households who rely on non-geographic numbers to access essential services.

2.75 Finally, in assessing the different regulatory options (Annexes 4 to 7) we have considered the impact on the following assessment criteria (which are discussed in full in Annex 1):

- Transparency/consumer price awareness;
- Price;
- Service quality, variety and innovation;
- Access to socially important services; and
- Regulatory burden.

Better regulation and Impact Assessment

2.76 This document, particularly Annexes 1 to 7, incorporates an impact assessment. Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in Section 7 of the Act, which sets out that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. Figure 2.2 shows how the different annexes and sections contribute to the Impact Assessment of the options we have identified.

Figure 1: How this document incorporates the Impact Assessment

- 2.77 As a matter of policy, Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. In the following sections, we set out our policy objectives for this review, the range of policy options available to us, and assess each option using an appropriate analytical framework. We then evaluate each option against our policy objectives, weighing up the pros and cons of each option, and conclude by identifying our preferred options.
- 2.78 In line with our Better Policy Making Guidelines, in identifying the options set out below, we have considered a wide range of options³⁵, including a deregulation option and a 'do nothing' option.

Outline of this document

- 2.79 We have organised our analysis so that our document caters for two audiences. In the main sections, we provide a thorough overview of our assessment and set out some wider issues, such as the scope and legal framework for this review. These are written with a wider audience in mind, particularly consumers who may have little interest in the more detailed analyses and the more intricate details of how the market works.
- 2.80 The Annexes set out in full our analysis and the analytical framework we have adopted for this review. They are better suited to those who have more interest in the detailed analyses, particularly the bigger originating and terminating network operators and service providers.

³⁵ See: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

2.81 The outline of this document is as follows:

- Section 3 describes the market for non-geographic call services: its size and services, the different market participants, the flow of funds, and its current and future trends;
- Section 4 sets out an overview of the assessment of the current consumer experience;
- Section 5 sets out an overview of the assessment of the current experience of the network and service providers' experience;
- Section 6 provides a summary of our broad options, how the different policy options fit with the different number ranges and sets out our proposals for intervention;
- Section 7 sets out and considers the potential implementation issues with respect to the regulatory options;
- Annex 1 sets out the analytical framework for this review;
- Annex 2 sets out the economic analysis of retail markets;
- Annex 3 sets out the economic analysis of wholesale markets;
- Annexes 4, 5 and 6 set out and discuss the broad options for intervention;
- Annex 7 sets out the options for the future of the different number ranges;
- Annex 8 sets out a preliminary assessment of migration costs;
- Annex 9 sets out a proposal for visual aids to accompany the new regime;
- Annexes 10 to 12 set out our consultation principles, how to respond to this consultation and the consultation's cover sheet;
- Annex 13 set out the consultation questions;
- Annex 14 lists the respondents to the Call for Inputs;
- Annex 15 presents extracts from complaints to the Ofcom Advisory Team ('OAT');
- Annex 16 provides links to the published research relevant to this review;
- Annex 17 provide links to Ofcom's previous consultations and decisions relevant to this review; and
- Annex 18 provides a glossary of terms used in this consultation document.

Questions on the scope, rationale for the review and framework for analysis

2.82 These questions relate to the analysis set out in this Section and Annex 1:

Q2.1 Do you consider that the scope for this review, set out above, is appropriate? If not how would you suggest that it should be modified and why?

Q2.2 Do the summary of the history of NGC services and the rationale for this review capture all the essential concerns which this review should be seeking to address? If not, please set out those issues which you consider are not being considered and why these should be included in the review at this stage.

Q2.3 Do you consider our proposed approach and framework for analysis is fit for the purpose of this review?

Section 3

The UK market for non-geographic call services

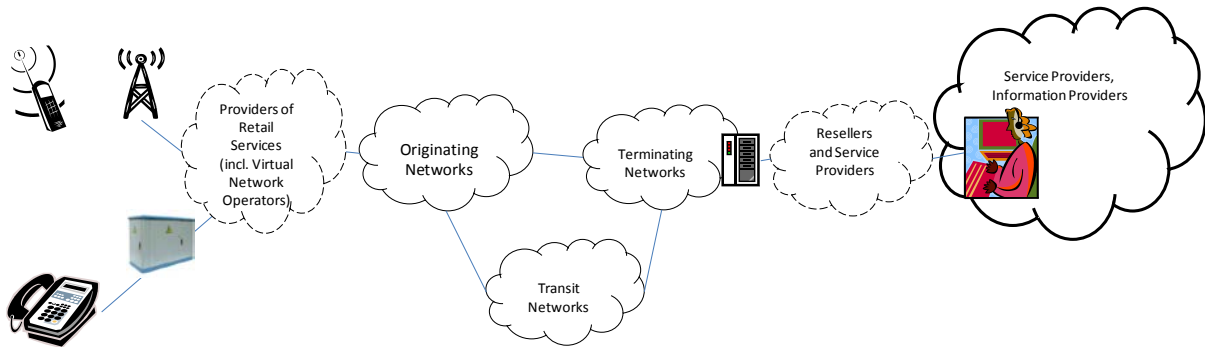
Introduction

- 3.1 This section summarises our understanding of the structure, size and responsibilities of the systems and companies involved in the provision of NGC Services. It draws on the evidence we have collected through stakeholder engagement, market research and specific data gathering activities: a consumer market research study, a survey of SPs, an analysis of the potential implementation costs in relation to our options, and a flow of funds analysis. There are all are published on our website with this document. Links to the published documents can be found in Annex 16.
- 3.2 The section will set out the market value chain between callers and the service providers. Against this structure, we will summarise the financial and volume statistics for each of the participant groups within the value chain.

The value chain: how the market is structured

- 3.3 There are a large number of variations in how non-geographic calls are conveyed between retail callers and service/information providers. The direction of the flow of funds is not always the same (for example provision of Freephone on fixed lines sees funds flow from the SP to the OCP, while this is reversed for 09 calls) and in some cases revenue can flow in both directions.
- 3.4 In many cases, a single organisation (particularly BT) can have many roles (for example BT can act as the TCP, transit provider and OCP). Though, equally, the service can be delivered with each component being provided by a separate organisation.
- 3.5 Figure 3.1 describes how a non-geographic call is delivered. The call is made by a caller on a fixed or mobile network with billing determined either directly by the originating network operator or by an independent retail service provider renting capacity on the network. The originating network operator then identifies this as a non-geographic call and conveys the call to a transit operator able to switch the call to the appropriate terminator (TCP) (we discuss transit options later). The TCP then identifies the geographic number mapped to the non-geographic number (this operation is known as Number Translation Service, or NTS) and sends it to that location (the Service Provider). Other billing/managing agents include the number resellers that often act as an intermediary for small SPs.

Figure 3.1 Parties involved in delivering a non-geographic calls

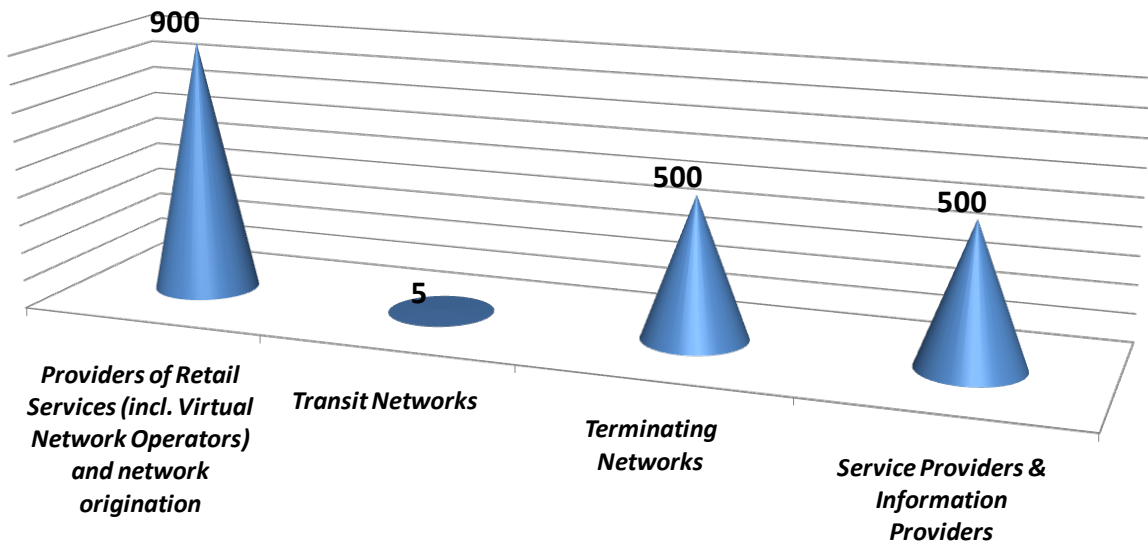


Source: Ofcom's analysis

Market size & flow of funds

3.6 Figure 3.2 shows how the £1.9bn consumers paid to make NGCS calls in 2009 was divided up at the various stages on the value chain.

Figure 3.2 How the £1.9bn of revenues from Non-Geographic calls were split between the different parties in the value chain, £M, 2009



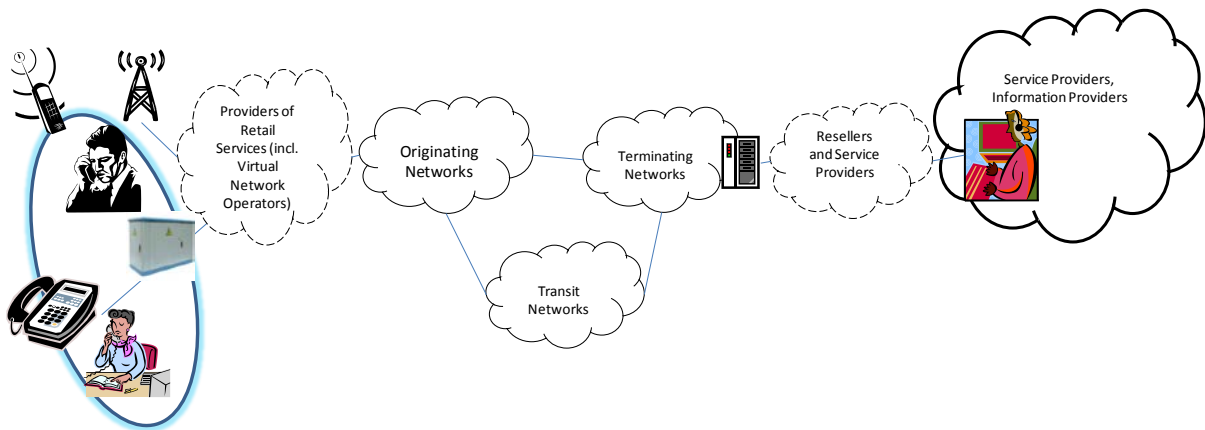
3.7 Revenues have been declining steadily in recent years (see Annex 2 and 3). While we consider a major part of this decline to be due to consumer dissatisfaction with the ranges, other factors include the switch from dial-up narrowband internet access to broadband and the increasing use of alternative technologies, especially on-line, to

deliver services to consumers at lower cost e.g. internet rather than telephone banking.

- 3.8 The £1.9bn paid by consumers takes account of the wide variation in retail prices for any particular price point which often bear little relation to the prices chosen by SPs to determine how much they receive from calls. As a consequence, almost 50% of total call revenues are retained at the retailing and call origination end of the value chain, primarily through the high prices of calling NGCS from mobiles. This contrasts with the proportion of the total now flowing through to SPs of only around 25%.

The retail consumers (or callers)

Figure 3.3 The callers



Source: Ofcom's analysis

- 3.9 As our research has shown, retail consumers rarely, if ever, base their choice of telecoms provider on the prices charged for non-geographic calls. As a consequence, when they make calls they can find they have been charged prices which can bear little relation to what they might have expected.

- 3.10 In Annex 2 (Table A2.4, A2.5, A2.7 and A2.8), we present a range of prices for calling both geographic and non-geographic numbers from fixed and mobile networks. In Table 3.1 below, we set out an overview of the range of prices as presented in Annex 2.

Table 3.1 Overview of call prices' ranges, geographic and non-geographic numbers

Number Range	Fixed network prices	Mobile Network prices
01, 02 (geographic) and 03	Inclusive – 8.5ppm	Inclusive - 25ppm
Call set up fee	3 – 11p	None
080	Free	Free – 40ppm
Call set up fee	None	None
0843/4	0.5ppm – 11ppm	20ppm – 150ppm
Call set up fee	3 – 11p	None

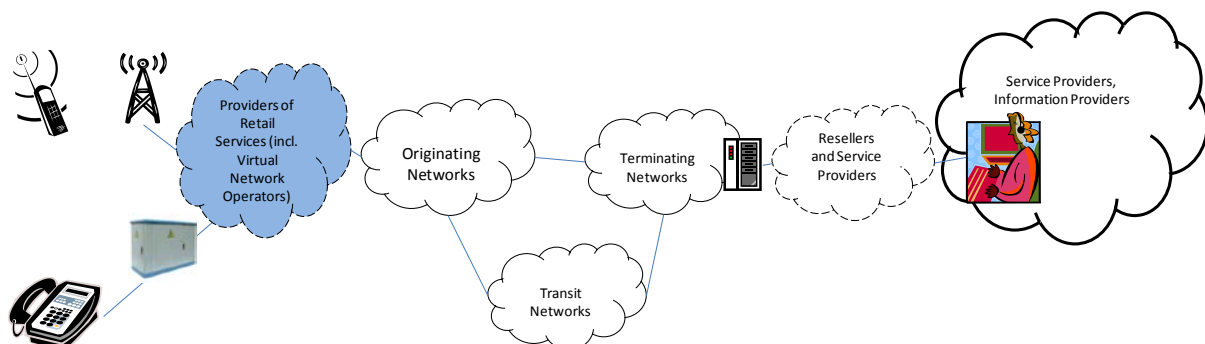
0845 & 0870	Inclusive – 10ppm	20ppm – 40ppm
Call set up fee	3 – 11p	None
0871/2	Inclusive – 12ppm	20ppm – 250ppm
Call set up fee	3 – 11p	None
09	1ppm – 165ppm	40ppm – 250ppm
Call set up fee	3 – 11p	None

Source: Various mobile and fixed OCPs websites: August 2010 (080, 0843/4, 0845,0870,0871/2,09), and November 2010 (01/02 and 03)

3.11 An analysis of calls made by BT customers to 08 and 09 numbers over the last three years showed that demand, measured in minutes per exchange line, has been falling: it fell by more than 25% between 2007/08 and 2008/09; it fell by a little over 20% in 2008/09; and by a little over 15% in the current year. A significant portion of this decline has resulted from migration away from dial-up internet.

Providers of Retail Services

Figure 3.4 The providers of retail services



Source: Ofcom's analysis

3.12 Retail consumers have a wide choice of providers from whom to purchase their telephone service. In addition to the direct purchase of telephone services from a telecoms network such as BT or TalkTalk, consumers can also buy packages of services from high street shops such as Carphone Warehouse or Tesco, multi-media providers such as Sky or Virgin Media, Broadband providers such as Plusnet, and Madasafish and multi-utility retailers such as Utility Warehouse.

3.13 Mobile callers can use one of the 4 major mobile networks (MCPs) or any of a large number of smaller and virtual mobile network operators (MVNOs).

3.14 Our recent review of the fixed retail narrowband market concluded that there was no party with SMP in the provision of fixed retail calls³⁶. Our assessments of the mobile sectors (most recently the Mobile Sector Assessment³⁷) have also always concluded that no retail operator has market power which is a threat to competition. Further, in

³⁶ http://www.ofcom.org.uk/consult/condocs/retail_markets/statement/

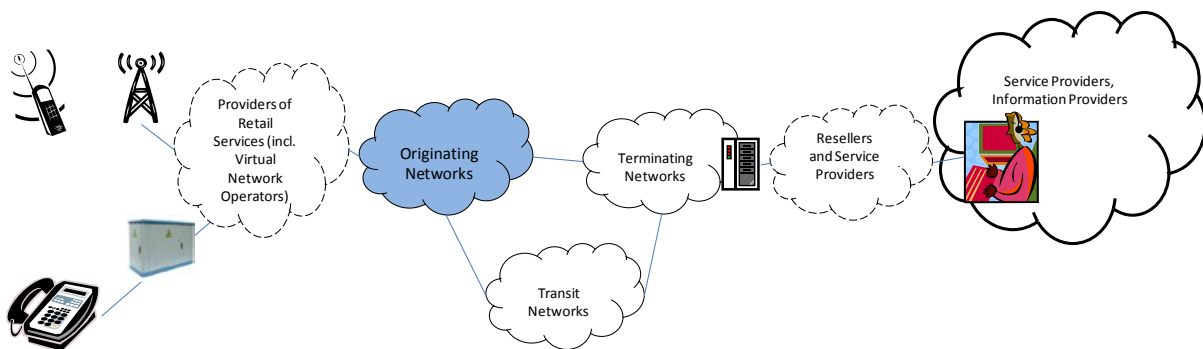
³⁷ <http://stakeholders.ofcom.org.uk/consultations/msa/>

the calls market there is evidence that the market for fixed and mobile calls has or is tending to converge to a single market – though it is not clear to what extent this would be true for NGCS calls.

- 3.15 With the exception of calls to 03 numbers, the prices that retail providers can charge are broadly unregulated. BT's charges are currently set by the Numbering Plan, but in most cases, other networks are able to charge what they like. For calls to 0871 and 09 numbers, however, there are specific PRS rules governing how prices should be communicated to consumers³⁸. The Numbering Plan, in setting out the price indications applying to BT, also establishes the pricing conventions that apply to each 08 and 09 range. These conventions are not binding on other retailers but where they choose not to abide by them and to charge higher prices, they must ensure that they make their prices readily accessible to consumers in their price lists and on websites. These stricter rules are set out in General Condition 14.2 and its accompanying schedules³⁹.

Originating Communications Providers (OCPs)

Figure 3.5 The originating communication providers



Source: Ofcom's analysis

- 3.16 Call retailers may or may not also originate calls, but the OCP function is to provide access to the telecoms network for the purpose of carrying calls to their destination. OCPs provide call origination which is the first switching stage in the conveyance of calls. The call prefix (03, 0845, 070 etc) followed by the first three digits of the non-geographic number tells the OCP which TCP network 'owns' that range of numbers and how to route the call to that network. In some cases, the calls may not leave the OCP's network where the OCP also provides call termination e.g. on networks such as BT, TalkTalk, Virgin Media and Cable & Wireless.
- 3.17 Depending on the type of non-geographic call, the OCP will retain an amount from the retail price paid by the calling consumer which is at least sufficient to pay its own costs, and which sometimes also includes a retail margin. The remainder of the call revenue is handed over to the TCP in the form of a termination payment.
- 3.18 The amount OCPs retain for originating calls depends on several factors. In the case of 08 (other than 080 and 0870) and 09 calls, the Number Translation Services ("NTS") Call Origination Condition, in place as a result of BT's dominance in

³⁸ <http://stakeholders.ofcom.org.uk/telecoms/policy/premium-rate-services/>
³⁹ <http://stakeholders.ofcom.org.uk/binaries/telecoms/ga/cvogc300710.pdf>

wholesale call origination⁴⁰, regulates the origination fee BT can keep. These are then subtracted from the net retail price of the call, after the subtraction of VAT and any discounts, and the remaining revenue paid out in the termination charge. These rules do not apply to other OCPs, but the termination payments made by BT form the template for calls from other OCPs who use BT's transit service to send calls to other TCPs.

- 3.19 This is why BT's retail prices for 08 and 09 calls, in particular, are among the lowest. For any other OCPs to make more than a cost-based margin from originating the calls, they must charge more than BT, or else all they will be able to retain is the equivalent of BT's costs.
- 3.20 The industry calculates the termination charges for 08 and 09 calls using a spreadsheet based ready-reckoner known as the NTS Calculator⁴¹ made available by BT on its Wholesale website. This is an industry wide spreadsheet published by BT on its Wholesale website which TCPs use to determine how much they can expect to receive for calls to their various numbers. The exception to this is 0870 calls which were removed from NTS regulation in 2009⁴². 0870 calls are now treated in much the same way as those to 03 numbers, except that 0870 retail prices are unregulated subject to the requirements of General Condition 14.2 (see above).
- 3.21 For calls to non-geographic numbers other than 03, 08 and 09, retail prices and termination charges are not regulated. However, the amount BT pays as a termination charge after deducting its unregulated charge for call origination, usually sets the model for termination charges from other networks. This is the model except where OCPs and TCPs other than BT interconnect directly with each other. In these circumstances the origination and termination charges for non-geographic calls are agreed by commercial negotiation. We consider in Annex 3 the issues that might arise in the context of such commercial negotiations.
- 3.22 Recently, however, BT and some other networks have begun to break with the previous practices in the setting of termination rates – we discuss this more in the following sub-section on calls from networks that charge high prices for 080, 0845 and 0870 calls. This has precipitated a series of disputes where, in the case of 080 and 0845/0870 calls, Ofcom's determinations of the matter have been appealed to the Competition Appeal Tribunal and are due to be heard in April 2011.
- 3.23 As OCPs account for the majority of direct retail services, in the remainder of the document this term is usually used to describe both the retail and originating function.

⁴⁰ http://www.ofcom.org.uk/consult/condocs/wnmr_statement_consultation/

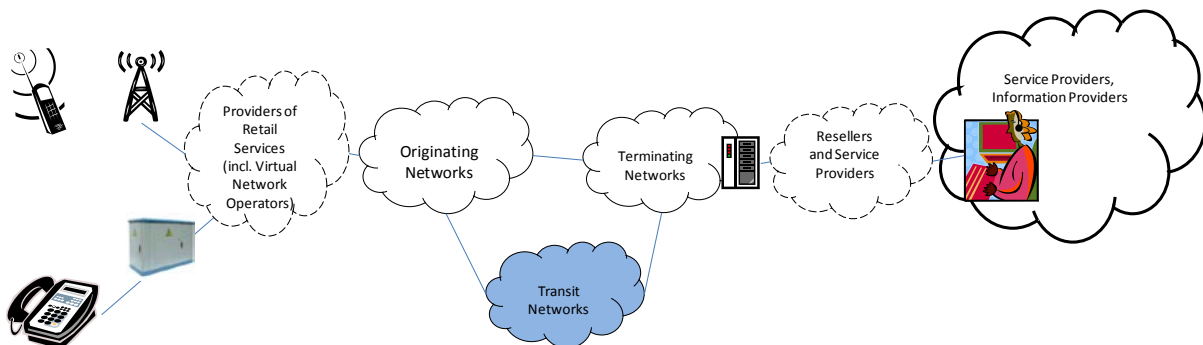
⁴¹

http://www.btwholesale.com/pages/static/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/number_translation_services.html

⁴² <http://www.ofcom.org.uk/consult/condocs/0870calls/0870statement/>

Transit Networks

Figure 3.6 Transit networks



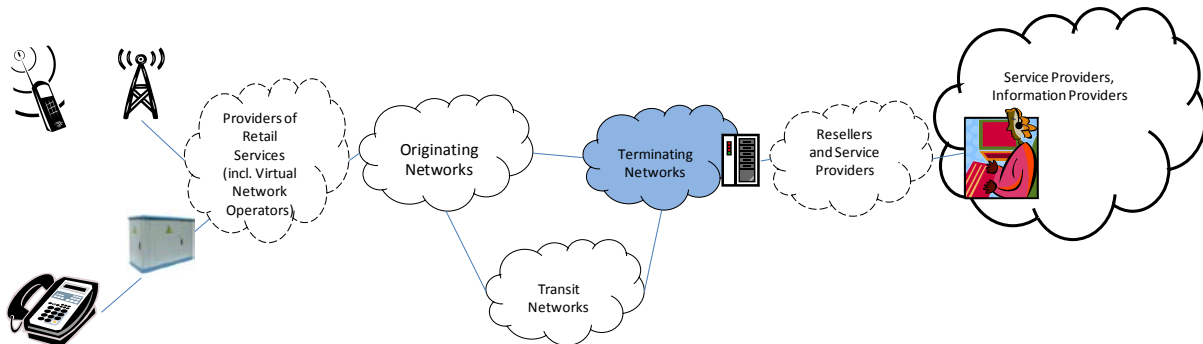
Source: Ofcom's analysis

- 3.24 Another difference between non-geographic and geographic calls is in the way in which calls are routed across networks. For geographic calls, termination charges are regulated to the equivalent of BT's wholesale costs of termination. OCPs generally want to optimise use of their own networks and thus route calls as efficiently as possible on their own networks before handing them over to the TCP for termination. This is referred to as "far-end handover".
- 3.25 Non-geographic calls, on the other hand, employ different network conveyance conventions and the OCP does not know the ultimate destination of the call. As a result, TCPs agree with OCPs where calls should be handed over to them, so that they can carry calls for the maximum possible distance on their own, rather than the OCP's, network. This is referred to as "near-end handover".
- 3.26 Given the relatively large numbers of both (fixed and mobile) OCPs and TCPs, it is common for networks to use transit services, rather than for OCPs to try to interconnect with every TCP, and vice versa. Such an arrangement would be very expensive to set up and equally inefficient to maintain. As a consequence, while some larger networks will interconnect directly with each other, others will use transit services to carry calls between smaller OCPs and TCPs.
- 3.27 Transit is the term used where larger networks with both a national reach and spare capacity, typically BT and Cable & Wireless (Worldwide), will offer to convey calls between OCPs and TCPs for a transit charge. The transit network will also pass termination payments from OCPs to TCPs since neither will have any direct contractual arrangements with the other.
- 3.28 One of the key benefits of transit, especially for TCPs is that they only have to establish points of interconnection with one network and receive all their traffic from whichever OCP on the same large, and thus more cost efficient, routes. OCPs also only have to know that the TCP is using the transit services of Network X and therefore send all calls to them rather than having to decide how to route calls to the TCP itself.
- 3.29 Who pays for transit currently depends on the type of call being sent. For the reasons discussed more fully in Section 5 and Annex 3, OCPs pay transit charges for geographic 0843/4 and 0871/2/3 calls and TCPs pay transit charges for all other

NGCS calls. Transit charges are extremely small relative to the total revenue on NGCs (see Figure 3.2) with BT charging only around 0.02ppm in the daytime.

Terminating Communications Providers (TCPs)

Figure 3.7 Terminating communications providers

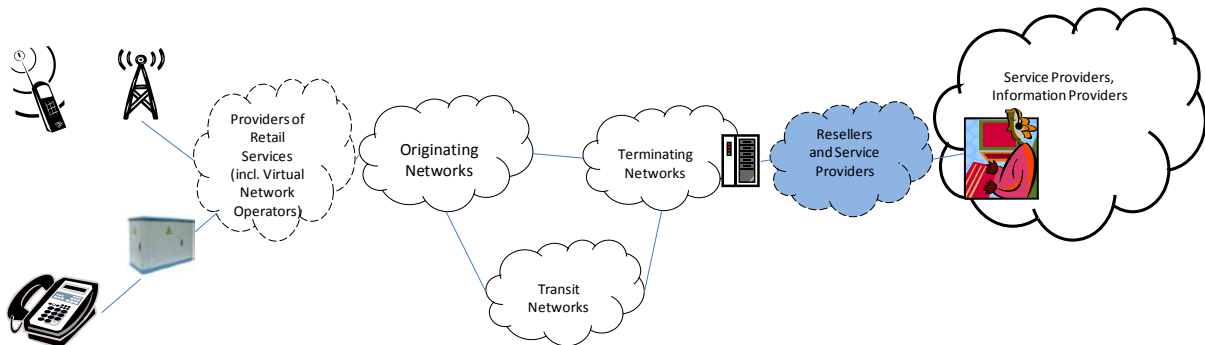


Source: Ofcom's analysis

- 3.30 TCPs receive calls from OCPs either directly or via a transit network for termination on geographic numbers belonging to the providers of the services consumers are using.
- 3.31 As we have seen, TCPs receive termination charges from OCPs and use these to pay for terminating the calls and any additional call hosting services they may offer. These can take the form of 'intelligent routing' where calls can be switched to different destinations at different times of day, or where traffic levels exceed the ability of the SP to receive them. Other services may range from providing simple calling statistics to the use of call centres to answer calls on behalf of SPs.
- 3.32 The TCP may also keep a retail profit from the call revenue. Any residual income can then be shared, in the case of higher cost calls or calls to Premium Rate Services, directly with the SP to pay for the service being offered or, in the case of low cost non-geographic calls, used to offset some of the SP's own costs or merely to cover the TCP's costs so that the SP does not have to pay to receive calls.
- 3.33 As we saw at the start of this section, out of approximately £1.9bn paid by consumers for calling non-geographic numbers in 2009, roughly half was paid out to TCPs in termination charges; and approximately half of that sum was shared with SPs to pay for the services consumers were seeking to use.

Number Resellers

Figure 3.8 Resellers

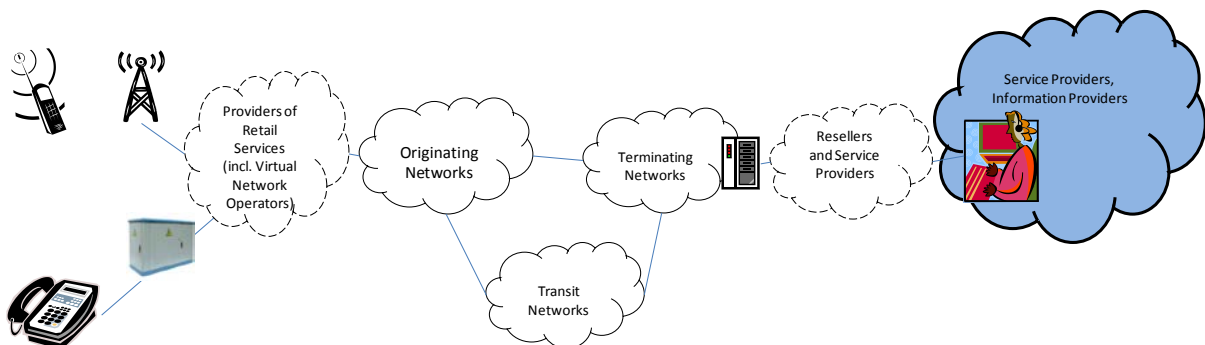


Source: Ofcom's analysis

- 3.34 We have included Number Resellers in the list of organisations as they are an example of another way in which revenues can be shared from within the NGCS value chain. Resellers sit between TCPs and, mainly, small SPs. Some replicate the TCP's hosting function, whilst others that may not have any physical network provide more 'virtual' services.
- 3.35 Resellers purchase small blocks of the numbers allocated by Ofcom to TCPs and 'resell' these either singly or in small numbers to SPs. They can also offer hosting services to their SP customers who otherwise have no commercial relationship with the TCP itself. A key function resellers offer, however, is in aggregating the otherwise small volumes of calls each SP attracts. This enables them to negotiate much higher revenue shares from the TCP than each SP would otherwise be able to do for themselves. In this way, the reseller can carve out a margin for itself and offer either services or a revenue share to the SP that the SP may not have been able to secure on their own.
- 3.36 We do not have any information on what proportion of the figure of around £500m available for sharing is retained by resellers.

Service Providers (SPs)

Figure 3.9 Service Providers



Source: Ofcom's analysis

- 3.37 The final link in the NGCS value chain comprises the Service Providers and Information Providers community (referred to more generally as Service Providers in the rest of this document to include also resellers, unless the distinction is instrumental to a specific point we want to make). This simple term covers a wide range of activities including providing access to essential public and Government bodies, commercial activities, entertainment, TV voting, information and adult services and personal 'follow-me' numbers. The thing they all have in common is their use of nationally available numbers to receive calls at whichever location they choose.
- 3.38 Not all SPs use NGCS to generate an income and are happy to pay for the ability to reach their consumer audience in a way which is convenient for them. The majority do rely on the income generated by calls to either contribute towards the costs of running their services or as a stand-alone income stream. Contemporary examples of a service that relies heavily on call revenues include some high profile TV shows that rely on votes from the audience calling expensive Premium Rate numbers. The revenue earned is used to fund the costs of making the programmes.
- 3.39 As we have seen SPs attracted £0.5bn in revenue in 2009 although call volumes, and thus revenues, have been steadily declining over the last few years. It remains to be seen whether new services are developed to take the place of traditional ones which have become outdated or move to other technologies. SPs have historically been highly innovative and nothing demonstrated this more clearly than the way in which, when Oftel introduced NTS in 1996, the opportunities presented were seized to develop the huge industry made possible by the use of billing on the telecoms network as a micro payment mechanism.
- 3.40 Some consumers have not always welcomed this trend but there is little doubt that the flexibility this system has offered to business has supported new service development.

Section 4

The consumer experience

Introduction and summary

- 4.1 In this section, we consider the experience of consumers of non-geographic numbers. Then, in Section 5, we discuss the experience of SPs and network providers (OCPs and TCPs). Together these sections summarise how the retail and wholesale levels operate. Our evidence and analysis is set out in full in Annexes 2 and 3.⁴³
- 4.2 Consumer welfare is at the heart of our analysis. There are two users of these services that can be regarded as “consumers”: on one side, non-geographic calls are used by callers to reach and, sometimes, pay for services; on the other side, SPs use non-geographic calls to reach customers or clients. In this section our main focus is on the caller experience.
- 4.3 From the evidence we have collected, we have a number of concerns about the impact of the current market structure for the provision of non-geographic calls on consumers.
- 4.4 Our main concerns stem from the way in which the retail level operates. We consider that consumers suffer a loss in welfare due to the impact of three related market failures:
- Lack of price awareness: this has direct impacts on consumer outcomes and behaviour, as well as on the OCPs’ incentives (that is, the lack of price awareness means OCPs decisions are less exposed to competitive pressure on prices for non-geographic calls);
 - Coordination between different elements in the value chain, particularly the SPs and OCPs (the “vertical externalities”): OCPs are not sufficiently motivated by the preferences of SPs of NGC services and thus generally do not take the impact of their call pricing decisions on SPs into account.
 - The impact of individual OCP (and potentially SP) behaviour on the reputation and consumer understanding of individual number ranges and on the market as a whole (the “horizontal externalities”): neither SPs nor OCPs have sufficient incentives to take into account the impact of their retail pricing on the reputation of an individual number range or the non-geographic number system as a whole.
- 4.5 There are five categories of impacts which are a result of these market failures. They consist of direct effects on callers and the consequences that consumer actions have on SPs, which in turn undermines the quality of services the SPs can offer consumers:
- **Direct impact of poor consumer price awareness:** Callers’ limited awareness of non-geographic call prices, both at the time they make a call and when making their phone company subscription decision, leads to consumer anxiety, bill shock,

⁴³ The evidence we have used includes consumer surveys, an analysis of the flow of funds, past Ofcom consultations and decisions and stakeholders’ responses to the Call for Inputs and to our information requests.

poor decision making (under- or over-consumption), and avoidance activity - sometimes incurring greater cost than the call being avoided;

- **Level of non-geographic prices relative to other telephony services:** non-geographic call prices are likely to be higher than they should. Higher margins on non-geographic calls may be associated with lower margins on other telephony services such as geographic calls (the “tariff package effect”). As a result, the structure of prices may not reflect either callers’ or SPs’ preferences and consumption choices between non-geographic calls and other telephony services may be distorted. High NGC prices arise from:
 - Poor consumer price awareness weakening competitive pressure which might keep pricing down;
 - OCPs generally not taking the impact of their call pricing decisions on SPs into account (which we refer to as the “vertical externality”);and
 - Neither SPs nor OCPs having sufficient incentives to take into account the impact of their retail pricing on the reputation of a number range or the NTS system as a whole, which ultimately harms other OCPs and SPs and ultimately consumers, e.g. through reduced demand for non-geographic calls (which we refer to as the “horizontal externality”);
- **Consumer exposure to fraud:** Poor consumer engagement with, and understanding of, non-geographic call services contribute to an environment in which consumers are ill-equipped to recognise and/or minimise their exposure to fraud;
- **Diminished service availability and innovation for consumers:** Poor price awareness and the level of non-geographic call prices have negative impacts on SPs. Therefore, their incentives to invest and innovate are reduced and service availability is diminished. This issue is considered in greater detail in Section 6; and
- **Distributional concerns:** The high non-geographic call prices discussed above have particularly negative consequences for some vulnerable citizens, for whom non-geographic calls are an important gateway to essential services (e.g. utilities) or services with a particular social function (e.g. healthcare, social security). This concern is particularly acute when considering households that only have access to a mobile phone, since these are disproportionately likely to have low income and limited alternative communications options.

4.6 Clearly the significance and importance of these concerns vary between number ranges. The detailed analysis of each number range is set out in Annex 7.

4.7 In order to assess the appropriate response to these concerns, we also consider market conditions and consumer outcomes we would expect in the absence of ex ante regulation in the market (to remove any distortions from current regulation). Our initial assessment shows that the fully deregulated market is likely to see existing market failures magnified and consumer welfare further diminished.

Evidence base for this review

4.8 In reaching this assessment, we have drawn on evidence from different sources past and present. We have listed the references to the research carried out for Ofcom by

independent consultants (Annex 16) and the key regulatory documents (Annex 17). In summary, our evidence base is as follows:

- Responses to the May 2010 Call for Inputs, where we asked stakeholders their initial views as to the scope and proposed approach and the working of the market;
- New and past market research on consumer understanding and preferences which is both qualitative and quantitative (new research is published alongside this consultation on our website, past research was published in conjunction with previous consultations and our annual surveys such as the Communications Market Report series);
- Surveys of service providers and analysis of the market flow of funds (published alongside this consultation on our website);
- Responses from previous consultations;
- Research produced by PhonepayPlus and Consumer Focus;
- Discussions with stakeholders, including SPs, OCPs and consumer groups; and
- Consumer complaints processed by the Ofcom Advisory Team (“OAT”) – see Annex 15 for some examples.

Structure of Sections 4 and 5

- 4.9 We will first consider the evidence for market failure with respect to consumer price awareness and the issues impacting on the private incentives of OCPs.
- 4.10 We will then consider how these market failures impact on consumer outcomes both in the current market and how they might operate in the absence of ex ante regulation:⁴⁴
- 4.11 We then discuss our preliminary view on the magnitude of the consumer detriment.
- 4.12 Finally, we will set out an overview of our preliminary views.

Market failures

Poor consumer price awareness

- 4.13 A central failure is persistent (and probably increasing) poor consumer price awareness. Callers do not have a clear understanding of what services are offered under each number range, and indeed many do not recognise the distinction between the ranges at all.
- 4.14 The evidence for this lack of price awareness is comprehensive. For example, 34% of respondents believed 0845 is used to provide premium rate services even though

⁴⁴ Some of these issues particularly diminished service availability and innovation are considered in greater detail in Section 5.

the NTNP actually specifies 0845 as non-geographic numbers that are charged at BT's 'local rate' (see Figure 4.1 below).⁴⁵

Figure 4.1: Perceptions of services on different number ranges

Number range	Respondents claiming to recognise range	Services respondents believe to be provided on that range (% of all responses)
01/02	94%	Landline (93%)
070	24%	Mobile (21%), premium rate (4%), landline (3%)
077/078/079	92%	Mobile (92%)
0800	88%	Freephone (63%), premium rate (13%), landline (6%)
0845	74%	Premium rate (34%), local rate (15%), national rate (6%), business (3%)
0870	56%	Premium rate (39%), national rate (5%)
0871	34%	Premium rate (25%), national rate (3%)
09	20%	Premium rate (20%)

Source: Ofcom/Futuresight research, June 2008. Q. Which types of services do you think you would be calling if you dialled the following numbers? Base: 163 UK Adults

- 4.15 Figure 4.2 below shows how confident callers are that they know the price of calling different non-geographic numbers. Overall, only a minority of respondents were confident that they knew the price of different non-geographic calls. The majority of respondents were not confident.
- 4.16 Notwithstanding the greater volumes of 08 and 09 calls from landlines, respondents were only marginally more confident calling from fixed lines than from mobiles.
- 4.17 Perhaps most striking of all were the results for 080/Freephone calls from landlines. 080 calls are generally free from landlines and yet only 46% of respondents were confident that they know the price. Given this is the most heavily used range, it is one most clearly associated with a price point (free), and on land lines the position has not altered since the range was created, the outcome is surprising (and suggestive also of other market failures – see the horizontal externality discussion below).

⁴⁵ Review of the 070 Personal Numbering Range, 15 October 2008 (the "070 Consultation"), Figure A5.4. Available at: <http://stakeholders.ofcom.org.uk/binaries/consultations/070options/summary/070options.pdf>

Table 4.2: Confidence of consumers in the cost of calls to non-geographic numbers from mobile and fixed lines

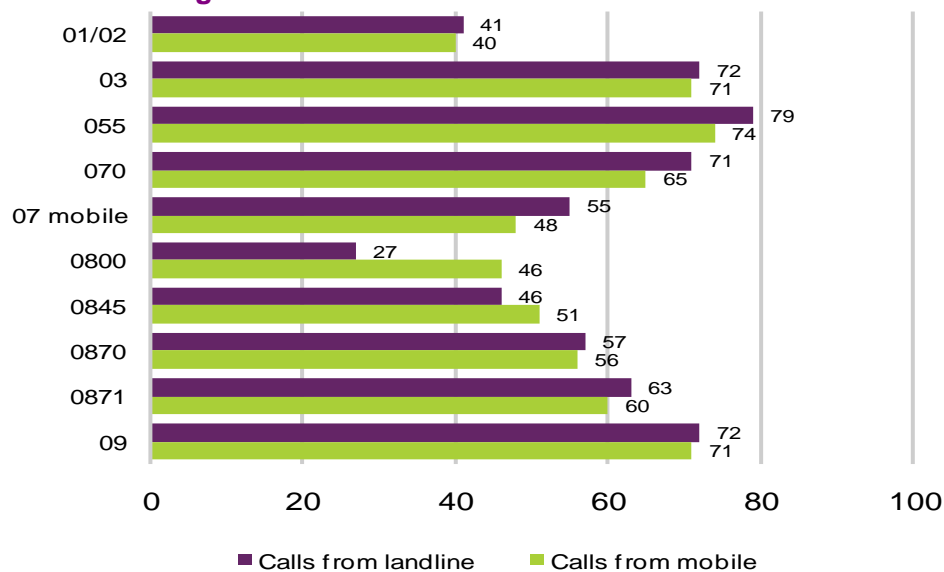
	0800		0844 / 0845		0870 / 0871		09xx	
	Fixed line	Mobile	Fixed line	Mobile	Fixed line	Mobile	Fixed line	Mobile
Confident	46%	25%	27%	21%	21%	18%	18%	18%
Neutral	10%	12%	15%	13%	17%	14%	14%	12%
Not confident	44%	63%	58%	66%	62%	68%	68%	70%

Source: the 2010 Consumer research. Q35/36. How confident are you that you know the costs of calls per minute to these numbers from your landline/from your mobile? Base: all respondents who use a landline/mobile phone (n=926/1091)

- 4.18 Our assessment of the overall lack of price awareness for non-geographic calls is supported by research from 2009 which found that, when asked to estimate the retail price of NGCs, a significant proportion of consumers did not even provide an estimate but answered “don’t know”.⁴⁶ This is shown in Figure 4.3 below.
- 4.19 Figure 4.3 shows that consumer awareness of the price of non-geographic calls is significantly worse than awareness of the price of geographic calls. Specifically, for the main non-geographic number ranges between 45% and 70% of respondents said that they did not know the price of calls.
- 4.20 On this measure, consumer awareness might superficially seem to be better for 080 calls on landlines than geographic calls. However, given that all 080 calls are and have always been free from landlines and this is an especially memorable price, we consider this evidence is also consistent with poor price awareness.

⁴⁶ Consumer market research by Futuresight for Ofcom (the 2009 Consumer research) A summary of this research is available at: <http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf> In addition, many of those who provided an estimate actually overestimated the price – see discussion in Annex 2.

Figure 4.3: Percent of respondents who stated that they did not know the cost of a call to a number range



Source: the February 2009 Consumer research. Q43/44: How much do you think that it costs to call the following types of telephone numbers from your landline phone/mobile phone at home during the daytime on a weekday? Base: all respondents with a landline/mobile phone (n=945/1102)

- 4.21 Consumer price awareness is not assisted by the complexity and difficulty of finding out price information: even those customers that wish to find out the price of a non-geographic call may find this a difficult and time consuming exercise.
- 4.22 In addition, consumers might not be given the right price information even when asking their retail provider. For example, in a 2009 mystery shopping research, Consumer Focus contacted the customer helplines of seven leading mobile OCPs and asked the price of calling the voting lines for popular TV shows. The majority (57%) of callers were given incorrect price information. Only 28% were given correct price information (15% were not given any price information). Moreover, the average length of the call to the customer helpline was 13 minutes (call durations varied between 2 and 88 minutes).⁴⁷
- 4.23 Not only are consumers generally uncertain of NGC retail prices, many tend to overestimate non-geographic prices. For example, the price expected on average by callers for an 0845 call was 30ppm for calls from a landline and 46ppm for calls from a mobile (see Table 4.4 below). We asked some OCPs for the price of calls to particular 0845 numbers under their most popular tariff plan. For fixed OCPs, the connection fee varied between 9.9 and 11pence and the per minute charge varied between 0 and 6ppm. For mobile OCPs, the retail price varied from 25-40ppm for pre-pay subscribers and 20-40ppm for post-pay subscribers.⁴⁸

⁴⁷ *Strictly unclear: Research into information on the cost of TV voting*, Consumer Focus, September 2010, pages 10-11. Available at: <http://www.consumerfocus.org.uk/assets/1/files/2009/09/Strictly-unclear-WEB1.pdf>

⁴⁸ BT response dated 23 June 2010 to question A5 of our information request dated 23 June 2010. BSkyB, Talk Talk, Virgin Media, Everything Everywhere, Vodafone and O2 responses to question A6 of our information request dated 23 June 2010.

Figure 4.4: Mean predicted price by number range

Number range	Mean price expected by respondents		% responding “Don’t know”		Example “actual” prices	
	Landline	Mobile	Landline	Mobile	Landline (BT)	Mobile*
0800	6ppm	29ppm	27%	46%	Free	Up to 40ppm
0845	30ppm	46ppm	46%	51%	Local geographic rate (included in bundles)	40ppm
0870	39ppm	51ppm	57%	56%	National geographic rate (included in bundles)	40ppm
0871	41ppm	52ppm	63%	60%	Up to 10ppm or per call	40ppm
09	70ppm	70ppm	72%	71%	Between £0.10 and £1.50 per minute or per call	Unknown

Source: The 2009 Consumer research, Q43 and 44, mean price rounded to the nearest ppm,

- 4.24 It is also worth noting that the current structure fails to deliver the policy outcomes originally envisaged for many of the ranges (i.e. 080 Freephone, 0845 local rate, 0870 national rate). This leads to a dichotomy between stated purposes and outcomes, further undermining consumer confidence and understanding.
- 4.25 To summarise, consumer price awareness is currently poor. Callers also lack confidence in their knowledge of call charges, and generally overestimate prices while a significant proportion simply do not know the cost of calls.

Vertical externalities

- 4.26 In addition, the nature of the supply chain gives rise to incentives on individual OCPs which may not be in the interests of all parties involved in the provision and use of non-geographic calls, particularly SPs and ultimately consumers, and these are exacerbated by consumers’ poor price awareness amongst consumers.

- 4.27 When OCPs set their retail non-geographic call prices, they do not have an incentive to fully take into account the preferences of SPs or the impact the chosen price has on SPs (we refer to this as a vertical externality). While an SP may prefer a particular retail price for calls to its service, it has no direct control over the actual price charged (subject to a few exceptions which are discussed in Section 6 and Annex 2) and very little, if any, leverage over the OCP to set the charge.
- 4.28 An example of the effect of the vertical externality is shown in the box below:

Consumer experience Box 4.1

XXX is a mobile customer of XXX for his mobile services and has recently made a call to Directory Enquiries. They have billed him £12 for the cost of this. The consumer feels this cost is extortionate. Directory enquiries have stated they only charge £4 and the difference is charged by their mobile OCP.⁴⁹

- 4.29 This externality exists as a result of the separation between the SP and the OCP and the nature of the market for the calls, meaning their pricing preferences are not aligned.
- 4.30 However, it is likely to be exacerbated by the lack of price transparency which weakens competitive downward pressures on non-geographic call prices, allowing OCPs to further increase the retail prices of these calls without a strong consumer reaction, to the potential detriment of SPs.

Horizontal Externalities

- 4.31 Each non-geographic number range (and indeed, the non-geographic calls system as a whole) is effectively a collective brand created by all in the supply chain. It is the consumers' lack of confidence in this brand that is at the heart of consumer concerns and consumers' lack of engagement with the non-geographic calls market.
- 4.32 Individual OCPs and SPs⁵⁰ do not have an incentive to take into account the impact their non-geographic call pricing has on the reputation/ brand perception of a particular number range or, again, on the non-geographic number system as a whole.
- 4.33 There has been a strong incentive for individual OCPs to free ride on the reputation of a number range, ultimately undermining that reputation. For example, initially 0845 calls were priced at the same level as prices for geographic (i.e. local) calls. As mobile and some fixed OCPs moved away from this position, their individual returns have increased but the reputation of the range has diminished. For example, more than twice as many consumers now think that 0845 provides premium rate services than local rate services (see Figure 4.1) This has also extended further as a lack of confidence in a core number range such as 0845 is likely to have, in turn, undermined confidence in similar numbers in the 08 range.

⁴⁹ Complaint received by Ofcom 25th October 2010.

⁵⁰ While SPs have a similar incentive meaning it is possible for them to cause a similar externality, we consider that the majority of SPs have very limited influence over the retail price for calls to non-geographic numbers (see discussion above), and so under the current regime it is unlikely that they would be able to act on this incentive.

- 4.34 Therefore, the free riding action of individual OCPs negatively affects all OCPs, TCPs, SPs and ultimately consumers – this is the horizontal externality.
- 4.35 Also, as with the vertical externality, the horizontal externality is exacerbated by the lack of price transparency as it means OCPs are able to act on this incentive and increase retail prices without losing consumers or, in the short term, volumes (in the medium term, as we have observed, overall demand is clearly dropping).
- 4.36 In fact, given the lack of control any one OCP has on consumers' understanding of the range, there is a strong incentive for them to maximise the returns on these call types through high prices rather than encourage volume growth through lower charges: as limited price transparency means consumers are less likely to respond to the price signals, particularly given the horizontal externality caused by other OCPs.
- 4.37 Therefore, three interrelated market failures underlie our retail concerns, namely poor price awareness, OCPs generally not taking the impact of their call pricing decisions on SPs into account (the vertical externality), and OCPs' and SPs' limited incentives to protect the reputation of particular number ranges (the horizontal externality). The combination of these market failures has several consequences for consumers, and these are discussed in more detail below.

Consequences of poor consumer price awareness and the externalities

- 4.38 The uncertainty, errors and pricing that flow from consumers' poor awareness of prices and the horizontal and vertical externalities have a number of harmful consequences for callers:
- A reduction in demand for non-geographic calls, particularly from mobile phones;
 - Relative prices of geographic and non-geographic calls not reflecting consumer preferences;
 - Burdensome avoidance strategies and loss of or reduction of access to socially important services, particularly for low income households;
 - Increased risk of fraud; and
 - Finally, consumers suffer the loss of service diversity and innovation as SPs lack the incentives to invest in the market.
- 4.39 We discuss these detrimental effects in further detail below.

Reduced demand for non-geographic calls

- 4.40 Non-geographic call volumes are falling. The Flow of Funds study found that the total volume of traffic decreased by 14% between 2008 and 2009.⁵¹ This is consistent with data provided by BT on the experience of its retail customers with non-geographic calls. Between April 2007 and July 2010, call volumes declined at a faster rate than

⁵¹ 2010 Flow of Funds study, page 24. This study indicates that the change in call volumes varies between number ranges e.g. 0871 volumes appear to have risen in 2009 (compared to 2008), probably due to SPs migrating from 0870 (page 33). A link to this published report is provided in Annex 16

for geographic calls and call durations also appeared to be shortening, though this would also reflect the decline of dial-up internet which also makes use of non-geographic number.⁵²

4.41 This decline in demand appears to affect consumers' increasingly negative views of non-geographic calls. 39% of fixed line and 33% of mobile-only consumers who make non-geographic calls stated that they feel forced to call and would rather not.⁵³ Part of the reduction in demand for non-geographic calls is likely to be a consequence of poor consumer price awareness and the vertical and horizontal externalities. This shows itself in three ways:

- Consumers are likely to be deterred by uncertainty over the price;
- Consumers tend to overestimate non-geographic call prices and may therefore make fewer non-geographic calls (or shorten the duration of those calls they do make) as a result of their mistaken beliefs; and
- Further, prices for non-geographic calls are increased as uncertainty and confusion around them means price competition is not as prominent on these calls as in other telephony services. This results in a distorted structure of prices, with a high level of non-geographic prices relative to other telephony services.

4.42 We further discuss these three effects below.⁵⁴

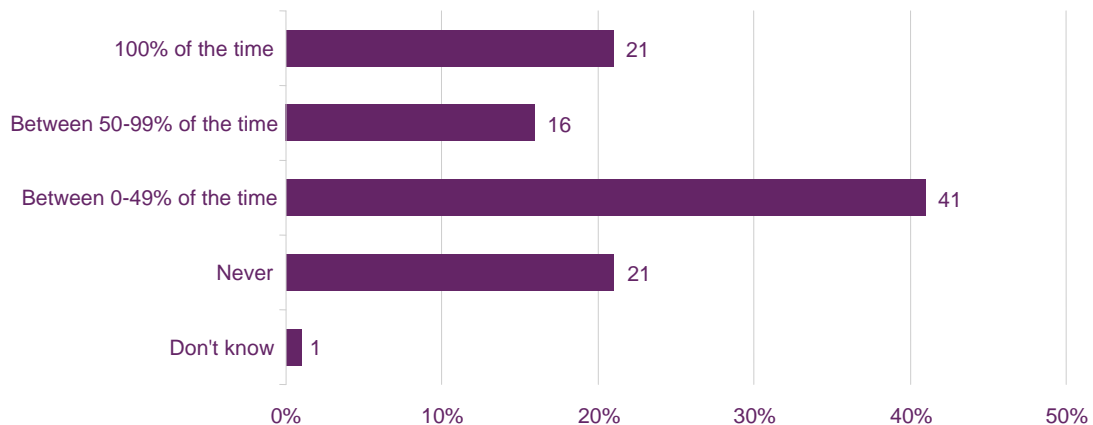
4.43 As set out above, consumers lack confidence about their knowledge of the retail price they will be charged for non-geographic calls. We asked callers how frequently they would call "out of bundle" (chargeable) numbers where they did not know the price. 78% of respondents stated that they would make fewer calls to these numbers (see Figure 4.5 below). It is reasonable, therefore, to infer that there is potentially a significant volume of non-geographic calls that are not being made as a result of price uncertainty.

⁵² Specifically: between April 2007 and July 2010, BT's consumer non-geographic call minutes declined by [%], compared to a [%] reduction in geographic call minutes; the number of non-geographic calls decreased by [%] (i.e. less than the fall in the volume of minutes). This compares to [%] for geographic calls. The results exclude wholesale minutes originated on behalf of third parties, for which the 2008 data was unreliable. Source: BT, 7 September 2010.

⁵³ The 2010 Consumer research. Q24/28: *How do you feel when you call these non-geographic numbers from a landline / mobile? Base: all respondents who use a landline (761)/mobile phone (309) (except those who never call non-geographic numbers)*

⁵⁴ This reduction in demand will also affect SPs' investment and innovation decisions. We discuss our concerns about diminished service availability and innovation in further detail in Sections 5 and 6.

Figure 4.5: Frequency that consumers would make calls to out of bundle numbers that they don't know the cost of (e.g. 0845, 0870 or 0871 numbers)



Source: The February 2009 Consumer research. Q: Let's say you are calling a number that you know is not contained in your package and you also don't know the cost (for example calling a number beginning 0845 or 0871 or 0870), how often would you make the call? Base: All respondents (n=1229)

- 4.44 In addition to the effect of uncertainty discussed above, demand for non-geographic calls is also being affected by the callers' current beliefs about the level of prices. We asked callers who told us they called non-geographic numbers "rarely" or "never" why this was the case. Although 52% of respondents stated that they do not call non-geographic numbers more frequently from their landline because they have no need to call these numbers, 29% stated that it was because they think they are expensive (the second most popular response). 42% of respondents said they did not call these numbers more frequently from their mobile phone because they think they are expensive (the most popular response).⁵⁵
- 4.45 Callers tend to overestimate the price of non-geographic calls (see Figure 4.4 above).⁵⁶ For example, callers' average expectation of the price of an 0845 call was 30ppm for calls from a landline and 46ppm for calls from a mobile.⁵⁷ It is substantially higher than the prices provided to us by OCPs. For fixed OCPs, the call set-up fee varied between 9.9ppm and 11ppm; and the per minute charge varied between 0ppm and 6ppm. For mobile OCPs, the retail price varied from 25-40ppm for pre-pay subscribers and 20-40ppm for post-pay subscribers.⁵⁸

⁵⁵ In the case of respondents that only have a mobile phone, 43% do not call more frequently because they have no need to call these numbers and 39% because they think they are expensive (the second most popular response). The 2010 Consumer research. Q23/27: *Why do you not call these numbers more frequently than rarely or never from your own phone?* Base: All respondents who use a landline/mobile phone (and rarely/never call non-geographic numbers (n=897/1076).

⁵⁶ As noted above, in a 2009 mystery shopping exercise for Consumer Focus the majority of callers were quoted an incorrect price for calling the voting lines of popular TV shows. For these callers, 68% were quoted a price that was too high and 16% were quoted a price that was too low (the remainder were quoted a range of prices). *Strictly unclear: Research into information on the cost of TV voting*, Consumer Focus, September 2010, page 10.

⁵⁷ The February 2009 Consumer research Q43/44.

⁵⁸ BT response dated 23 June 2010 to question A5 of our information request dated 23 June 2010. BSkyB, Talk Talk, Virgin Media, Everything Everywhere, Vodafone and O2 responses to question A6 of our information request dated 23 June 2010.

- 4.46 Since callers tend to overestimate the price, we would expect callers not to make some non-geographic calls and to shorten the duration of those calls that they do make.
- 4.47 Further, prices for non-geographic calls are likely to be increased (relative to a situation where callers are well informed) because the lack of price awareness means competitive pressures on the prices of non-geographic calls are weak. Thus demand is further reduced.
- 4.48 The lack of price awareness, although generally leading consumers to over-estimate prices, can also be reflected in under-estimation of prices and bill shock, as reflected in complaints to Ofcom Advisory Team (OAT). See two example boxes below.

Consumer experience Box 4.2

“Consumer called to complain about [a fixed OCP] charging an excessive amount of money for calls to '08' number. He states he received a bill for over £200 due to making such calls.”⁵⁹

Consumer experience Box 4.3

“Consumer was charged 39.00 GBP to call two premium rate numbers from his landline. He states that he feels the charges to call these numbers are far too high.”⁶⁰

Relative prices of geographic and non-geographic calls are unlikely to reflect consumer preferences

- 4.49 For competition to be effective and deliver consumer benefits, consumers must be well informed about prices and take them into account in their purchase decision. This is not the case for non-geographic calls for the following reasons:
- As explained above, consumer price awareness is poor; and
 - Callers do not regard the price of non-geographic calls as important when selecting a telephony provider. In the Ofcom consumer research in 2010, only 11% of respondents spontaneously mentioned “the cost of calls to 08xx/09 numbers” as an important factor when choosing a new landline supplier (the eighth most popular response)⁶¹. This figure was 9% for respondents choosing a new mobile supplier (similarly, this was the eighth most popular response)⁶². The total mentions of the cost of 08xx/09 numbers (prompted and unprompted) were

⁵⁹ Complaint received 14th October 2010

⁶⁰ Complaint received 11th August 2010

⁶¹ The most popular response was the “monthly cost of the package”. This was spontaneously mentioned by 65% of respondents. The 2010 Consumer research. Q5: *If you were considering switching your landline supplier, what elements would be important when choosing a new supplier? (spontaneous). Base: All respondents who use a landline (n=925).*

⁶² The most popular response was the “cost of calls/texts”. This was spontaneously mentioned by 65% of respondents. Futuresight/Ofcom consumer research 2010. Q6: *If you were considering switching your mobile operator, what elements would be important when choosing a new supplier? (spontaneous). Base: All respondents who use a mobile phone (n=1,091).*

30% for fixed line customers (sixth most popular response in total) and 21% for mobile customers (the seventh most popular response in total).⁶³

- 4.50 We recognise that, looking at the overall package of services purchased by consumers, retail telephony markets are generally regarded as competitive. As a result, high margins on one element of that package (namely non-geographic calls) as a result of weak competition on that element are likely to be offset by lower prices for other services (such as geographic calls). In other words, the structure of prices is changed even though the profits of the providers may not be fully affected (that depends on the strength of the “tariff package effect”). More specifically, we consider that the structure of prices is changed in a way that disadvantages consumers.
- 4.51 Perfect competition between firms to supply a bundle of services to well-informed consumers is likely to produce a structure of prices that reflects consumers’ preferences. Suppliers’ margins will be higher for those elements which consumers are price insensitive towards and vice-versa. Such a price structure is likely to benefit consumers.
- 4.52 However, we consider that callers’ poor awareness of non-geographic call prices makes consumers more insensitive to these prices in selecting a bundle. Prices for these calls can be raised in a way that reflects the extent of callers’ ignorance, rather than their underlying preferences. Non-geographic call prices are high relative to other services, reducing the demand for these calls to a level which may not reflect consumer preferences under greater price transparency.
- 4.53 In addition, as set out above, the nature of the supply chain gives rise to incentives, which also contribute to concerns about the level of non-geographic prices relative to the prices of other telephony services (even in a fully competitive market). Both of these incentives encourage OCPs to increase their retail prices from the level that may ultimately be in the interests of SPs and consumers, but without taking into account the effect this has on other parties (thus reflecting externalities).

Callers’ avoidance strategies and loss of access

- 4.54 Uncertainty about the call price, overestimation of the call price and relatively high call prices from some OCPs are all likely to increase the extent to which consumers adopt call avoidance strategies.
- 4.55 Callers prefer to use their landline to make these calls, rather than their mobile phone (see above). Despite the rise of the internet and on-line access, callers say they are generally not aware of alternatives to making a telephone call.⁶⁴
- 4.56 Moreover, web access is not a panacea. Even where this is convenient (i.e. access is available in the home or place of work), contacting a company by email or relying on

⁶³ The most popular response (prompted and unprompted) was the “monthly cost of package” for fixed-line customers (mentioned by 81% of respondents) and the “cost of calls/texts” for mobile-users (mentioned by 79% of respondents). Futuresight/Ofcom consumer research 2010. Q5/7 and 6/9: *If you were considering switching your landline supplier/Mobile operator, which of these elements would be important when choosing a new supplier? (Total Mentions). Base: All respondents who use a landline/mobile phone (n=925/1,091).*

⁶⁴ We asked callers whether they were “aware of any alternatives to having to call numbers starting with 08 and 09 numbers?” 68% of respondents were not aware of any alternatives. 22% of respondents said that they could make use of the internet, instead of making the call and 8% said that it is possible to find a geographic number. The 2010 Consumer research, question 30. Base: all respondents (n=1,189).

standardised FAQs on company websites may be less flexible for some queries than speaking to that company via the phone. But for many households ease of access is not readily available.

- 4.57 Low income households are more likely to rely solely on a mobile phone, which tend to be more expensive to call NGCs than fixed lines. 26% of lower income (socioeconomic groups D and E) households were mobile only in Q1 of 2010, compared to 9% of ABC1 homes.⁶⁵ Low income householders are less likely to have access to alternatives such as contacting the SP via the internet. Only 54% of socio-economic groups D and E reported having a broadband connection at home in 2010, compared to 88% of ABs.⁶⁶
- 4.58 It is, thus, more difficult for these households to access socially important services affordably. For example, these callers can end up paying high prices for calls to essential public services such as some doctors' surgeries. HM Revenue & Customs also use 0845 numbers. Calls to these numbers can be priced between 25ppm and 40ppm from pre-pay mobile phones.⁶⁷ Citizens Advice also highlighted important private sector services such as helplines for gas suppliers which have numbers which would be low rate from a BT landline but are considerably more expensive for mobile customers.⁶⁸
- 4.59 Citizens Advice provided examples of individuals visiting them simply to make telephone calls. They also provided examples of individuals who were unable to claim benefits to which they were entitled, and who incurred significant costs when calling public services.⁶⁹ Thus, low income mobile only households are more likely to pay high prices to access important public services, which have a proportionately higher effect relative to their income. Alternatively they may take onerous actions to avoid making such calls such as seeking out public payphones or calling from a Citizens' Advice Bureau.

Consumer experience Box 4.4

A Hampshire CAB reported a case in which their client, who had recently been discharged after a four month stay in hospital, came to the bureau for help in resolving some problems about his benefit entitlement. The client had initially tried phoning Jobcentre Plus to sort this out himself by calling them from his mobile phone but had been forced to give up after being put on hold and incurring substantial costs. In total, the client had spent £20 credit trying to contact them.⁷⁰

- 4.60 Having regard for Ofcom's duties under section 3 of the Act, as set out in paragraph 2.31, we consider that it is important that citizens are able to access socially important services, some of which may be defined as essential (e.g. utilities), and services with a particular social function (e.g. healthcare, social security) at reasonable prices. High prices for these calls thus give rise to distributional concerns.

⁶⁵ Communications Market Report (2010), page 333.

⁶⁶ Communications Market Report (2010), Figure 4.16.

⁶⁷ Virgin Media, Everything Everywhere, Vodafone and O2 responses to question A6 of our information request dated 23 June 2010.

⁶⁸ Citizens Advice response to Call for Inputs, 28 May 2010.

⁶⁹ *Hung up: The cost of calling government from a mobile phone*, Leeds Citizens Advice Bureau, June 2009. Attached to Citizens Advice response to Call for Inputs, 28 May 2010.

⁷⁰ Citizens Advice Bureau response to Call for Inputs, 28 May 2010.

Higher consumer vulnerability to fraud

- 4.61 The combination of uncertainty, confusion and high NGC prices leads to higher consumer vulnerability to fraud.
- 4.62 As consumers do not readily recognise the 'true' cost of calls to non-geographic numbers and tend to treat all numbers with suspicion, they are less able to distinguish actual fraud from normal consumption.
- 4.63 This issue of fraud is reflected by complaints received by the OAT in the boxes below.

Consumer experience Box 4.5

Consumer called to complain about the mis-use of the 070/074 number range. He states that these are being used by scammers to entice people to call them using such numbers...He states he receives such solicitations via spam SMS messages on his mobile.⁷¹

Consumer experience Box 4.6

Caller has received ten calls in last month from a company called XXX solutions (using a geographic number). He says he is working on behalf of Company X and asks the consumer to go to her computer and start making changes to her set up. She has refused to do so as she believes it is a scam and puts the phone down. When she rings the calling number back it says the number is no longer valid and asks you to call a 070 number instead.⁷²

Loss of service variety and innovation

- 4.64 In Section 5 we discuss the impact on SPs of the market failure in detail. As we identify in that Section, the net result of the identified market failures is that SPs' incentives to invest and innovate are reduced.
- 4.65 Of particular direct impact is the vertical externality. SPs have difficulty in positioning a service to properly reflect consumer demand in terms of the relationship of price and service. Also some of the OCP behaviours, such as band pricing (i.e. all numbers of a type e.g. 118 being priced at the same level) undermine any attempt to differentiate either the headline price or additional services (e.g. it is not possible to offer low cost follow-on calls from 118).
- 4.66 Accordingly, consumers are not able to benefit from the potential range and diversity of services that non-geographic numbers could support.

Market in the absence of ex ante regulation

- 4.67 We consider that there are a number of consumer concerns that arise in the current non-geographic calls regime (as discussed above). Our preliminary view is that the

⁷¹ Complaint received 1st November 2010

⁷² Complaint received 28th October 2010

regulatory regime cannot continue in its current form. In light of this, the base case against which we assess potential outcomes of changes in regulation is the market absent ex ante regulation. This effectively means that we are assessing the options for regulatory change against a situation where the conditions set out in the NTNP and current restrictions on BT's call prices are removed, as are the requirements to provide pre-call announcements for some calls (various restrictions on BT at the wholesale level are also removed).

- 4.68 Most OCPs are largely unregulated at present in any event, meaning that the above problems would continue in the market absent ex ante regulation. However subscribers to these OCPs (and particularly BT subscribers) are likely to receive slightly less price information than they do at present.
- 4.69 BT would have significant new freedoms in a market without regulation compared to the situation today where it has a limited ability to raise non-geographic call prices. As a result, BT will have incentives to behave in a way similar to how other OCPs currently behave. Since BT is likely to currently exert some, though perhaps limited, degree of constraint on the NGC retail prices of other OCPs, removing the constraints on BT would probably reduce the competitive constraints on other OCPs.
- 4.70 Thus in a market without regulation, even the existing limited certainties (the information on BT's prices) are no longer present. The incentives underlying the vertical and horizontal externalities remain.
- 4.71 While it is possible that the industry could self-organise, as it is the case for the short-code market⁷³, the diversity of participants and interests mitigate against such an outcome in the short to medium term. Furthermore, there is no reason to believe that the outcome would be better for consumers.

Preliminary views on the magnitude of current consumer detriment

In Annex 2 we have undertaken a high level estimate of the potential extent of the detriment that consumers currently suffer as a result of their over-estimating non-geographic call charges. This estimate is only illustrative and should only be interpreted as providing an indication of the possible the detriment that consumers suffer today as a result of limited price transparency leading to consumer poor price awareness for non-geographic calls. As discussed in Section 4, this only captures one element of the current detriment: there are a number of other concerns in relation to the detriment that consumers and SPs currently experience, which are not included because they cannot readily be estimated. Results suggest that completely removing this element of detriment alone, would increase consumer welfare in the number ranges considered by hundreds of millions of pounds per annum (our modelled estimate is in excess of £500m).

Overview of current concerns

- 4.72 In summary, we have a number of concerns about the provision of non-geographic calls which stem from the way the retail level operates.
- 4.73 Three interrelated market failures underlie our concerns, namely poor price awareness, OCPs generally not taking the impact of their call pricing decisions on SPs into account (the vertical externality) and OCPs' and SPs' limited incentives to

⁷³ See Annex 2 for a discussion of the short-code market and its relevance for the analysis of the non-geographic calls' market.

protect the reputation of both individual number ranges and the non-geographic numbers as a whole (the horizontal externality). These effects reinforce each other. For example, callers' poor price awareness makes it easier for OCPs to sustain high retail margins on non-geographic calls, which exacerbates the vertical and horizontal externalities.

4.74 These market failures create a number of harmful consequences for callers.

- A reduction in demand for non-geographic calls;
- Relative prices of geographic and non-geographic calls not reflecting consumer preferences;
- Burdensome avoidance strategies and, loss of, or reduction of access to service, particularly for low income households;
- Increased risk of fraud; and
- Finally, consumers suffer the loss of service diversity and innovation as SPs lack the incentives to invest in the market.

Questions on the assessment of the consumer experience and detriment

4.75 These questions relate to the analysis set out in this Section and Annex 2:

Q4.1 Do you consider that the analysis set out in this Section and in more detail in Annex 2 represents fairly the consumers' concerns? In particular: does it provide a reasonable assessment of the type and extent of the detriment consumers currently experience? And does it identify all the relevant factors?

Q4.2 In this section and in Annex 2 we set out our views of the main factors that contribute to the current outcomes, specifically the interaction of poor price transparency for consumers combined with poor incentives leading to vertical and horizontal externalities. Do you accept that this analysis is a valid assessment of the incentives of the market participants? Do you consider that the implications for consumers we draw are sound and represent a useful basis for assessing appropriate regulatory responses? If not, how would you categorise the relationships and motivation underpinning consumers and OCPs' behaviour?

Q4.3 We have identified five key areas of consumer detriment as a result of the poor transparency and poor incentives in the market: reduction in demand for NGC, relative prices not reflecting consumers' preferences; costly avoidance strategies; increased fraud risk and loss of service diversity; and the disproportionate impact these problems have for low income mobile only households when accessing essential services. Do you consider that this represents a comprehensive summary of the impact on consumers? If not, how should it be modified and why?

Q4.4 Do you consider that our assessment of the state of the market in the absence of ex ante regulation is a reasonable extrapolation of the evidence? If not, why?

Section 5

Network and service providers' experience

Introduction and summary

- 5.1 The provision of NGCs is what is sometimes called a “two-sided market”. OCPs and TCPs are the means through which consumers on one side, and SPs on the other side, interact and benefit from the service. Therefore, it is not sufficient to understand how consumers (i.e. callers and subscribers – henceforth consumers) fare under the current regime (Section 4), but we also need to take into account the effect on SPs. The two sides – callers and SPs – are interrelated and if the regulatory regime does not perform well on one side the other will also be negatively affected as well.
- 5.2 In addition, OCPs and TCPs allow the two sides to interact via their wholesale termination arrangements. Therefore, any concerns at the wholesale level may also feed through and affect the consumers' and SPs' experience.
- 5.3 In this Section we examine the current evidence on the experience of SPs, OCPs and TCPs both at the retail and wholesale level to complement the analysis of Section 4. This Section summarises evidence that is presented in Annexes 2 and 3.

Summary

- 5.4 SPs appear to benefit from the current provision of hosting services. However, SPs are adversely affected by the way in which the retail level operates with potentially serious implications for service availability and innovation currently and prospectively.
- 5.5 Removing NGC-specific regulation is likely to exacerbate these retail issues for both OCPs and SPs. Callers' poor price awareness is likely to be higher, which would intensify the features we already observe. Full deregulation is likely to result in BT behaving in a similar fashion to how other OCPs do today. SPs would thus have even less control over retail prices than they do at present.
- 5.6 At the wholesale level, absent regulation we consider that there are circumstances where the outcome of commercial negotiations between OCPs and TCPs may not be in consumers' interest.
- 5.7 The tariff package effect means that the extent to which NGC charges increase OCPs' overall profit level is uncertain. What is clear is that non-geographic call volumes are lower as a result of consumers' uncertainty about the price that they pay for these calls. This is a net loss to consumers and, potentially, a lost opportunity for OCPs.

Structure of this section

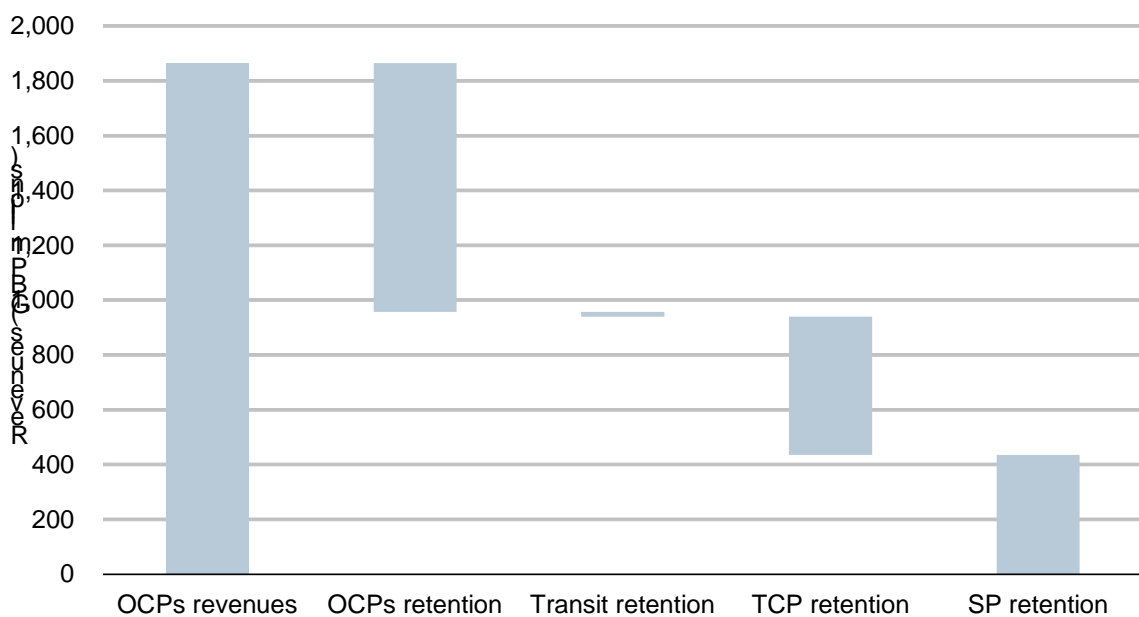
- 5.8 This Section is structured as follows:
- First we provide some background on the division of revenue between the parties

- Next we discuss the SPs' experience, covering:
 - Whether the provision of hosting services satisfies SPs' needs; and
 - The implications that the retail concerns have for SPs;
- Then, we discuss the OCPs' experience at the retail level as a consequence of the consumers' retail concerns identified in Section 4;
- For both SPs and OCPs in each case, we also examine how the issue impacting on them might operate in the absence of ex ante regulation;
- We then discuss OCPs' and TCPs' experiences at the wholesale level; and
- Last, we set out our preliminary views.

Division of revenue

5.9 Figure 5.1 shows how the retail revenue from NGCs was divided between the stages in the supply chain in 2009. Overall, 49% of the retail revenues generated by NGCs is retained by the OCP, 1% by the provider of call transit/conveyance, 27% by the TCP and 23% by the SP.⁷⁴ Clearly these proportions vary between different number ranges.

Figure 5.1: Division of retail revenues from NGCs (2009)



Source: 2010 Flow of Funds study, Fig. 5.17, all figures exclude VAT.

⁷⁴ The 2010 Flow of Funds study, page 39.

Service providers' experience

- 5.10 SPs' services are the reason why consumers make NGCs. There are two potentially important aspects to the SPs' current experience, which we discuss:
- In order to be able to deliver their services SPs purchase various hosting services and engage TCPs, who terminate calls to the SPs' service; and
 - The SPs' business is affected by the performance of the retail market – i.e. whether that is conducive for consumers to make NGCs.
- 5.11 Finally, we briefly discuss how SPs' experience might differ in the absence of NGC-specific regulation.

The provision of hosting services

- 5.12 The evidence available to us suggests that the hosting level currently appears to be operating well.
- 5.13 In the 2010 SPs survey, both the ultimate providers of the service in question (referred to as "IPs" or "information providers" in the 2010 SPs survey) and resellers/aggregators considered that they had sufficient choice of TCPs.
- 5.14 Furthermore, most SPs did not identify significant obstacles to switching provider or other problems with the operation of this level of the supply chain.⁷⁵ These views are consistent with the large numbers of TCPs operating in the market – i.e. in June 2009, BT interconnected with 158 TCPs.⁷⁶
- 5.15 A few smaller operators expressed some concerns about the arrangements for ported numbers. First, it is not possible for SPs to port non-geographic numbers between some TCPs.⁷⁷ Second, a reseller told us that SPs may no longer be able to receive a share of termination revenues if they port their non-geographic numbers between TCPs.⁷⁸ We are unsure whether this claim is representative of a more widespread issue and would welcome stakeholders' comments on this.
- 5.16 We recognise that obstacles to SPs porting their number increase switching costs for SPs at the hosting level, which would tend to hamper competition. It would also lead to a more inefficient use of numbers, as providers move to a new number along with their hosting provider, leaving behind unused numbers.
- 5.17 However, this level of the supply chain appears, based on the evidence available to us, to be broadly working well for SPs: TCPs are by large likely to be responsive to SPs' needs and to charge them reasonable prices.

⁷⁵ 2010 SPs survey, pages 17 and 26-27.

⁷⁶ Given BT's obligations regarding end-to-end connectivity and its historic position as the incumbent fixed operator, this is likely to be an accurate reflection of the number of TCPs/number of operators receiving a POLO. Source: BT response dated 23 June 2010 to question A8 of information request dated 2 June 2010

⁷⁷ A concern expressed in IPV6's and Alternative Networks' responses to the Call for Inputs. Similarly, in the 2010 SPs survey, one reseller stated that it was difficult to port numbers away from some firms (page 26). There is a fixed cost to putting in place porting arrangements between a pair of TCPs. As a result it is not commercially viable to establish porting arrangements if they are likely to be used infrequently. We explain this issue and respond to stakeholders' points in Annex 3.

⁷⁸ Tele-Lynx UK response to the Call for Inputs.

Consequences of the operation of the retail level

- 5.18 If the provision of NGCs does not deliver benefits for consumers, SPs will be negatively affected. Section 4 set out our current concerns about consumers' poor awareness of NGCs charges, which is likely to have a negative impact not only on consumers but also on SPs. This view is supported by the 2010 SPs survey.⁷⁹ Similar views were expressed by resellers.⁸⁰
- 5.19 The implications of the current retail concerns on the provision of NGCs to consumers for SPs fall into two broad categories:
- Reduced NGCs' volumes; and
 - SPs' lack of control over the retail price of NGCs.
- 5.20 The common concern is that the combination of these concerns will reduce incentives for SPs to invest in the underlying NGCs services, leading ultimately to diminished quality, service availability and innovation for consumers.

Diminished demand

- 5.21 Consumers are discouraged from making NGCs:
- 5.21.1 Because they face lack of transparency over the retail price and generally overestimate the retail price, both at the time of call and when facing subscription decisions; and
- 5.21.2 Because of the high (relative) charges for NGCs due to:
- a) Limited price transparency and consumers' poor awareness of retail charges for NGCs;
 - b) Spillover effects of high retail prices from one NGC number range into others (the "horizontal externality" discussed in Section 4); and
 - c) High mark-ups by OCPs (the "vertical externality").⁸¹
- 5.22 Reduced demand for NGCs is likely to have a direct negative effect on SPs' returns, negatively affecting their incentives to invest in the underlying services which ultimately will impact on consumers.^{82 83}

⁷⁹ 36% of SPs considered that there are problems with the current regulatory regime. The in-depth interviews suggest that these result from a lack of clarity of retail pricing as well as OCPs' retention. Source: the 2010 SPs survey.

⁸⁰ Source: 2010 SPs survey.

⁸¹ Moreover, consumers generally regard NGCs negatively and with suspicion. Analysis for PhonepayPlus in 2008 found that both SPs and consumers felt that a lack of price transparency was having a significant negative impact on consumer perceptions of phone-paid services. *UK Phone-paid services market: current conditions and future trends*, Analysys Mason for PhonepayPlus, December 2008, page 45. Available at: <http://www.phonepayplus.org.uk/upload/ResearchDec08AM.pdf>

⁸² Respondents to the 2010 SPs survey referred to the lack of clarity between the different types of NGC. They considered that non-geographic numbers used to be very useful and valuable, but that they are now complex and confusing. Similarly the consensus amongst resellers was that the current system is confusing for callers. See the 2010 SPs survey.

SPs' lack of control over retail prices

5.23 With a few exceptions, SPs are currently unable to set the retail price for calls to their service. In the case of calls originated by BT, SPs can select a number associated with a particular retail price. This gives SPs some degree of control over the retail price charged by BT.⁸⁴ However, for OCPs other than BT, SPs do not have control over the retail price unless it reaches an agreement with the OCP.⁸⁵ This has a number of consequences which we discuss in turn below:

- SPs cannot advertise their charges to consumers in a transparent way;
- Retail prices may not be set at a level that reflects SPs' preferences;
- Consumers are unaware of which party is responsible for setting retail charges and, hence, they will be unclear as to whom to address any complaint they may have (see Box 5.1 below); and
- Price competition between SPs is hampered and their incentives to invest and innovate are reduced.

SPs can only advertise limited price information

5.24 SPs' lack of influence over the call price and the ranges of retail prices for their services make them unable to provide a clear pricing message in their promotional material. This is because each OCP could, and often does, charge a different retail price. As a result, SPs are unable to provide a key piece of information to consumers in a clear and timely way. Rather, SPs typically provide a message such as "calls cost 10ppm from a BT landline, costs from other providers may vary and mobile may be considerably more". For a large proportion of consumers (all those that have not chosen BT as their OCP), therefore, this does not provide them with useful price information.

Retail prices do not reflect SPs' preferences

5.25 OCPs may charge a much higher retail price than that preferred by the SP.⁸⁶ Where OCPs set high margins on NGCs, this increases the retail price of calls, therefore reducing demand for the SPs' services.

⁸³ This is interrelated with declining volumes over time and the 2010 Flow of Funds study estimated that total retail revenues from non-geographic calls fell by 7% between 2008 and 2009. See the 2010 Flow of Funds study.

⁸⁴ However, BT can change its standard call set up fee or change the retail discounts that it offers. If BT increases the discount it applies to the retail price then this reduces the termination rate paid to the TCP by a corresponding amount. Similarly if BT increases its call set up fee this increases the termination rate paid to the TCP.

⁸⁵ Such agreements have occurred for some 080 calls. The MCPs have agreed not to charge for calls to some charities. The Department of Works and Pensions has entered into a commercial arrangement with the MCPs under which it makes a payment to the MCPs and, in return, the MCPs do not charge for calls to certain of its services. The above arrangements, however, only apply to a limited number of calls. In the 2010 SPs survey only 5% of SPs indicated that they have an influence over the retail price. See the 2010 SPs survey. For the majority of calls, the OCP sets the retail price of calls to a particular non-geographic number without taking into account the preferences of the SP. The OCP generally does not take these negative consequences for the SP into account when setting its retail price. We refer to this effect as the "vertical externality" in Annex 2.

⁸⁶ With the exception of BT due to the pricing obligations in the NTNP.

5.26 Concerns have been expressed about the high (relative) prices for NGCs:

5.26.1 In research carried out for PhonepayPlus and published in December 2008⁸⁷, the prices charged for NGCs from mobile phones were widely considered to be a source of consumer mistrust and bill shock. They were also criticised by stakeholders at all positions along the value chain (apart from mobile OCPs); and

5.26.2 Respondents to the 2010 SPs survey expressed concern about this issue and, in particular, expressed strong concerns about the retail prices charged by mobile OCPs.⁸⁸

5.27 We asked mobile OCPs for the price of a three minute call to a specific 080 number (more precisely a call to the sales line for new customers joining a bank) under their most popular tariff plan⁸⁹. The results are set out in Figure 5.2. If the bank (the SP) selected a 080 number to offer free access to new customers, this preference is not reflected in the retail prices charged by mobile OCPs.

Figure 5.2: Price of three minute 080 call

	O2	Orange	T-Mobile	Virgin Mobile	Vodafone
Pre-pay tariff	45p	75p	120p	30p	75p
Post-pay tariff	60p	45p	120p	60p	60p

Source: Responses to s135 notice dated 25 May 2010, Section A, question 6.

5.28 Similarly, Figure 5.3 below shows the price of a three minute call to various Directory Enquiries services. A Directory Enquiries provider is able to select a particular price point only for calls retailed by BT. Other OCPs need not abide by the SPs' preference and instead set a variety of retail prices.

⁸⁷ *UK Phone-paid services market: current conditions and future trends*, Analysys Mason for PhonepayPlus, December 2008, <http://www.phonepayplus.org.uk/upload/ResearchDec08AM.pdf>

⁸⁸ For example, one respondent claimed that "It is the fault and actions of the MCPs and the non-geographic number/premium rate service industries are taking the blame. MCPs are taking 32p out of 40p in total call cost, and they are providing no added value." 2010 SPs survey, page 31. See also page 23

⁸⁹ i.e. the residential package which had the greatest number of subscribers.

Figure 5.3: Comparison of price of 3 minute call to Directory Enquiries services from BT and various mobile OCPs, pence.

Service	BT	T-Mobile	Orange	H3G	Vodafone	O2
118 111 (Onetel)	109	225	No data provided	341	No data provided	450
118 118 (The Number)	246	600	302	341	600	450
118 212 (Maureen)	136	450	527	245	600	450
118 500 (BT)	171	450	527	341	600	450
118 800 (Connectivity)	397	600	527	341	600	450
118 811 (The Number)	154	450	165	341	No data provided	450
118 888 (Conduit)	50	195	No data provided	341	600	450
Numbers Direct	347	600	349	341	285	450

Source: TNUK 10 August 2010 Submission, Table 4 (selected entries only)

Unclear division of responsibility

- 5.29 Under the current arrangements consumers do not know who is responsible for setting the retail price of a NGC – see box 5.1 for an example.

Consumer experience Box 5.1

Ofcom received a complaint from a member of the public that was charged a significant amount for a mobile call to a Directory Enquiries service. Upon receiving their bill, the caller contacted the Directory Enquiries provider who advised them that a significant proportion of the charge was a result of the mobile CP marking up the price of the call. However, the mobile CP categorically denied applying a “surcharge” to Directory Enquiries calls.⁹⁰

- 5.30 SPs thus risk being blamed for high prices, with the attendant loss of customer goodwill, even where they are not necessarily responsible for the retail price.

Competition between SPs, where possible, is impeded

- 5.31 There is the potential for effective competition between some SPs⁹¹ – e.g. for services such as Directory Enquiries, horoscopes, chatlines, etc.⁹² However the

⁹⁰ Ofcom case reference 1-157686424.

⁹¹ In principle, call prices could be constrained by callers switching to alternatives such as geographic numbers, contacting the SP via the internet or visiting the SP in person. However, as explained in

effectiveness of competition is being diminished by the SPs' inability to control their retail prices.

- 5.32 Mobile originated calls are important to Directory Enquiries providers.⁹³ We were provided with the retail prices charged by twelve different Directory Enquiries services for calls originating from BT. These retail prices were selected by the Directory Enquiries provider and each of the twelve Directory Enquiries providers chose a different price point. In contrast, mobile OCPs set fewer price points. Most starkly, O2 set the same price for all twelve services. As a result, for an O2 customer there is no retail price competition between different Directory Enquiries providers. Similarly, Vodafone set the same price for all but its own supplier. While other MCPs set more price points, there was still less price variation than for calls from BT.⁹⁴ While this issue is particularly stark in the case of Directory Enquiries calls, other number ranges are similarly affected.⁹⁵
- 5.33 This dampens price competition between SPs. Even if a SP wished to reduce its retail price in order to win business from rival SPs, there would be no guarantee that the price cut will be passed on by OCPs. Price competition then becomes ineffective in attracting business. Further, it also discourages investment and service innovation by SPs. For example, a Directory Enquiries provider that wished to offer a lower priced 'no frills' service may have no alternative to price it at the same level as a high quality service.⁹⁶ We have been provided with examples of Directory Enquiries providers being discouraged from implementing price changes as a result of their inability to control the retail price.⁹⁷

Environment for SPs absent ex ante regulation

- 5.34 SPs are currently suffering detriment as a result of diminished demand for NGCs and their inability to control the retail price of calls to their service. There is no evidence or obvious line of argument which demonstrates that, in the absence of ex ante regulation, this situation would change. In fact, we would expect the overall situation to be worse as it is likely that BT would no longer offer the current level of predictability (Annex 2).

Annex 2, only a minority of respondents to the 2010 Consumer research were aware of any alternatives to calling non-geographic numbers.

⁹² Obviously for some other services competition between SPs is likely to be weak. For example, it is not feasible for a caller that wishes to contact their bank or their utility provider to contact a different SP. In 2005 we estimated that 45-55% of 0870 calls and 30-40% of 0871 calls were made by callers that were "locked in" to a particular SP. *Number Translation Services: A way forward (2005)*, paragraph 5.74.

⁹³ The 2010 Flow of Funds study suggests that 29% of DQ minutes were originated from mobiles in 2009 (see 2010 Flow of Funds study, Figure 1.5 on page 6). TNUK told us that [3<] of calls to its 118 118 service came from mobiles. *Discussion of competition and consumer policy concerns in the DQ market*, CRA for TNUK, 10 August 2010, page 21.

⁹⁴ *Discussion of competition and consumer policy concerns in the DQ market*, CRA for TNUK, 10 August 2010, Tables 1 and 2 on pages 6-7.

⁹⁵ For example, O2 told us that it sets a single price for the various 08 number ranges. For 09 calls it sets five price bands. Source: O2 response dated 30 June 2010 to informal information request dated 21 June 2010, OCP question 5.

⁹⁶ For example, calls to TNUK's main service (on 118 118) cost £1.29/call plus 39ppm from BT. Calls to its limited functionality service (on 118 811) cost 50p/call from BT. However these two services are priced identically by O2, Vodafone and H3G. *Discussion of competition and consumer policy concerns in the DQ market*, CRA for TNUK, 10 August 2010, page 17 and Table 1 on page 6.

⁹⁷ Specifically shifts from pence per minute charges to greater per call charges. Submission from TNUK dated 24 August 2010, pages 2-3.

OCPs' experience at the retail level

- 5.35 At the retail level, the presence of current regulation on BT makes its position different from that of other OCPs.
- 5.36 As explained in Section 2, BT's retail pricing is currently constrained by the price guidance described in the Numbering Plan (See Figure 2.1). In addition, as a result of BT's wholesale position, BT is subject to the NTS Call Origination Condition. This applies to the majority of NGCs originated by BT and limits the amount that BT is able to retain.⁹⁸ As a consequence, BT's incentive is not to set high retail NGCs prices, since an increase in its retail price does not affect the retail margin that it is able to retain.
- 5.37 In contrast, the retail pricing of other OCPs is largely unregulated, although they are subject to various requirements to provide retail price information (e.g. OCPs must include a PCA on 080 calls that involve a charge to the caller). The margins that other OCPs are able to earn on NGCs are determined by the extent of competition, rather than by regulation.
- 5.38 In Section 4 we put forward our belief that OCPs' retail behaviour is heavily influenced by three related market failures: lack of easily accessible price information and consumer awareness; vertical externalities in terms of coordination between different elements in the value chain, particularly the SPs and OCPs; and horizontal externalities from the impact of individual OCP and SP behaviour on the market as a whole.

OCP revenues and volumes

- 5.39 Mobile OCPs currently account for relatively low volumes of NGCs and they appear to have substantially higher charges. Fixed OCPs generate higher volumes of NGCs while their charges are lower than those of the mobile OCPs, they are still relatively high compared to other calls. A number of pieces of evidence point towards this view:
- According to the 2010 Flow of Funds study, NGCs accounted for 20% of all fixed call minutes in 2009 but 23% of all call revenue. If 080 calls are excluded, that 23% of call revenue came from 13% of fixed call minutes.⁹⁹ As a result, even in the case of fixed OCPs, NGCs are (on average) relatively more expensive than geographic calls. This is starker in the case of NGCs originated by mobile OCPs; According to the same study, NGCs accounted for 3% of mobile voice call minutes and 5.6% of total mobile call revenues in 2009¹⁰⁰; and
 - However, it is unsurprising that many NGCs retail prices are higher than other call types, given that many also support a degree of revenue sharing with the SP.
- 5.40 An OCP's retention refers to the amount of the retail call price that it retains, after deducting payments to TCPs and transit providers. As shown in Figure 5.1 above, OCPs retained 49% of the retail revenue generated by NGCs in 2009 (excl. VAT). However, within this aggregate figure there are significant differences between fixed

⁹⁸ Specifically it applies to calls to 0500, 080, 082, 0843/4/5, 0871/2/3 and 09 numbers.

⁹⁹ See the 2010 Flow of Funds study.

¹⁰⁰ We recognise that attributing the monthly subscription charge for post-pay mobile subscribers between different mobile services is not straightforward. The 5.6% figure from the 2010 Flow of Funds study excludes mobile OCPs' SMS and MMS revenues but includes revenue from other calls and charges. Source: the 2010 Flow of Funds study.

and mobile OCPs, as shown by Figure 5.4 below. On average a mobile OCP retains 13.3ppm on a NGC while a fixed OCP only retains 1.7ppm. As a result, mobile OCPs account for only 11% of NGC volumes but account for 49% of OCPs' retention.

Figure 5.4: OCP retention from NGCs (2009)

	Fixed OCPs	Mobile OCPs	Total
Retention	£463m	£443m	£906m
Call volumes	27.5bn	3.3bn	30.8bn
Average retention	1.7ppm	13.3ppm	

Source: Ofcom calculations based on data from 2010 Flow of Funds study

5.41 These figures do not necessarily imply that OCPs are earning unduly high profits overall. In the presence of effective retail competition high margins on NGCs are likely to be used to support lower margins on other products, such as cheaper geographic calls or lower monthly subscriptions (we termed this effect the “tariff package effect” – see Annex 2). However, Section 4 highlighted that we may be concerned that high NGCs charges are the result of underlying market failures.

Consequences of consumers' difficulties

5.42 The difficulties faced by consumers also affect OCPs. As explained in Section 4, the lack of price transparency has implications for the OCPs. While this allows OCPs to increase their NGCs charges, where the tariff package effect may lead to lower charges for other services, and overall it is unclear whether OCPs' overall profits are increased and, if so, by how much.¹⁰¹ If the tariff package effect is complete – i.e. what OCPs gain from higher NGCs charges they compete away in cheaper charges for other services– then there is no overall increase.

5.43 In Section 4, we argued callers are discouraged from making NGCs, as a result of uncertainty about the price and their overestimation of NGC charges (including the horizontal externality). This reduction in demand has a negative impact on OCPs. As a result OCPs are foregoing revenue that they would earn if callers did not overestimate NGCs charges and instead made more of these calls. Hence, OCPs would be better off if consumers did not overestimate NGC charges and were more confident about the price. This loss of NGCs' revenues may mean that, via the operation of the tariff package effect, prices for other services may also be higher than otherwise.

5.44 Thus the overall impact on OCPs' overall returns seems ambiguous. There may be a positive effect as a result of the lack of price information translating into higher NGCs charges (although this effect diminishes if the tariff package effect is strong, since the majority of the profits from NGCs are used to support lower prices for other services). This is counterbalanced by a clear negative effect on OCPs' profits as a result of the negative impact on demand for NGCs which is influenced by consumers' uncertainty and overestimation of call prices.

¹⁰¹ Note that an individual OCP is incentivised to increase its price, even if there is little effect on OCPs' overall aggregate profits. An individual OCP that lowers its NGC prices is unlikely to win much additional business, as a result of callers' poor price awareness, and is likely to be disadvantaged because it has to increase its charges for other, more prominent services, such as geographic calls.

OCP behaviour absent regulation

- 5.45 If there were no regulatory obligations on BT's retail pricing and on BT's retention, we would expect to see BT behave more like other fixed OCPs. In particular, it is likely that there would be a rebalancing of BT's retail prices, namely higher charges for NGCs and lower charges for other services.
- 5.46 Assuming the removal of current constraints on BT, it would also be expected to affect the other fixed OCPs' prices for non-geographic calls. Overall the impact of this different balancing on OCPs' profitability is likely to be small, although it seems plausible that BT's commercial position would be improved relative to other fixed OCPs.

OCPs' and TCPs' experience at the wholesale level

- 5.47 We have so far examined experiences at the retail and hosting levels. However, we also need to examine the operation of the wholesale level. At the wholesale level, TCPs charge termination rates to OCPs or, in the case of some 080 calls, make a payment to the OCP. Transit operators also ensure connectivity between TCPs and OCPs, although we do not discuss their experience in this document.

Current operation of the wholesale level

- 5.48 The proportion of retail charges that BT retains for originating many NGCs is limited as a result of the NTS Call Origination Condition. As a result, the termination rate that BT pays to other TCPs for these calls is heavily influenced by regulation.

Figure 5.5: Current regulation of termination rates

OCP	TCP	Termination rate
BT	Non-BT	Numbers covered by NTS Call Origination Condition:* termination rate heavily influenced by regulation (termination rate is BT's retail price minus regulated retail margin) 03, 055/6, 070, 076, 0870: termination rate is unregulated**
Non-BT	BT	Termination rate is unregulated** Historically BT has generally charged the same termination rate as if it originated the call (and, for most number ranges, that rate is heavily influenced by regulation – see above). Since OCPs have the option of transiting traffic via BT, this also constrained the termination rate OCPs pay for calls not involving BT. For some number ranges, BT is choosing to set higher graduated termination rates linked to retail pricing
Non-BT	Non-BT	Termination rate is unregulated** Historically, for calls that transited BT's network, the termination rate was the same as if BT originated the call (i.e. heavily influenced by regulation on most number ranges – see above). This reflected the way in which BT's billing system operated. Recently BT has introduced processes to charge WOCs the termination rate set by the TCP

* 0500, 080, 082, 0843/4/5, 0871/2/3 and 09 are covered by NTS Call Origination Condition.

** “Unregulated” in this Figure refers to the absence of ex ante obligations regulating the termination rate, but as discussed below regulation may influence or set prices in dispute resolution, e.g. for calls to 0870 numbers.

- 5.49 Figure 5.5 shows that the termination rate paid by BT is heavily influenced by regulation and, historically, for a number of reasons the same termination rate has generally applied to all types of calls. However, these arrangements are increasingly breaking down. For calls originated by parties other than BT, in particular for calls that are terminated by BT, TCPs are increasingly diverging from the rates that apply when BT originates a NGC. The current experience at the wholesale level is thus one of recurring disputes between OCPs and TCPs.
- 5.50 A consequence of this has been an increased number of disputes over the last few years¹⁰². Current termination rates are thus heavily influenced by the regulator's (Ofcom's) view on what the appropriate level of termination rates is.
- 5.51 Rather than examining what the current experience is today (which will be also discussed in detail as part of the disputes) it is more useful to understand what would be the outcome absent ex ante regulation and whether this could raise concerns about the impact on consumers (and SPs).

Wholesale outcomes without ex ante regulation

- 5.52 Without ex ante regulation the controls on BT's retention specified in the NTS Call Origination Condition would be lifted. The termination rate for calls originated by BT would thus no longer be directly regulated. Rather, OCPs and TCPs would have to negotiate over the level of termination rates.
- 5.53 To ensure consistency with our approach to other termination charges we put aside the possibility of Ofcom involvement via our dispute resolution powers. OCPs and TCPs would need to determine termination rates through commercial negotiations. The outcome would depend on the strength of the negotiating positions of the particular parties involved, rather than one side consistently being in a strong position. Different OCPs and TCPs are likely to be in different commercial positions. As a result, commercial negotiations are likely to produce a range of termination rates that depend on the identity and position of parties involved. Annex 3 identifies the following factors that influence negotiating strength:
- OCPs accounting for a high share of wholesale call origination are likely to be in a stronger position than OCPs accounting for a low share of call origination;
 - Similarly, TCPs accounting for a high share of termination are likely to be in a stronger position than TCPs accounting for a low share of termination; and
 - Vertically integrated firms are likely to be in a stronger position than vertically separate firms of comparable size.
- 5.54 In our view, BT is likely to be in a strong position, both in its role as an OCP and its role as a TCP. We also consider that C&W, the second largest TCP, is also likely to be in a strong position when negotiating with smaller OCPs (albeit not when negotiating with BT). Similarly, TalkTalk and Virgin Media, the second and third

¹⁰² Since 2009, we have considered disputes about the termination rates charged for 0870 calls (June 2009), 080 calls (February 2010) and 0870 and 0845 calls (April 2010). We are currently considering disputes in relation to the termination rates charged for 03 calls and 080 calls.

largest OCPs, are likely to be in a strong position when negotiating with smaller TCPs (albeit not when negotiating with BT). Therefore, we consider it likely that the termination rates that result from commercial negotiations would vary depending on the identity of the OCP and the TCP. Mobile OCPs account for a smaller share of non-geographic call origination, compared to calls more generally. Nonetheless Everything Everywhere, Vodafone and O2 may be in a strong position when dealing with the smallest TCPs (although not larger TCPs such as BT and C&W).

- 5.55 Critically, we are not confident that the termination rates that would arise absent involvement by Ofcom are likely to lead to desirable outcomes for consumers. In particular:
- Some OCPs may be able to drive termination rates down to a particularly low level. In the long run this would result in detrimental effects for SPs, harming service provision and innovation, which are not offset by significant benefits for callers;
 - Some TCPs may be able to set high termination rates that allow SPs to exploit features such as weak competitive constraints on the price of their service. This results in higher retail prices for non-geographic calls. If competition in hosting is effective, the proceeds are likely to be passed through to SPs. This is the opposite of the outcome described in the preceding bullet point – it results in the balance of prices between callers and SPs being tilted in the SPs' favour.
 - Different TCPs are likely to negotiate different termination rates. Over the longer term, this asymmetry between TCPs is likely to lead to consolidation in hosting. This potentially harms competition at that level, which would have detrimental impacts for both SPs and callers.

Preliminary views

- 5.56 SPs appear to benefit from the current provision of hosting services. However, SPs are adversely affected by the way in which the retail level operates, with potentially serious implications for service quality, availability and innovation, both currently and prospectively. In particular, the following concerns are particularly important for OCPs:
- Demand for NGCs is reduced; and
 - Further, SPs have little ability to control the price of calls to their services.
- 5.57 Removing NGC-specific regulation is likely to exacerbate these retail issues for both OCPs and SPs. Callers' poor price awareness is likely to worsen, which would intensify the features we already observe. Further, the removal of regulation is likely to result in BT behaving in a similar fashion to how other OCPs do today. SPs would thus have even less control over retail prices than they do at present.
- 5.58 At the wholesale level currently, absent regulation we consider that there are circumstances where the outcome of commercial negotiations between OCPs and TCPs may not be in the consumers' interest.
- 5.59 The tariff package effect means that the extent to which NGC charges increase the overall profit levels of the OCPs is uncertain. What is clear is that non-geographic call volumes are lower as a result of consumers' uncertainty about the price that they pay

for these calls. This is a net loss to consumers and, potentially, a lost opportunity for OCPs.

- 5.60 In the following sections we consider potential remedies for the retail level concerns that we have identified.

Questions on the assessment of the providers' experience

- 5.61 The following questions relate to the analysis set out in this Section and Annex 3:

Q5.1 Do you consider that the analysis set out in this Section and in more detail in Annex 3, fairly represents the wholesale relationship and issues in this market? If not, why?

Q5.2 Specifically, do you agree with our assessment of the market experience for SPs', including in hosting markets? Do you agree with our assessment of SPs' concerns about price transparency and the impact on their incentives? If not, how would you characterise the market from the SPs' perspective?

Q5.3 Do you agree with: our assessment of the OCPs' incentives and behaviour and our preliminary views of the outcome for OCPs under the current market conditions? Are there other factors we should take account of in our analysis? How complete do you consider the tariff rebalancing effect would be in the event of any changes to retail prices, and what impact might any reduction in NGC prices have on consumers?

Q5.4 Do you agree with our assessment on the complexity of the market relationships between OCPs and TCPs and the balance of bargaining power summarised in this Section and set out in detail in Annex 3? If not, what factors do you consider this analysis should include or give a different weight to?

Q5.5 Do you consider that our assessment of the state of the market in the absence of ex ante regulation is a reasonable extrapolation of the evidence? If not, why?

Section 6

Options for the future of non-geographic calls services

Introduction

- 6.1 Sections 4 and 5 summarise our assessment of the impact that the current regulatory regime (the *status quo*) has on the market participants, and in particular consumers. This assessment is set out in full in Annexes 2 and 3.
- 6.2 We have found that the current operation of the market leads to significant market failures that generate substantial consumer detriment, particularly with respect to the most vulnerable.
- 6.3 As discussed in Section 4, our preliminary view is therefore that maintaining the *status quo* would not further consumers' and citizens' interests in relation to non-geographic call services.
- 6.4 We have also considered (in Sections 4 and 5) how the market would work in the absence of ex-ante regulation. Based on that analysis, our view at this stage is that a market with no ex-ante regulation is likely to exhibit the same areas of market failure as those that currently exist, but that these are likely to become more pronounced in terms of their harm to consumers.
- 6.5 We are, therefore, of the view that a substantially restructured regulatory regime is required. In this section, we summarise our assessment of the different options we have considered, and present our preliminary views as to our preferred approach. The full assessments are set out in full in Annexes 4 to 7.
- 6.6 In this section we first briefly set out our assessment of why intervention is warranted and the nature of the market failures that needs addressing. We then identify the main policy options for reform of pricing for NGC. Following this, we consider how the policy should be applied to individual number ranges and where exceptions to the standard approach may need to be made. Finally, we consider other issues raised by stakeholders not directly otherwise addressed.

Market failures

- 6.7 As set out in Section 4, we have identified three interrelated market failures that generate the substantial consumer detriment currently associated with non-geographic call services:
- Poor consumer price awareness;
 - Price setting behaviour that supports neither the interests of callers nor service providers by deterring price competition and innovation (the “vertical externality”); and
 - Due to the OCPs' (and to a lesser degree SPs') limited incentives to protect the reputation of both individual number ranges and the non-geographic

numbers as a whole a general reduction in confidence and understanding of the non-geographic number system (the “horizontal externality”).

- 6.8 These effects reinforce each other. For example, callers’ poor price awareness makes it easier for OCPs to sustain high retail margins on non-geographic calls, which exacerbates the vertical and horizontal externalities.
- 6.9 These market failures create a number of harmful consequences for callers:
- A reduction in demand for non-geographic calls, particularly from mobile phones;
 - Relative prices of geographic, non-geographic calls and other telephony services not reflecting consumer preferences;
 - Burdensome avoidance strategies and, loss of, or reduction of access to service, particularly for low income households;
 - Increased risk of fraud; and
 - The loss of service diversity and innovation as SPs lack the incentives to invest and compete in the market.
- 6.10 It is clear that the level of consumer detriment associated with non-geographic calls is substantial. Although it is very difficult to meaningfully quantify the impact of all the causes of consumer detriment we identified, our limited and illustrative estimation in Annex 2 suggests that for a limited selection of number ranges and solely focusing on the impact of price overestimation consumer detriment is likely to be in excess of £500m per annum. Recognising the other factors that lead to consumer detriment, this estimate, therefore, very much represents a lower bound.
- 6.11 The interrelated nature of the market failures require us to consider remedies that both address specific problems consumers face with respect to individual number ranges, and also ensure that there is a collective improvement in consumer understanding and confidence in the system.
- 6.12 At a holistic level, we consider that we need to examine options to amend the overall NGC framework to achieve a more intuitive division of call types; simplicity in the presentation of pricing information; fewer opportunities for fraud and; where possible, removal of existing points of confusion.
- 6.13 Each of the options has been assessed against a clear set of criteria (discussed in detail in Annex 7) derived from our primary objective of promoting consumer welfare. We have identified the following assessment criteria:
- i) **Transparency/consumer price information:** In order for consumers to make choices that are in their interest they need to have a sufficient understanding of the prices involved. If inadequately informed, they would not be in a position to make the best choices both when they choose a contract with a communications provider, and when they choose to make a phone call. In addition, providers could take advantage of the lack of price information and increase their prices or lower the quality of their services;
 - ii) **Price to reflect consumer preferences:** we would want consumers to benefit from prices for NGCs that reflect, as closely as possible, a competitive outcome

in terms of their preferences, so that prices should not distort the relative consumption of NGCs, GCs and other elements of the voice telephony bundle of services. That is consumers should be able to choose freely between services based on clear price information so that their choices reflect the value they place in the services;

- iii) **Service quality and variety:** consumers vary in terms of their preferences with regard to the type and the quality of services. Therefore, it is important to ensure that the regulatory environment encourages providers to offer the range of services that consumers demand, and to seek to provide new services through innovation;
- iv) **Access to socially important services:** some NGCs numbers are used to deliver socially important services, such as access to welfare services (both government and charities), doctors' surgeries and employment services. In our view, it is particularly important to ensure that "vulnerable" citizens and consumers do not run the risk of being excluded from using these services; and
- v) **Regulatory burden and policy choices:** a framework that is costly to manage introduces inefficiencies into the system that potentially impose costs on both providers and consumers.

- 6.14 We set out below a summary of the analysis of the main options that we have considered. A fuller discussion of the analysis is provided in Annexes 4 to 7.
- 6.15 The analysis in Section 4 and supporting Annexes indicated that if the current regulatory structure were left in place, there is no strong reason to expect the consumer problems identified to be addressed. Concerns about price transparency, the suppression of service competition and innovation, and the continued undermining of the reputation of number ranges would be expected to continue along their current paths.
- 6.16 We also should note that some stakeholders have suggested that the appropriate point for us to intervene is at the wholesale level, without the need for further intervention at the retail level. In Annex 4 we consider two wholesale-level approaches:
- Variable termination rates: Introduction of termination rates that are linked with retail prices; and
 - Regulating termination: Regulation of the level of termination rates.
- 6.17 Our view at this stage, as set out in Annex 4, is that wholesale options alone would not address the market failures and consumer concerns identified.
- 6.18 For variable rates we consider it unlikely that the industry would be able to establish a coordinated approach to variable termination charges which addresses the three market failures or the consumer concerns we have identified.
- 6.19 This is because the suitability of this option is dependent upon the incentives of TCPs and SPs, and the behavioural responses of OCPs. There is a risk that those incentives are not aligned (across TCPs/SPs, within number ranges, with consumer preferences), and the behavioural response by OCPs is complex to both predict and incentivise. Therefore the outcome is uncertain and dependent upon these factors, meaning there is no reason a new equilibrium set of charges would reflect the

preferences of SPs, TCPs, OCPs or consumers and may fail to address the market failures identified (i.e. lack of price awareness, vertical and horizontal externalities).

- 6.20 Variable termination charges are, at best, an indirect way of achieving the desired outcomes, such as improved price awareness and a better structure of prices. However, there is a great deal of uncertainty regarding the impact and the incentives they create. These points apply whether variable termination charges are industry-led or driven by regulation. We therefore consider that there are likely to be significantly more effective ways to address the market failures and concerns in NGCs and promote improved outcomes for consumers.
- 6.21 Equally, with respect to controls on termination rates that cap such charges, we have until recently had a system where there were effectively de facto caps. It was under this system that the consumer problems emerged and therefore, there would seem to be no reason why a stronger cap would address the retail level concerns that we have identified.
- 6.22 Accordingly, we have focussed our proposals on retail intervention. We have examined the potential policy options in two steps. First, we have looked at options that potentially apply across the full range of NGC numbering ranges. Then, recognising that the problems associated with different number ranges can vary substantially, we have looked at whether there are certain NGC number ranges that should be treated differently in terms of the proposed policy interventions. This Section consequently continues by focusing first on the wider reaching options, before turning to consider whether specific approaches are required for some particular number ranges.

High level options to address market failures

- 6.23 The central policy options that might be applied across the range of NGCS numbers can be grouped under the following headings:
- Deregulation – removal of ex ante regulation governing the supply and pricing of non-geographic calls with the aim of allowing the market for such calls to achieve a natural equilibrium. This would be implemented if we considered that the competition in the market would alone address market failure and that current regulation was blocking the development of a beneficial new equilibrium;
 - Improved price awareness measures - this option focuses on mechanisms that would provide more effective point of use price information, such as pre-call announcements, to ensure consumers have pricing information available whenever calls are made;
 - Maximum prices - Setting maximum limits to the prices that can be charged for calls in each number range, the charges varying by number range; and
 - Unbundled tariffs –NG calls effectively combine two services: one from the service provider (the primary service), the other from the phone company (enabling access to the service provider), though consumers are generally unable at present to disentangle which element of the overall call price goes to each. This option separates the retail price of a non-geographic call into the two elements.
- 6.24 Under most of these broad options, there is a wide range of permutations in terms of their precise application. These issues are covered in the detailed analysis in

Annexes 4 to 7. In this Section we summarise the advantages and disadvantages of each broad approach, and explain our initial recommendations.

Deregulation

- 6.25 Given the overall level of competition in the retail market of telephony services, it is natural to consider whether the removal of existing ex ante regulations would encourage a change in the nature of competition for these services in a direction that would deliver an improvement in consumer outcomes. There is, in fact, a model of competition in the market at present, namely mobile short codes¹⁰³, which suggests that non-regulated competition can deliver services which are similar to that provided by non-geographic calls.
- 6.26 However, our analysis suggests that the mobile short code structure operates effectively because of its relatively small size and control by the mobile companies. With respect to the broader non-geographic market with its wide range of services and service providers, our analysis, set out in the earlier sections and Annexes 2 and 3, suggests that the incentives in the market can work against the interests of consumers.
- 6.27 Our views, set out in the Annexes, is that rather than improve consumer outcomes, if anything, the market failures identified in the current market would be further exaggerated by deregulation. The nature of the three main market failures is such that the interrelationships encourage the current poor consumer outcomes and could only be addressed with coordinated action across a large number of market participants. In the absence of policy intervention, there are no market mechanisms that appear likely to change these incentives on the OCPs and SPs.

Price information remedies

- 6.28 Up to now, many of Ofcom's initiatives have focussed particularly on price transparency. A number of requirements for the provision of price information are currently in place, as set out in Section 2.
- 6.29 The analysis we have presented so far demonstrates that this approach is not sufficient.
- 6.30 We have examined other options. Our recent behavioural economic experiments have highlighted the benefits of point of call information remedies, with pre-call announcements (PCAs), in particular, standing out as potentially highly effective. Many respondents to the Call for Inputs also raised PCAs and similar remedies as worthy of review.
- 6.31 However, as discussed in Annex 4, as a stand-alone option this does not adequately address the market failures identified.
- 6.32 One key weakness is the cost and complexity. Under the current system, PCAs would require OCPs to maintain large and complex systems able to provide customer specific pricing information prior to call connection. In previous reviews we have identified the cost of such systems in the current structure of pricing to be prohibitive and considered that there were significant risks that they would interfere with

¹⁰³ Mobile short codes are a set of mobile only numbers in which services are offered for a charge which is fixed across all mobile companies though the mobile companies also charge their connection fee

automatic machine to machine calls which are used to support emergency alarms and other critical systems.

- 6.33 Putting aside the cost, we also note that price transparency is not the sole point of failure in the market. Simply improving point of call information would not address the incentives on OCPs and SPs that lead to the vertical and horizontal externalities we consider are present. While price transparency would expose OCP pricing to greater scrutiny, it may not be sufficient to overcome the other incentives to increase charges.

Maximum prices

- 6.34 The initial appeal of setting maximum prices for NGC calls is clear. Maximum prices would ensure that callers' maximum expenditure on calls was constrained. At present, callers can face very high prices for calls to some numbers yet not be fully aware of the extent of the charge. A maximum charge would reduce the risk of bill shock that arises from consumers being unsure about call prices. This approach could be adopted using the revised EU Framework.

- 6.35 Maximum prices would also aid in improving consumer awareness of call prices, as the maximum price limit could be more easily communicated than actual prices currently are. Unlike the present situation, there could be a central point of information about a maximum charge to a given number. Equally, communications about charges on advertising could be less ambiguous. We would move away from the current formulation of the pricing message used by service providers:

'This call will cost £X ppm on a BT line, possibly more on other landline provider and possibly considerably more on mobile'

to a maximum statement true for all phone companies:

'Calls to this number cost no more than £X ppm from all networks'

This presentation would be considerably simpler than the variation in price callers are faced with today, with a range of many hundreds of prices for these services.

- 6.36 Many respondents to the Call for Inputs called for a form of maximum retail prices:
- BT believed the call pricing requirements in the NTNP should apply to all communications providers;
 - C&W considered that the 'ideal outcome' would be requiring the retail price of non-geographic calls to be within an acceptable price range (i.e. both minimum and maximum prices);
 - The Federation of Communication Services (FCS) considered that retail price maxima would be one way of achieving greater price transparency¹⁰⁴;
 - FleXtel considered that one potential remedy could be maximum retail prices; and
 - IPV6 favoured maximum prices for all CPs based on the limits on BT specified in the NTNP.

¹⁰⁴ FCS response dated 28 May 2010 to the Call for Inputs.

- 6.37 In addition, in the 2010 Consumer research survey we asked consumers for their views on maximum retail prices. 35% said that this would make them feel more comfortable while 39% said that it would make no difference¹⁰⁵.
- 6.38 Finally, SPs were asked in the 2010 SPs survey how desirable it would be to inform callers of the maximum price they could be charged. Respondents were equally divided on this, apart with regard to calls to 09 and 118, where there was a strong preference for a maximum charge.¹⁰⁶
- 6.39 While there are clear points in favour of this approach to addressing the problems of NGCS, we also need to consider how this system is likely to operate, the impact it would have on participants in the market and the degree to which it addresses all the issues identified.
- 6.40 We consider the implications of a maximum price regime in detail in Annex 5. We summarise this assessment below.
- 6.41 One clearly important question is at what level to set the maximum price level. There is clearly no benefit to consumers in setting the maximum price at levels that would allow the current highest charges available in the market to remain possible. The current diversity of price structures would remain and the central market failures would not be addressed. In addition, given that we would be removing the current constraints on BT and setting higher limits, there is a risk that existing prices in the fixed line market (where prices currently tend to be lower) would increase.
- 6.42 Equally there is a risk in setting prices too low. This would have the effect of undermining the incentive to provide access to these services and/or to provide such services.
- 6.43 An obvious point at which to set the maximum limits is in alignment with the current limits in the NTNP, which mainly apply to BT. The advantage is that it is clear that the current NTNP limits ensure that existing services can be funded within the total revenue (assuming that the termination rate does not change) and on fixed lines at least, origination costs are likely to be covered.
- 6.44 We also need to consider whether a separate higher maximum should be set for mobile calls, based on their higher origination costs. This would require an assessment of what a reasonable difference should be and whether it should be fixed or variable over time (as mobile call termination costs have reduced over time this implies a similar trend for call origination costs).
- 6.45 Setting caps would lead to a significant and probably rapid re-alignment of charges. We would expect to see increases in the charges for other telephony services, perhaps including higher geographic call charges or reduced value of subsidies for handsets. Mobile OCPs are particularly likely to be affected. The scale of this restructuring if the same price maximums were set for fixed and mobile OCPs could be over £350M p.a, depending on extent to which call volumes change (see Annex 6 for further details).
- 6.46 Under this system, SPs would still have limited capacity to dictate the final price that consumers face. One option to address this and to encourage competition between

¹⁰⁵ 3% of respondents said that maximum prices would make them less comfortable, 13% said that it depends on the price and 10% responded "don't know". 2010 CMR, question 41.

¹⁰⁶ 2010 SPs survey, Figure 3.6 on page 21. SPs operating on the 0843/4 number range also considered this to be reasonably important (rating of 3.5).

SPs would be to set a large number of caps for various sub-ranges (i.e. not a single cap for 08 numbers but formal caps for 08445 and separately for 08446 etc). However, this may increase the regulatory burden and probably consumer confusion.

- 6.47 The risk is that this proliferation of price maxima would itself work against consumer understanding and would also be quite complex to introduce. However, as explained in Annex 6, we consider that these drawbacks are likely to be relatively small. Accordingly, a considerable amount of granularity be appropriate on number ranges such as 09 and 118, where competition between SPs is particularly important and where different SPs are likely to want to set very different prices. On number ranges such as 08, a degree of granularity is also likely to be appropriate.
- 6.48 Maximum prices also do not resolve the uncertainty over how revenue should be shared between OCPs and SP/TCPs. We would hope this could be resolved commercially, though we accept that there is a risk that failure to negotiate appropriate termination charges could require Ofcom future involvement.
- 6.49 Set out against the criteria listed above, the effects of maximum prices, set out in full in Annex 6, can be summarised as follows.

Overview of assessment against our criteria

Transparency and consumer price awareness

- 6.50 Price transparency would to some extent be improved. SPs would be able to provide an accurate indication of the maximum price that callers would be charged and, depending on the level of termination rates, retail prices are likely to be close to that maximum. Moreover, consumers' exposure to bill shock as a result of price uncertainty is limited by the maximum price.

Price

- 6.51 With maximum prices, the retail price is effectively determined by the regulator to the extent that OCPs choose to set prices at the maximum level. This can help avoid inappropriately high prices (ie those above the maximum) and promotes price transparency, by introducing a regulated price applying to all OCPs.
- 6.52 However, there will inevitably also be consequences in terms of reduced flexibility or responsiveness on the part of OCPs in their price-setting behaviour. An OCP would have less flexibility to offer their customers alternatives in which consumers can trade-off between prices for NGC and other services. The regulator would essentially be determining the balance of retail prices between non-geographic calls and other services which creates the risk of regulatory failure; i.e. a balance of prices that does not reflect the preferences of some or all consumers.¹⁰⁷
- 6.53 In addition, to the extent that OCPs' revenue retention is lower due to the new regulations, OCPs' retail prices are likely to be rebalanced. The tariff package effect is likely to be particularly significant for mobile OCPs.

¹⁰⁷ Moreover, to the extent that some OCPs are currently pricing below the retail price maximum, they may well increase their prices towards that maximum (particularly since we are not proposing to allow OCPs much headroom).

Service variety and innovation

- 6.54 Service variety and innovation is likely to some degree to be positively affected, although this depends on what termination rates emerge at the wholesale level. SPs are likely to benefit from any increase in demand as a result of greater caller confidence and more accurate estimation of retail prices.
- 6.55 Moreover, as discussed above, if we were to introduce a series of available maximum prices on different sub-ranges this would potentially provide SPs with the freedom to select price points that undercut their competitors. As a consequence, if structured suitably, maximum prices can provide scope for competition between SPs. However, there would still necessarily be limits on revenue and the existence of appropriate price points would be dependent on regulatory decisions. For some number ranges (e.g. DQ), a limited range of different price maxima could undermine competition and the presentation of new offerings.

Access to socially important services

- 6.56 Because there is scope to set lower maximum prices for number ranges with a high proportion of these services and these limit the prices that can be called from all phones (mobile and fixed), maximum price limits potentially improve access by less well-off consumers to these services.

Implementation costs

- 6.57 While from a technical perspective, there would be few systems costs to implementing this remedy, there is a significant regulatory burden (adherence to a multitude of price limits), and it will require industry to engage in a substantial review of wholesale relationships (plus potentially, substantial regulatory intervention if conflicts arise at the wholesale level and are not resolved commercially).
- 6.58 The nature of this remedy is such that, while it sets overall price limits, it does not give any guidance to how this revenue is to be distributed. As a consequence, industry would need to negotiate arrangements for revenue sharing (i.e. the level of termination rates).
- 6.59 One potential consequence of these negotiations is that OCPs might refuse to originate some non-geographic calls. This may happen if the revenue allowed is lower than an OCPs incremental cost of originating non-geographic calls. This would effectively mean that certain non-geographic calls were not available from certain OCPs. While arguably competitive pressures would encourage OCPs to have to offer consumers access to all numbers, if this did not remain the case, then under maximum prices the general expectation on the part of consumers that all numbers can be rung from their OCP could be challenged.
- 6.60 In addition, there is a risk that the rapid adjustment of revenues in the mobile sector could lead to tariff restructuring that would have unintended negative impacts on consumers (e.g. higher contract tariffs).

Preliminary views

- 6.61 Overall, however, we consider that setting maximum prices is a viable option that would protect consumers. It has significant advantages and it would go some way to addressing the identified consumers' concerns. It will, at the least, limit the potential for consumers to pay more for calls than they expected. It should also increase

consumer transparency and awareness, as consumers learn to associate the maximum prices with the relevant number range. Service providers would be able to give clearer guidance on the likely cost of the call. Competition between service providers could potentially increase to the extent that service providers would be free to select a number range that corresponded to their preferred price point (though the strength of competition would depend on the number of separate price points).

- 6.62 However, we also recognise that this would be a highly interventionist approach, requiring Ofcom to set the maximum permissible prices for each number range. There is a very real risk that these prices act not just as maximum limits, but that they become the focal points for actual prices to be set, this could not only raise prices, but also mean that the actual prices of calls were set, not by competition, but by the regulator. There would also be limited potential for phone companies to compete in this area through offering consumers trade-offs between prices for these calls and other services.
- 6.63 Given the nature of such controls they may not be able to reflect the different origination costs of different technologies (e.g. mobile compared to fixed line). The risk is that of favouring one over another. Lastly, maximum prices would also leave open the potential for conflict between phone companies and those companies that host these services over the level of termination rates. We consider that the balance between the benefits and the costs of maximum retail prices is different for different number ranges. For most of the number ranges we are inclined to think that an alternative approach may be preferable. But we consider that maximum retail prices may have a valuable role to play for a limited set of numbers, for which the horizontal and vertical externalities represent especially serious concerns, as discussed in further detail later in this Section.

Unbundled tariff

- 6.64 One potential policy option for addressing the consumer concerns around NGCS is to restructure tariffs to recognise explicitly that there are separate payments to be made to the OCP and to the SP. We have referred to this approach as “unbundling” the tariff.
- 6.65 When consumers can get access to information, the current standard presentation of the charges for non-geographic calls runs along the following lines:
- ‘This call will be £X per minute from a BT landline, possibly more from other landline providers and considerably more from your mobile.’*
- 6.66 While this offers some point of price reference (namely the BT price) it clearly provides little real information or certainty for any caller not using a BT landline.
- 6.67 The approach can be contrasted with the message used for most mobile short codes:
- ‘This call/text will cost you X pence per minute plus your phone company charge.’*
- 6.68 This short code message is in principle less ambiguous, offering a clearly stated price point applying to all networks, though admittedly an understanding of the full retail charges is dependent on knowledge of the network access charge (usually the text charge).

6.69 An unbundled tariff for NGCs would separate the retail price of a non-geographic call into two parts: a Service Charge set by the service provider (usually through a TCP intermediary) and an Access Charge set by the OCP. This approach could be adopted using the revised EU Framework by specifying the tariff principle by which the retail price should be unbundled in this way; and potentially combining this with maximum prices applying to service charge components¹⁰⁸. It would potentially protect consumers by presenting the price of non-geographic calls in a simpler fashion.

6.70 The unbundled approach would mean that SPs could provide callers with a message such as:

“This call will cost you 80 pence per minute plus your network’s access charge”

6.71 In this example, the 80 pence per minute figure would be the Service Charge. This enables callers to readily compare the amounts charged by different SPs, which would facilitate competition between SPs. Provided that the caller knew what the Access Charge charged by their OCP was, the caller would also know the price of the call.

6.72 We would expect the Service Charge to cover the costs of termination and hosting, and the SP’s revenue share. The Service Charge supports service provision and is set by the SP (through choosing a number option from their supplier). This is effectively the payment for the service.

6.73 The Access Charge is set by the OCP and would contribute to the costs it incurs, such as origination, retailing, billing plus whatever retail margin the OCP determines. This is the price the consumer would pay for accessing the service.

6.74 Ensuring that charges are separated into these components also potentially provides a framework within which effective competition can also take place. Taking the two components of the retail price in turn:

- a)** The unbundled approach would facilitate competition between OCPs, since in order to determine the cheapest means of originating a particular non-geographic call consumers would just need to look at the Access Charge. In this way, the Access Charge should be constrained by competition between OCPs.

Provided the Access Charge is structured simply, it potentially provides a price that consumers can readily take into account when selecting which OCP to subscribe to and which callers can easily remember. This will allow individual consumer to make an informed choice when choosing to make a phone call. This contrasts with the multitude of non-geographic call prices that consumers are currently faced with, which cannot realistically be borne in mind by consumers, and as such are not competed over.

- b)** The Service Charge is also potentially constrained by competition between SPs. Where two SPs offer similar services, a consumer would only need to compare their Service Charges in order to identify which SP is the cheaper. Such a comparison should be simpler to make than at present.

¹⁰⁸ Authorisation Directive, paragraph, 1, Annex C.

It would be much easier for SPs to communicate the Service Charge to callers than the multitude of retail prices that currently exist for calling each SP.

Moreover, because the service provider controls the service charge itself, unlike the current situation it would be able to compete with the prices offered by other service providers. Under the current system this is generally not feasible, and results in reduced competition and innovation in new services by service providers.

- 6.75 The effectiveness of the unbundled remedy depends primarily on how consumers respond to the new tariffs. There is the risk that the Access Charge, for example, is found to be confusing in a similar way to the current situation. These risks can however be substantially mitigated by focusing on the details of how the Access Charge and Service Charge would be specified. We discuss this more below.
- 6.76 Nonetheless, we recognise that the unbundled remedy requires consumers to think about non-geographic call prices differently, and that the effectiveness of this remedy relies upon consumers being able to understand and act on an unbundled price structure. We intend to carry out further research to test how consumers respond to an unbundled price structure and how it affects their behaviour.
- 6.77 If it works well, however, we consider that the unbundled remedy has potential benefits for all parties:
- For consumers: when choosing a package, they would be presented with a choice between different Access Charges. If they are particularly sensitive to the price of non-geographic calls, they can choose a package that offers a better Access Charge, which could be traded-off against the cost of other services. Furthermore, when they receive communications from their banks, councils, utility providers etc., they would now find a clear message setting out how much the Service Charge will be for the call and reminding the customer that the total cost of the call will include their standard network charge. The information provided to consumers is thus simpler and unambiguous;
 - For service providers, including resellers who, by being able to set the Service Charge, can directly compete on prices with other service providers. Service providers could communicate the exact Service Charge to callers in their advertising and literature. In a similar way, the incentives to innovate and bring new services to market would be increased;
 - For originating network operators: Instead of the large number of prices across all ranges, they can now focus on communicating and marketing the Access Charge. OCPs would no longer need to negotiate a termination rate with terminating networks as they would recover all their costs from their customers. OCPs would bill the customers for the Service Charge and pass on the revenue to the service provider/terminating network. Unlike the maximum price remedy there is no one off adjustment in total revenue (though we would expect competition to rebalance revenue over time). Overall increased price transparency is likely to result in more calls being made to NGCS; and
 - For terminating network operators: Removing the need to negotiate their rates would help their revenue stability and investments in services for service providers.

Constraints on the prices

- 6.78 As mentioned, for the unbundled tariff to work as desired it is probably necessary to set conditions on the elements of the unbundled charge. These issues are discussed in detail in Annex 5. In summary, we consider the following features are necessary for the structure to be effective.

Simple Access charge

- 6.79 If the Access Charge is too complex, then it would not be readily understood and acted on by consumers, and the unbundled remedy would not work. Accordingly, while finely balanced our preference is for a single access charge per package; and that this access charge should be a simple per minute charge with no associated connection fee. We do not propose, at present, to regulate the level of the access charge, as if it can be set competitively this brings greater benefits to consumers and providers alike.
- 6.80 We recognise that there are arguments for different number ranges to incur variations in OCP charges (for example there is an arguable higher risk of bad debt from some 09 numbers), however, our assessment is that additional complexity of multiple Access Charge charges has a significant risk of undermining the effectiveness of the unbundled structure. Equally, call set up charges also mean that the actual call cost is less transparent to consumers.

Service charge caps and communication

- 6.81 We consider that there remains a clear benefit to ensuring that the number ranges continue to be differentiated to some extent by price. This is the system that consumers are broadly familiar with, and it also provides a simple means of generating easy rules of thumb for consumers to remember comparative tariffs. Accordingly we consider that there should be some maximum prices on the Service Charge for at least some of the number ranges, to ensure that, for example, 08 numbers remain cheaper than 09 numbers (we would need to consider whether other ranges which currently do not have such control even under the NTNP should come under this framework).
- 6.82 We also consider that such maximum prices could be relatively simple in structure (for example one maximum for the 08 range). We consider that there should be a requirement on SPs always to advertise the Service Charge of the call whenever the number is provided. This would ensure that consumers are always provided with clear pricing information at the point the number is displayed. We would seek to ensure this price information is provided either by securing voluntary industry agreement or modifications to the PRS definition to include all relevant number ranges (see example of advertising in Annex 9). We consider there is less risk in this model for SPs to wish to move to the maximum points of ranges given the greater fragmentation and competition amongst them.

Overview of assessment against our criteria

- 6.83 We now set out in summary the assessment against our criteria as set out in full in Annex 1.

Transparency and consumer price awareness

- 6.84 In terms of price transparency, this option would have the following potential advantages over the current situation:
- Overall the complexity of prices is likely to be significantly reduced relative to the status quo;
 - As explained above, we consider that the Access Charge should be a single pence per minute number for each tariff package. It is thus very easy to compare the Access Charge between different OCPs. The cheapest way of making any call will always be through the OCP with the lowest Access Charge. Moreover, since the Access Charge is very simple, it would be more likely to be remembered by consumers at the point of call, than the multitude of prices that consumers are currently faced with;
 - The current variation in retail non-geographic call prices across OCPs makes it difficult for SPs to communicate to callers the cost of calling their services. The unbundled remedy would address this. SPs would be able to clearly explain the Service Charge for calling them; and
 - We are aware that there is uncertainty as to how consumers would react to a change of this type. While we believe that the change would allow consumers easier access to simplified information; whether this would work in practice remains an empirical question. Therefore, we intend to carry out further research to gain a better understanding on this, both to determine its broad effectiveness and to gain an understanding of how it might be modified to ensure that the design is optimal.

Price

- 6.85 In terms of the prices faced by consumers, the effects would depend on the strength of competition between SPs and between OCPs under the unbundled remedy:¹⁰⁹
- 6.86 In terms of the Access Charge, the unbundled remedy would be likely to increase competitive pressures both at the point of subscription and at the point of call.
- 6.87 Greater price transparency would mean that the structure of OCPs' prices (i.e. the balance between non-geographic call prices and the price of other services) is likely to move closer to consumers' underlying preferences. As explained in Section 4, currently callers' poor awareness of non-geographic call prices makes them 'artificially' insensitive. This distorts the structure of retail prices – non-geographic call prices can be raised in a way that reflects the extent of callers' ignorance, rather than their underlying preferences. We believe the unbundled remedy would reduce this effect.
- 6.88 In terms of the Service Charge, there may be some additional competitive pressure when there is scope for competition between SPs. Where two SPs supply comparable services; then callers simply need to evaluate the Service Charges charged by those SPs to determine which offers the best value for money. However, there is likely to be a significant share of non-geographic calls for which callers have no choice (e.g. the caller's bank). However, while this suggests some limits to competitive pressure, the fact that such institutions' contact numbers are more

¹⁰⁹ The discussion below assumes that the AC is not subject to a biting price maximum.

effectively publicised may increase the pressure on them to choose lower cost numbers.

Service variety and innovation

- 6.89 Consumers' benefit from service variety and innovation and there are concerns that currently consumers are not able to make the most of these services.
- 6.90 As explained above, we consider that the unbundled remedy would increase price awareness. Since consumers would be more confident that they know the price, and less likely to markedly overestimate non-geographic call prices, this is likely to stimulate demand for non-geographic call services. This is likely to promote service quality availability and innovation. Consumers would also have a better understanding of what a SP is charging for a service, which would allow them to better assess its value (and put pressure on providers seeking to charge too much).
- 6.91 Currently SPs are harmed as a result of their inability to control retail prices and consumers' poor price awareness. In terms of the first of these factors, SPs would have more control than at present, given their ability to select the Service Charge, although they still would not control the overall retail price which also depends on the Access Charge (the vertical externality discussed above).
- 6.92 OCPs would be free to set different Access Charges for different tariff packages. Consumers have heterogeneous preferences. Some may prefer cheaper non-geographic calls in exchange for more expensive geographic calls or subscriptions, while others may have opposite preferences. The unbundled tariff would allow OCPs to cater for the variety in consumer preference.

Access to socially important services

- 6.93 Our distributional concern relates primarily to access to socially important services. This is particularly acute where vulnerable citizens are deterred from accessing some of these types of services through non-geographic calls. However, improved prospects for competition should result in greater pressure to reduce retail prices (see the discussion in the paragraphs above). This would be beneficial to those vulnerable citizens seeking to access socially important services.
- 6.94 Moreover, the unbundled tariff would make it clear to what extent the SP was responsible for the retail price, by making the Service Charge element explicit. SPs providing socially important services may be particularly sensitive to claims that they are charging inappropriate for non-geographic calls. The threat of adverse publicity may thus exert a further constraint on the level of Service Charges.

Regulatory burden

- 6.95 Lastly we consider the implementation costs and unintended consequences. The key advantage of the unbundled option is that it could still allow SPs and OCPs considerable flexibility to select the level of Access Charge and Service Charge, taking into account the extent of competition and consumers' preferences. This option would be less interventionist, therefore, than maximum retail prices.
- 6.96 There are likely to be some implementation costs, such as changes to billing systems. But these are not likely to be large relative to the benefits if the unbundled tariff is reasonably successful.

- 6.97 We commissioned a survey of operators to examine potential implementation costs. With respect to the unbundled tariff, there was some concern about the complexity of the two tariff elements which gave rise to relatively high costs of implementation estimates, which started at around £2m for a major OCP (if systems needed to have complex databases matching a large number of both Service Charge and Access Charge charges for a given consumer)
- 6.98 As discussed in Annex 5, we consider that these results were likely to over-estimate the complexity of the unbundled tariff and the level of detail to be presented in the callers' monthly bills. We also consider that the implementation burden could be reduced at the beginning by not requiring per call itemised billing for these calls. We would welcome detailed assessment by operators of potential costs now in the light of these more refined proposals.

Preliminary views on price structure options

- 6.99 Overall, our preference at this stage for most of the non-geographic number ranges, is for the unbundled option. In principle, this presents a clear way of addressing at least in part each of the sources of consumer detriment identified above. Moreover, it has the ability to do so within a framework that encourages competition at all levels of the market.
- 6.100 We recognise, however, that the effectiveness of this remedy depends on how well consumers respond to the structure and the information it provides to support their decision making.
- 6.101 If further analysis and the responses to this consultation lead us to doubt the efficacy of the unbundled option, setting maximum prices appears to be the most obvious alternative policy. We will, as noted earlier, be undertaking further behavioural economic research on the two alternatives discussed above and welcome stakeholder views on these options

Considering the options for the individual Non-Geographic number ranges

- 6.102 As mentioned above, although there are common elements to the detriment associated with all non-geographic ranges, that warrant a common policy approach, there are also certain specific issues in respect to particular number ranges. The latter may require very specific policy approaches. We now turn to look at each of the existing NGCs number ranges in turn to assess whether, and if so, how, we might potentially modify the regulations relating to individual number ranges given the market failures identified earlier. The detailed analysis supporting these proposals is set out in Annex 7.
- 6.103 We should note that the changes proposed will not necessarily be made immediately and will each need to be implemented according to individual assessment of appropriate timeframes based on urgency of need and implementation complexity and cost – see section 7.
- 6.104 We have classified the different number ranges as follows into one of five groups. The groupings reflect the common designation that these ranges share in the NTNP and common feature with respect to the caller's experience.
- 6.105 These groups are:

- i) Group 1: Freephone ranges: 080/050/116;
- ii) Group 2: ranges with prices historically linked to the cost of geographic calls: 03, 0845, and 0870;
- iii) Group 3: revenue share ranges: 0843/4, 0871/2/3, and 09;
- iv) Group 4: Directory Enquiries (DQ) 118; and
- v) Group 5: numbers beginning with 07 that are not designated as mobile service numbers, 070/076.

6.106 We would want to work closely with industry to promote the changes – see our initial thoughts in Annex 9 of a possible new imagery for the system.

Options for calls to Freephone numbers

6.107 As discussed in the introduction, in redesigning the NGC structure we would want to build on the aspects of the current system that consumers understand with a reasonable degree of confidence. While, as we will point out in more detail below, there is evidence of substantial consumer confusion about the cost of 080 numbers it nonetheless remains the most recognized and understood of the NGC number ranges.

6.108 Therefore, we want to build on this understanding and reinforce it as a key element of the new structure.

6.109 Freephone comprises the 080, 050 and 116 number ranges. Calls to such number ranges usually fall into two categories:

- Those that are always “free-to-caller”, where the caller is not charged regardless of what type of phone the call is made from (i.e. both landline and mobile phones) (a very small sub-set of the total set of 080 and 050 numbers); or
- Those that are “free-to-caller” from some phones (usually fixed line), but can be chargeable from others (usually mobile) and a PCA is provided to notify callers at the start of a call that a charge will be made (the usual treatment).

6.110 In general, fixed line providers offer Freephone as “free-to-caller”. However, most mobile providers charge for most Freephone calls. Compared to prices for geographic calls, prices for Freephone calls from some mobiles can be very high and these calls are generally not included in bundles – see Table 6.1 below.

Table 6.1 Typical prices for 080 calls and geographic calls, major MNOs, ppm

Provider	Vodafone		O2		Orange		T-Mobile	
Calls to:	Contract	PAYG	Contract	PAYG	Contract	PAYG	Contract	PAYG
Geographic numbers	20	20	20	5-25	25	20	30	25
Freephone	20	25	20	15	15	25-40	0-40	0-40

Source: CPs' websites, as of 18 October 2010. Exceptions apply in some cases (e.g. calls to charity lines and some 080 numbers such as those of DWP)

- 6.111 Despite the charges, 080 is the largest Freephone range by active numbers, and also the most popular non-geographic range in terms of call volumes (though calls are overwhelmingly made on fixed lines). It is used for a variety of services, which are provided by both private and public organisations.
- 6.112 The message that Freephone refers to calls that are free-to-caller, is clearly a message that consumers should readily understand. Current exceptions, based originally on concerns about the then high cost of mobile origination, have seriously dented but not removed consumer understanding of this concept, and it remains the most commonly used NGC (as discussed in Section 4 080 is the NGC number range that performs least badly in terms of consumer awareness).
- 6.113 There are some differentiating elements for 050 and 116, largely as a result of them not being widely recognized as Freephone ranges and the specific regulatory nature of the 116 range. Nonetheless to maintain the principle of intuitive simplicity for consumers, we believe that there is value in retaining one single concept for Freephone. And, since 080 is easily the most widely used and recognized Freephone number, the policy that applies to this range should apply to the other Freephone numbers as well.
- 6.114 Many respondents to our Call for Inputs commented on the working of the Freephone regime:
- Many respondents called for 080 calls to be “free-to-caller”:
 - Consumer Focus noted that many helplines were provided on the 080 number range, and that if prices of calls act as a barrier, then the downstream impact could be high. It was also concerned that 080 calls were being charged at high prices, recognising that this would impact mobile-only households which tend to be low income;
 - C&W was concerned about charging for 080 numbers; it also believed there was little consumer detriment in relation to the use of 0500 numbers and that they should be treated as analogous to the 080 range;
 - The Department for Work and Pensions (DWP) believed that 0800 should be “free-to-caller”. The DWP has itself been able to negotiate with mobile networks for its numbers to be “free-to-caller”; and
 - 0800handyman, an 0800 service provider, believe calls to 080 should be made “free-to-caller”;
 - The Direct Marketing Association noted that consumers believe that 080 is free from landlines; and
 - Everything Everywhere¹¹⁰ pointed out that mobile origination costs needed to be considered in any change to the current regime as these are higher and these should be met by SPs.
- 6.115 Similarly, in the past Ofcom has stated a preference for having prices of calls to 080 numbers free or as close to free as possible¹¹¹. Even if callers were more aware of

¹¹⁰ Now the two companies have merged and changed their name to EverythingEverywhere. At the time of the Call for Inputs they still used separate names.

prices, the market is unlikely to result in all calls being “free-to-caller” due to the vertical externality (the OCP doesn’t take the SP’s preferences into account) and the horizontal externality (free riding on the reputation of the 080 number range).

6.116 Our preliminary view, as discussed in Annex 7, is that ensuring that all Freephone numbers are free to caller (i.e. setting a maximum price of zero for all calls) potentially provides the best approach for achieving our objectives in relation to the 080 range. The reasons for restoring a full “free-to-caller” regime for 080 numbers are as follows:

- There are obvious benefits both for service providers and for consumers in there being a readily recognised number range that has a zero price point.
- Freephone numbers are a product for which there is clear and specific demand from both callers and SPs. Some of the SPs responding to the 2010 SPS survey have stated such a preference, as have 080 SPs responding to the Call for Inputs. The absence of true Freephone is a central example of the vertical externality problem;
- The Freephone brand is reinforced by the fact that it exists in many markets abroad, most of which are “free-to-caller” when available (see examples in Table 6.3);
- Mobile only customers are particularly disadvantaged at present and, in the case of low income users, potentially excluded from services over Freephone, despite this number being the key access portal for many services; and
- A clear problem with the current system is that despite this demand, it is effectively not possible for the large majority of service providers to offer such a service. We, therefore, believe that there should be a clearly recognised free to caller number in the numbering scheme.
- Although consumer confusion around 080 has grown in recent years, it is nonetheless still the most widely recognised of the NGCs number ranges. Moreover, this recognition is still associated with Freephone.
- The current trend in confidence in 080 suggests that without change its reputation will decline despite strong consumer and SP demand.
- There is therefore a strong case to draw on existing consumer awareness by making 080 free to caller. This provides the most obvious point in the numbering scheme for a toll free tariff.

¹¹¹ For example in the dispute between BT and the mobile operators about BT’s termination charges for 080 calls, Para. 2.32. See http://stakeholders.ofcom.org.uk/enforcement/competition-bulletins/closed-cases/all-closed-cases/cw_01036/

Table 6.2 Selected international experiences with Freephone

Country	Calls made from fixed lines	Calls made from mobiles
Australia	Free	Chargeable
France	Free	Mobile charges tend towards geographic rates
Germany	Free	Free, but may be some service limitations*
Italy	Free	Free, but may be some service limitations*
The Netherlands	Free	Free
Spain	Free	Free, but may be some service limitations*
USA	Free	Free

* There are three potential reasons we are aware of that lead to this outcome:

- 1) Ps do not want to pay more for origination from mobiles, so they ask their TCP to block access from mobiles;
- 2) Network operators and TCPs/SPs cannot agree origination rates; or
- 3) Network operators do not like the types of services offered by some SPs (services providing arbitrage opportunities; international calling cards; etc) and therefore refuse connection.

Source: NRAs

6.117 We note that this change would not be costless. On fixed lines OCPs recover the cost of origination from the SPs through an origination payment. One of the important questions to be addressed is the extent to which the same should apply for mobile also.

Trade-off

6.118 In essence, as explained below, there is a trade-off between:

6.118.1 Lower origination payments to mobile OCPs, which might have a higher cost to consumers in terms of the prices of other mobile services and a risk that mobile OCPs might have an incentive to dissuade their customers from making Freephone calls.

6.118.2 Higher origination payments, which impose greater cost on SPs and so might lead to reduced quality, variety and innovation in the services available on Freephone numbers to the detriment of consumers.

6.119 We can distinguish two elements in the price for Freephone calls charged by mobile OCPs (for simplicity leaving aside the proportion of such calls that is already zero-rated, e.g. calls to some charity helplines). Firstly, the price paid by the caller covers the cost of origination to mobile OCPs. Secondly, since the prices are generally substantially higher than the origination costs, there is also an above-cost margin.

6.120 Moving to a requirement on mobile OCPs to make all Freephone calls free to the caller and a cost-based origination payment (discussed in further detail below) would remove the above-cost margin. Through the tariff package effect this might lead the mobile OCPs to set higher prices for the other mobile services they sell to their customers (such as other types of calls, subscription charges etc). This would lead to a change in the structure of prices. However, by securing Freephone calls that are free to the caller (thereby addressing the market failure), we consider it likely that this different structure of prices would be better for consumers.

- 6.121 As discussed below, a cost-based origination payment for mobile OCPs is likely to be higher than for fixed networks, because of the larger traffic-sensitive costs of mobile networks. Since the origination payment would ultimately be funded by the SPs, it would therefore become more costly than it is today to be an SP on a Freephone number. The effect of a requirement for Freephone calls to be free from mobile OCPs could be a diversion of Freephone traffic from fixed OCPs to mobile OCPs without any overall increase in the volume of calls. If so, the benefit to SPs might be limited, although some SPs might still have a clear preference for this outcome compared to the situation today, by ensuring that all calls are free to callers regardless of the originating network. However, the desired outcome would involve an overall increase in the volume of Freephone calls by improving consumer awareness and the reputation of the Freephone number ranges, which would benefit SPs.
- 6.122 Some SPs might be willing to pay the higher cost of origination payments to mobile OCPs. But it could lead other SPs to migrate to alternative number ranges, or to reduce other elements of their cost such as investment in the quality of their service or to become less innovative. Or it could lead some SPs to block the receipt of calls from mobile OCPs in order to avoid the higher origination payment and receive calls from fixed OCPs (for which the origination payment is lower). Any of these reactions by SPs to higher origination payments would reduce the benefits from Freephone calls obtained by consumers, although the overall outcome might still be better for consumers than the situation today.
- 6.123 Reducing the size of the origination payment to mobile OCPs, potentially even below the cost of origination on a mobile network, e.g. if it was set at the level of the origination payment to fixed OCPs, would alleviate these reactions by SPs. But it might have other adverse effects.
- 6.124 A lower origination payment received by mobile OCPs would increase the scale of any rebalancing of prices. That is, (a proportion of) the cost of lower origination payments saved by SPs would be faced by mobile consumers in higher prices for the other services they buy from mobile OCPs through the tariff package effect. If the origination payment were set below the (incremental) cost to mobile OCPs, they might have an incentive to dissuade their customers from making Freephone calls. In the extreme, they might wish to block calls being made to Freephone numbers (because they would make a loss on each Freephone call, as their incremental cost of origination would be larger than the origination payment they would receive).

Origination payment options

- 6.125 Given this trade-off between lower and higher origination payments, we discuss below the main options for the level of the origination payments to mobile OCPs for free-to-caller Freephone calls:
- The same level as the origination payment to fixed OCPs;
 - The incremental cost to mobile OCPs; or
 - The incremental cost to mobile OCPs plus a contribution to network common costs.
- 6.126 We have not yet formed a clear preference between these options and we welcome comments from respondents.

- 6.127 The origination payment could include a contribution towards mobile OCPs' network common costs. Our initial assessment is an origination payment in the region of up to 2ppm (consisting of network costs of 1.8ppm and retail costs of 0.2ppm).¹¹²
- 6.128 Alternatively, the origination payment could be based on the incremental costs of originating 080 calls. While we have not carried out a detailed assessment, this might suggest an origination payment in the approximate region of up to 0.5-0.7ppm.¹¹³
- 6.129 We note that the bottom end of this range for the incremental costs is similar to the fixed origination cost (0.5ppm) for the calls.
- 6.130 Two of the options involve an increase in costs for SPs. The scale of the increased cost will depend on the level of use of Freephone on mobiles. According to the 2010 Flow of Funds study¹¹⁴, fewer than 5% of calls' minutes to 080 numbers originated from mobile networks. If under a 'free-to-caller' regime the volume of calls on mobile was closer to the more equal split of geographic call volumes, then the total increase in cost would be up to 70% (assuming no net increase in Freephone demand and origination at 2ppm).
- 6.131 The impact on SPs as a result of any change in origination payments is likely to affect the availability of services on 080 in general. There are a wide variety of SPs providing services on 080 numbers, ranging from commercial entities to not-for-profit organisations, such as charities. Increases in origination payments would increase costs for the SP and impact their business models. This could lead to service withdrawal, at least for those SPs that might not be able to cover the full cost of origination for a true "free-to-caller" service (withdrawal might take the form of movement to other ranges where lower charges might apply eg 03)..
- 6.132 The 2010 TCP/SPs survey found that service providers were generally supportive of making 080 numbers "free-to-caller". However, when the proposition of charging more to receive the calls was put forward, opinion was split¹¹⁵. Most TCP respondents considered a 10 pence per minute premium to be unreasonable, with only two believing a maximum of 5 pence per minute would be accepted by their SP customers. Other respondents thought that just 2 pence per minute would be acceptable.
- 6.133 Whether SPs would carry on using 080 if such extra costs were incurred is hard to judge and would depend on their individual business model, and the potential growth in mobile-originated 080 calls.
- 6.134 We recognise therefore, that while overall some SPs will be able to absorb higher origination payments, others will not be able to. To this extent, we would expect that some services on 080 would be withdrawn and those SPs would either choose to migrate the service to another number range or choose not to provide the service at all.

¹¹² The network costs figure is in line with the with the 2010 Mobile Termination Consultation, which estimated unit costs of termination on a LRIC+ basis in the region of 1.6-1.8ppm, depending on the year in question. 2010 Mobile Termination Consultation, figure 29 in annex 11.

¹¹³ The network costs figure is in line with the with the 2010 Mobile Call Termination Consultation, which estimated a pure LRIC of termination in the region of 0.5ppm (2010 Mobile Termination Consultation, paragraph A11.8 and figure 30 in annex 11). The retailing costs figure includes billing and customer service costs. It is in line with the current NTS Retail Uplift of approximately 0.1848ppm (080 Dispute Determination, paragraph A3.30).

¹¹⁴ See Annex 16 for a link to the published report.

¹¹⁵ See 2010 SPs survey, pag. 22.

- 6.135 This is not necessarily an adverse outcome. At the moment, the cost of operating an 080 number for SPs, to some extent, reflects the lack of consumer transparency about the prices. As such, albeit implicitly, many SPs may be free-riding on the Freephone concept in terms of termination payments¹¹⁶. As stated at the outset, our central aim in this review is to put the consumer interest at the heart of NGCs policy. If addressing the problem of pricing transparency leads to SPs migrating from the range, then this might well be the appropriate outcome to achieve a numbering scheme that works well for users.
- 6.136 One risk is that SPs may choose not to accept 080 calls from mobiles. This may be a possible outcome for those SPs who might wish to retain a service on 080 but are unable to afford mobile origination payments. Such arrangements, we understand, are in place in other countries such as Germany, Italy and Spain (see Table 6.2 above). We would need to consider the risk and consequences of this for consumers.
- 6.137 For the mobile operators, the direct impact on revenue and profit will also be dependent on the origination charge determined and the volume impact. Our preliminary assessment is that if volume split between fixed and mobiles moves up to near the average of geographic and origination charges are around 2ppm, the financial outcome for mobile companies may well be neutral (and positive if there is real volume growth in total 080 calls).
- 6.138 On the other hand, if mobile OCPs receive the same level of origination payments as fixed OCPs do at present then their profits from 080 calls may fall by around £80m pa. If mobile companies were facing a net reduction in 080 profits they may seek to recover these from other services. However the potential rebalancing of mobile prices is small in the context of overall mobile revenues (the potential loss in 080 profits is less than 1% of mobile revenues¹¹⁷ and even less if mobiles are able to recover some of their foregone profits from SPs).
- 6.139 There may be a need to separately consider the impact of increased origination charges on charities and helplines offering public services. We would welcome views as to how the impact of this change might be moderated for organisations of this nature.

Simplifying the structure of the number ranges charged at geographic rates

03/0845/00870

- 6.140 At present, there are three number ranges for which the NTNP designates that call prices should (in some circumstances) be aligned with geographic number rates: 03, 0870 and 0845. Only the 03 range is universally treated in this manner and, where geographic calls are included within call bundles, calls to 03 are treated likewise. The treatment of 0870 and 0845 varies between providers.
- 6.141 The evidence discussed in Section 4 shows that consumers' awareness of 03 is low. 0870 and 0845 suffer from the inconsistency in their treatment. Also the similarity of the number ranges to higher charging number ranges 0871 (up to 10ppm from BT) and 0844 (up to 5ppm from BT) is likely to confuse callers.

¹¹⁶ See 2010 SPs Survey pag. 22. See Annex 16 for a link to the published report.

¹¹⁷ Mobile retail revenues were £14.9bn in 2009. Source: Communications Market Report (August 2010), page 279.

6.142 In the review that led to the creation of the 03 range there was a clearly identified requirement for at least one universally available non-geographic range to be set at geographic prices. We consider that this requirement remains. The question is whether the current set of numbers linked to geographic calling rates should be rationalised.

6.143 Our preference is to have the 03 range as the only geographically rated non-geographic number range. There are a number of reasons for this:

- There is a strong case for having a widely known geographically-rated non-geographic number, that consumers could call with confidence and service providers could use in a similar vein (and with lower costs than a free to call number by avoiding origination payments);
- Aside from 080, the 08 number ranges are now not trusted by many consumers. Therefore, they now provide a weak foundation for building consumer confidence in a geographically priced range going forward;
- The existing confusion of multiple similar ranges and the overlap between 0871/0870 and 0845/0844 points to the need for a single and clearly distinct number range being used for this purpose;
- The problems with using 08x ranges for geographically rated calls are also arguably due to their being located at a position in the numbering scheme where it is not intuitively obvious that calls on these numbers will be relatively low priced (i.e. they are higher up the numbering range and next to 09 premium numbers);
- 03 on the other hand is the only one of the three ranges that is treated consistently by all communications providers;
- 03 is currently generally included in bundles and does not attract higher charges than 01/02; and
- Consumers are more likely to associate 03 with the geographic ranges, 01/02. 03 also provides the clear basis for an intuitively easy to remember geographically rated range that has the potential to become widespread and widely recognised.

6.144 Retaining 03 alone as the geographically rated number leaves us open to the question of how to manage 0845 and 0870. The options are:

- Remove the link with local/national rates and treat them like other 08 numbers; or
- Close the range to new entrants and encourage or require migration of existing users to 03 or other revenue share ranges.

6.145 We consider that the arguments are slightly different for each range.

6.146 0845 remains a revenue sharing range (albeit at very low levels) with a high number of users. Our analysis in Annex 7 suggests that the disruption of closing the range would be high and that given the existing reputation of 0845 a move to align it more closely with other revenue sharing ranges would be more appropriate.

6.147 For 0870, the arguments for closure and migration away from 0870 are stronger as the business case for users of 0870 is far closer to that of 03 (no revenue share). While alignment with the other 08 numbers would be viable our preference is for closure over an implementation period that would allow costs for SPs to be minimised (see Section 7 and Annex 7). There is an existing migration path with 037XXX numbers reserved that match the 087 number patterns. This is our preferred option, however, we recognise that there are likely to be substantial costs associated with closure (discussed in more detail below) and welcome the views of stakeholders on all options.

Considering our options for the revenue sharing ranges

084, 087, 09 and 118

6.148 We discussed above the options for revenue sharing ranges in terms of setting maximum prices and the unbundled tariff (set out also in more detail in Annex 5 and 6).

6.149 In Annex 7, we discuss both options in relation to the 084, 087, 09 and 118 ranges. Our preliminary view is that unbundled tariff for calls to these ranges is potentially the best of all options for addressing the consumer problems associated with lack of consumer price awareness and the vertical and horizontal externalities.

Removing confusion on the 07 ranges

6.150 Ofcom, and before that Oftel, have had continuing concerns about abuses of the 070 and, more recently, the 076 number ranges; and have sought to tackle these problems through enforcement and in a number of reviews.

6.151 Much of the consumer detriment results from an inability of consumers to recognise that 070/076 numbers are not mobile numbers. Through our 2009 review we noted that 34% of respondents claimed to have heard of 070 numbers compared to 28% in a similar survey in 2004.¹¹⁸ However, when this 34% were then asked to identify the type of service associated with 070 numbers, only 8% were able to identify them as personal numbers, whereas 48% thought they were mobile numbers. Recognition of 076 numbers is even lower. As a consequence consumers call these numbers expecting costs to be equivalent to mobile calls. The consumer detriment is compounded when the caller is induced to call for fraudulent reasons.

6.152 The intended uses of these ranges are, respectively:

- 070 personal numbering services (PNS): the formal definition, as set out in the Numbering Plan is 'a service based on number translation that enables end users to be called or otherwise contacted, using a single Personal Telephone Number, and to receive those calls or other communications at almost any telephone number, including mobile numbers; and
- 076 numbers are designated for use by electronic pagers services.

6.153 The problems that consumers experience arise from the fact that the termination rates for these number are substantially above geographic and mobile levels. This is for historical reasons and is unlikely to not reflect the current costs of terminating a

¹¹⁸ See <http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>, paragraph A1.63

call to a 070/076 number. However, it does give rise to the opportunity for legitimate (and, unfortunately, illegitimate, that is fraudulent) 'pseudo' revenue sharing – where high revenue is retained by the TCP or aggregator.

6.154 Through the Call for Inputs stakeholders expressed a range of views that have relevance for our examination of 070 numbers:

- Concern about 070 fraud (C&W);
- Concern about consumers confusing 070 with mobile numbers (C&W);
- Ofcom should designate all 070 numbers as PRS and regulated by PhonepayPlus (rather than just when revenue sharing occurs) (C&W);
- Ofcom should allow revenue sharing on all 070 numbers and have them regulated by PhonepayPlus (IPV6);
- The problems that are occurring on the 070 range could be addressed if Ofcom undertook its own due diligence when allocating numbers, as well as taking stronger enforcement action when a provider breaches regulations (O2 and Everything Everywhere); and
- There was a general theme that 070 pricing confusion can be addressed by PCAs, call price labelling and/or capping retail rates.

6.155 We have sought to address fraud through reference to PhonepayPlus rules and investigations and we accept that the current actions of many companies in using these numbers to fund services are legitimate. However, this effort and the fact of legitimate use does not negate the point that consumers are not aware of the cost of calls.

6.156 We consider that there are significant risk in allowing revenue-raising systems to co-exist with apparent mobile-like numbers given the risk of confusion and fraud.

6.157 Given the continuing level of complaints and the concerns expressed by stakeholders in the Call for Inputs, we consider that the status quo is not meeting consumer needs and is contributing to general consumer confusion and concerns about NGCs. In the past we have considered increased transparency measures (pre-call announcements) and consider that this could be reconsidered now.

6.158 However, we consider that the impact of such numbers on the confidence of consumers (the horizontal externality) points us to more direct measures.

6.159 Our preference is to reduce the available revenue (say through a maximum Service Charge or maximum retail price) such that the costs of the calls to 070/076 are close to mobile calls. We accept that this would require migration of some of the existing users to other number ranges and would wish to work with stakeholders to minimise these costs.

6.160 We have considered the option of closing the ranges completely or to new users. The impact on legitimate users of personal numbers and pages could be severe, however, and this would not be our preferred approach.

Impact of the changes

6.161 Ultimately, in considering the different approaches, we have to weigh the costs and benefits of the proposed changes. We have assessed the detriments from the current situation in Section 4 and Annex 2. These provide a partial (only one type of detriment and only few number ranges) illustration of the potential benefits from the proposed changes. We also need to consider the likely benefits relative to the costs of the changes, both in terms of costs of implementation and other costs such as unintended consequences.

Cost of proposed changes

6.162 We have grouped the potential costs into two categories:

- Costs to simplify the price structure: these are mainly costs incurred by OCPs and associated with upgrading their systems and negotiating new commercial terms; and
- Costs to rationalise the number ranges: Costs incurred mainly by SPs to migrate their services to another range.

6.163 We discussed the costs associated with OCPs upgrading billing structures for the unbundled charge above. Our assessment is that there will be one-off costs but these will be a relatively low proportion of total revenue. However, we accept that we need to review this in more detail following stakeholder responses.

6.164 For the maximum charges there is a potential loss of revenue (of up to £350M for mobiles) and the requirement to renegotiate terms, which itself could be expensive, particularly if major disputes arise.

6.165 With respect to the cost to SPs of migration, we have considered these in Annex 8 for 0870. We recognise our proposals could give rise to such costs in several ways:

- Migration away from the 080 range and similar Freephone ranges for those SPs that feel they cannot finance higher payments to support “free-to-caller” calls from all phones;
- Further migration from the 0870 range if the range is closed;
- Migration away from the 0845 range if this is aligned with 0844 for those SPs that want to keep charging callers at geographic rates on 03; and
- Migration away from 070 and 076 as a result of the proposed changes.

6.166 We do not know with confidence the precise number of firms operating across the different ranges, and therefore we cannot estimate the overall potential costs of such migrations.

6.167 In Annex 8, we have instead assessed the potential migrations costs per firm. Our analysis in the annex is largely based on the analysis conducted by Ofcom in the 0870 Statement published in April 2009.

6.168 We estimate that the direct migration costs could be in the range of £600-700 per firm, which comprises the costs for replacing: the stationery, the advertising and

promotional material, signage; and administrative costs. In addition, there will be costs incurred as a result of callers misdialling numbers.

- 6.169 We have also estimated the potential total cost of migration from the 0870, for which we had a range for the number of firms from the 0870 Statement. We have found that migration costs from the 0870 range could be in the range of £30m-£106m. An additional cost is incurred as a result of callers misdialling numbers. This has been estimated at about £24m.
- 6.170 These costs could be reduced if the implementation period is extended. With a 4 year transition they would have reduced by 40-50% according to our analysis in Annex 12.
- 6.171 There is clearly also a risk of unintended consequences, including loss of services in the transition and the risk of further consumer confusion. We would wish to work closely with industry to avoid or at least mitigate these risks.

Likely benefits relative to costs

6.172 In Section 4, we set out the consumer experience, noting that consumers experience detriment in a number of ways:

- A reduction in demand for non-geographic calls, particularly from mobile phones;
- Relative prices of geographic and non-geographic calls not reflecting consumer preferences;
- Burdensome avoidance strategies and, loss of, or reduction of access to service, particularly for low income households;
- Increased risk of fraud; and
- Finally, consumers suffer the loss of service diversity and innovation as SPs lack the incentives to invest in the market.

6.173 It is clearly difficult to quantify all such costs even though it is clear from what we can quantify and an assessment of the individual impacts on consumers that the level of consumer detriment is clearly very high.

6.174 Table 6.3 sets out how the types of detriments impact on consumers and how this impact manifests in costs to society. . For the purpose of considering which of the sources of detriment would be most amenable to reasonable quantification, it is helpful to set out a slightly more granular articulation of the adverse effects. The nature of the detriments and the assessment criterion to which each relates is also shown in Table 6.3.

Table 6.3: Summary of potential detriments

Type of detriment	Implication	Relevant assessment criterion
1. Consumers have an incorrect perception of prices and over- or under-estimate the actual prices of	Reduced volume of NGCs made by consumers	Price

NGCs		
2. The meaning of NG number ranges is undermined leading to uncertainty and a loss of consumer confidence in making NGCs. ¹¹⁹		
3. Consumers face high prices for NGCs relative to other charges. ¹²⁰		
4. As a consequence of 1-3, the volume of NGCs received by SPs is reduced (or less common too high), which weakens their incentives to invest and innovate.	Reduced quality and variety of NGC services offered by SPs to callers	Service quality, variety and innovation
5. As a consequence of 1-3, vulnerable citizens face increased cost, uncertainty and difficulty in gaining access to socially important services.	Reduced access to socially important services by vulnerable consumers	Access to socially important services

6.175 While it is not possible to precisely quantify the extent of detriment, we have undertaken in Annex 5 a number of estimates of aspects of the detriment in order to form a view, the results of which have been discussed also in Section 4. Our analysis suggests that the effect of reduced demand alone could be in the order of 5% and that, overall, the magnitude of detriment is likely to be significantly in excess of £500m per annum (see Annex 2 for our estimation). Although we would not expect our proposals to remove this level of detriment in its entirety, the likely benefit is still substantial.

6.176 Given the size of the likely benefit, the cost of change appears proportionate. However, this is not to underestimate the impact on companies and individuals. In determining our final position we will need to be confident that the net impact assessment is positive and that any changes are proportionate.

Other issues considered in our analysis

Charity lines

6.177 Some stakeholders have requested a dedicated, and clearly recognised, number for charity donations that allow high value transaction, for example for £10 or more.

6.178 So long as the provider is willing to adopt PCAs, in principle, these could be hosted on many ranges. However, avoiding confusion with some ranges, such as 09 for PRS and adult services, is desirable. We welcome stakeholders' inputs into how best we could meet this demand.

¹¹⁹ There may be an additional detriment from a tariff package effect, though it is difficult to estimate its size. For example, in presence of uninternalised negative horizontal externalities OCPs may overall be worse off and this may translate via the tariff package effect into higher prices for other services.

¹²⁰ There may be an additional detriment from a tariff package effect, though it is difficult to estimate its size. For example if high non-geographic prices lead to OCPs increasing prices to exploit consumers' lack of awareness prices for other services would be lower than otherwise.

Transit

- 6.179 As explained in Annex 3, currently OCPs pay transit charges for geographic, 0843/4 and 0871/2/3 calls. TCPs pay transit charges for all other non-geographic calls. This industry convention was shaped by the historic position taken by Ofcom. For most non-geographic calls, OCPs thus decide how the call is routed but do not pay for the cost of transit. While there are some indications that this may have some detrimental effects, since OCPs do not have an incentive to route calls efficiently, these detrimental impacts are likely to be relatively small.
- 6.180 Given the fundamental nature of this review, it presents an opportunity to revisit the asymmetric arrangements for transit that apply to non-geographic calls.
- 6.181 Our current view is that each tariff package should include a single Access Charge that applies to all non-geographic calls covered by the unbundled remedy. The current arrangements for transit create a slight difference in OCPs' costs of origination, for example between an 0844 call (where the OCP bears the cost of transit) and an 0845 call (where the OCP does not bear the cost of transit). Since OCPs will have to charge the same amount for both calls (namely the Access Charge), this supports the case for standardising who is responsible for transit. However, this argument is not particularly strong. As explained in Annex 5, there are a number of other differences between the costs of originating calls to different non-geographic number ranges (e.g. bad debt).
- 6.182 For those number ranges which are subject to maximum prices, differences in which party is responsible for paying for transit will be reflected in termination rates. However a system of maximum retail prices does not necessarily require changes to the current transit arrangements.
- 6.183 In conclusion, we recognise that responsibility for paying for transit does not necessarily need to change as a result of the other interventions that we are proposing. Transit arrangements do not appear to be a significant source of consumer harm. Nonetheless the current arrangements are somewhat untidy and the separation between the party choosing transit (the OCP) and the party paying for it (the TCP) may lead to some slight detriment. This review presents an opportunity to revisit which party is responsible for paying transit for non-geographic calls. We would thus welcome stakeholders' views on who should bear the responsibility for transit charges.

Porting

- 6.184 Some stakeholders have complained that currently porting for non-geographic numbers is difficult or not possible. Others complained that TCPs may receive windfall gains or losses on calls to numbers that have been ported between TCPs..
- 6.185 We have discussed this issue in Annex 3, where we consider this issue to be part of the wider approach to porting numbers. We do not therefore propose to consider this issue further at this stage as this is not central to the scope of this review.

Next steps

- 6.186 Our proposals are subject to transposition into UK legislation of the revised EU Framework. If we were to take them forward, good planning and management of the transition would be required. In the next section, we set out our thoughts on the issues that would need to be addressed in taking our proposals forward, having

regard for all the considerations that might affect the direction and pace of change and, in particular, the trade-off between speed of changes which deliver the potential benefits and an appropriate pace of implementation to help providers mitigate the costs associated with our proposals.

Questions on the options for the future of non-geographic calls

6.187 The following questions relate to the analysis set out in this Section and Annexes 4 to 7:

Q6.1 Do you agree with our assessment of the likely failure of deregulation to address the identified market failures? If not, please explain why, ideally with reference to the analysis set out Annex 2 and 3.

Q6.2 Do you consider that we were right to put aside consideration of wholesale intervention at this stage? If you disagree please set out your views, ideally with reference to the wholesale analysis set out Annex 3.

Q6.3 Do you agree with our assessment of the limitations of informational remedies to address the totality of the identified market failures? If not, what informational solutions would you propose and to what extent do you see that they would resolve the market failures identified, ideally with reference to the analysis set out Annex 4.

Q6.4 Do you agree with our assessment of unbundled tariffs as a potential remedy for the market failures identified? Do you agree with our assessment of the pros and cons of this approach? What do you consider would be the impact of the introduction of unbundled tariffs in this market? Ideally include in your response reference to the analysis set out Annex 5.

Q6.5 Do you agree with our assessment of maximum price as a potential remedy for the market failures identified? Do you agree with our assessment of the pros and cons of this approach? What do you consider would be the impact of the introduction of maximum prices in this market? How should such a scheme be structured? Ideally include in your response reference to the analysis set out Annex 6.

Q6.6 Do you agree with our assessment of the impact of different options relating to calls to Freephone numbers summarised in this Section and set out in full in Annex 7? In particular, do you agree with our preference for 080 to be “free-to-caller”?

Q6.7 Do you agree with our assessment of the impact of different options relating to calls to numbers which prices are linked to the prices of geographic calls (03,0845,0870) summarised in this Section and set out in full in Annex 7? In particular, do you agree with our preference for 03 to be the only range with calls prices at geographic rates?

Q6.8 Do you agree with our assessment of the impact of different options relating to calls to revenue share ranges (084, 087, 09, 118) summarised in this Section and set out in full in Annex 7? In particular, do you agree with our preference for:

- Adoption of the unbundled tariff for these ranges, with a maximum tariff to apply for consumers’ protection on the Service Charge; and*
- 0845 to be treated the same as 0844?*

Q6.9 Do you agree with our assessment of the impact of different options relating to calls to 07 numbers which are not mobile numbers (070/076) summarised in this

Section and set out in full in Annex 7? In particular, do you agree with our preference for reducing the revenues available from these calls so as to remove the incentives for fraud?

Section 7

Potential implementation considerations

Introduction

- 7.1 Our proposals as discussed in the previous section are subject to transposition into UK legislation of the revised EU Framework. In considering our options, we have evaluated different approaches. Our preliminary view is that, overall, the unbundled tariff and the maximum price are both good options to further the interests of consumers and citizens. Both approaches would require changes for industry which, in turn, require good planning and management. We consider that it is therefore important to consider the implementation issues that would be likely to arise with respect to each of these potential approaches and the other options considered in Annex 7 and summarised in Section 6.
- 7.2 Implementation costs for individual options have been considered in more detail in the annexes and the requirements for stakeholder input to these assessments have been identified through the questions raised in those annexes. Here, we consider potential issues relating to implementation, where necessary referring to the evidence discussed in the annexes, and particularly Annexes 4 to 7.
- 7.3 There are a number of separate implementation issues each with their own sets of considerations and timetables. There are two main categories:
- Changes to the tariff structure (unbundled tariffs or maximum prices)
 - Changes to the structure of the non-geographic call ranges and rules governing individual ranges.
- 7.4 We examine these two categories separately in this section.
- 7.5 Finally, we consider the implications of any potential price disclosure obligations.

Implementation of changes to tariff structure

- 7.6 As discussed in Section 7, we consider that the revised EU Framework gives rise to two potential alternatives for changing the tariff structure for most non-geographic calls: unbundling of the tariff (preferred option); and maximum prices.
- 7.7 The key (interrelated) considerations in relation to the potential implementation of each of these options are:
- System costs;
 - Communications costs (of the new system to consumers); and
 - Implementation duration and intermediate phases.
- 7.8 We will now consider each of these issues in turn.

Implementation of an unbundled tariff structure

What it might look like

- 7.9 We anticipate the structure of an unbundled tariff would have the following characteristics:
- a) The retail charges of all CPs for relevant non-geographic calls would be based on the unbundled tariff structure;
 - b) All CP customers' contracts would be revised to include reference to the unbundled tariff structure and, in particular, confirmation of the access charge for each customer;
 - c) All new sales of communications packages which include retail calls would include explicit reference to the access charge for that package;
 - d) A national information campaign might need to be carried out (though subsequent on-going communication efforts may continue¹²¹);
 - e) Advertisements and other information provided in connection with the affected non-geographic number ranges would need to be provided in the form required under the unbundled tariffs (e.g. 'This call will cost X pence per minute plus you standard access charge'); and
 - f) Itemised consumers' bills would need to present separately the access and service charges incurred for each call (where itemised billing is provided).

Systems costs

- 7.10 The 2010 Implementation Study¹²² explored the implementation aspects related to OCPs' billing systems supporting the unbundled tariff structure. Although OCPs would have to update their billing systems to reflect an unbundled tariff structure, the study didn't identify any insurmountable implementation barrier in adopting an unbundled tariff structure. The study identified some limitations with legacy retail billing systems that require a single charge to be fed into the retail billing systems. Although this might restrict the level of disaggregated information presented in a bill, it is unlikely to cause any issue in applying the correct call charge. We understand that the access and service charge components could be combined together before being fed into the legacy retail billing systems.
- 7.11 OCPs would face implementation costs if to adjust their billing systems if an unbundled tariff structure were to be adopted. The OCPs responding to the 2010 Implementation Costs study¹²³ suggested an implementation period of up to 24 months and investment costs in the range £2m to £10m per firm to support both correct charging under an unbundled tariff structure and to present a bill with disaggregated call charges on a per call basis.

¹²¹ We consider that such campaign would be necessary to ensure the changes are effectively communicated, but we have not considered what form it should take and how it should be funded. We intend to engage with stakeholders on this issue during the consultation period.

¹²² See Annex 16 for a link to the published report.

¹²³ See Annex 16 for a link to the published report.

- 7.12 We consider these potentially over-estimate the complexity of an unbundled tariff structure and the details that we believe would have to be presented in a bill. The likely initial implementation burden could potentially be reduced, for example, by not presenting the access and service charges on a per call basis, and only presenting them as charges aggregated on a per number range basis. This might allow for a faster implementation of the consumer transparency objective while delaying the full implementation of itemised bill presentation to be rolled into the normal billing upgrade cycles.

Communications

- 7.13 Subject to transposition of the revised EU Framework into UK legislation, and our further evaluation of our options through the public consultation, the effectiveness of any new proposed structure relies strongly on consumer understanding of how the tariff structure would operate and the choices that they would have.
- 7.14 We would be likely to require CPs to provide information to their existing customers as well as information at the point of sale.
- 7.15 Understanding of the tariff structure would also be reinforced by reference to it by the SPs in their advertising and corporate material.
- 7.16 However, there may also be a need for a centralised promotion of the changes, for example through advertising and promotion through media consumer programmes. Other factors such as funding of any advertising campaign that might be required, would need to be considered.
- 7.17 There is also the consideration of how promotion of the unbundled tariff changes should be linked to the other individual number range changes. We would need to consider how an information campaign should be developed to assist consumers in understanding what the changes would be and when they would come into effect.
- 7.18 As discussed later in this Section, we would need to engage with stakeholders to develop the communications plan, as well as the description of what would be implemented – for example what should be the industry standard term for the access charge.

Implementation duration and intermediate stages

- 7.19 The issues to be considered in reviewing the potential period for implementation and the potential requirement of any intermediate stages would be likely to include:
- Potential impact on consumers;
 - Minimum implementation period of each system element;
 - Potential impact of implementation timetable on implementation costs; and
 - Potential transition from existing regime.

Potential impact on Consumers

- 7.20 The longer the implementation period, the longer the consumer detriment that this review has identified would continue. However, we do not think it would be necessary

for full implementation to be completed for the benefits of the changes to begin to transform the consumer experience.

- 7.21 We would expect consumers to begin to benefit from the changes once charges have been aligned with the new structure and the access charge has begun to be subject to competition at the point of sale. Careful thought would need to be given to the ordering of the full implementation features to ensure an appropriate prioritisation of the implementation steps required. For example, while full itemised billing would be desirable, so long as supporting information on the access charge is provided to consumers and consumers are exposed to advice on the service charge in any promotional material linked to that number, it is unlikely that delay in the practical implementation of this stage would be critical to the success of the new tariff structure.

Potential implementation timescale

- 7.22 The OCPs responding to the 2010 Implementation Costs study¹²⁴ suggested an implementation period of up to 24 months would be required to achieve full implementation of the unbundled tariff structure including presenting an itemised bill with disaggregated access and service charges on a per call basis. We consider that providing some level of transparency at the earliest opportunity is something that would be desirable in order to raise consumer awareness of the costs of NGCSs.
- 7.23 An intermediate step in the implementation might be to present the bill as aggregated access and service charges. If Ofcom was to adopt an unbundled tariff approach this could facilitate its adoption within 12 months of publication of the statement, with full roll-out by 24 months since the publication of the statement. A two-stage roll-out would also be likely to lighten the up-front potential implementation cost burden to OCPs, allowing them to roll-out the full implementation upgrades as part of their billing system upgrade cycles.

Potential transition from existing regime

- 7.24 We believe there are two issues which would need to be considered in this context:
- Would there be any incentives on, and scope for, service providers and communications providers to act in a manner which would be detrimental to consumer interests in the period between the agreement to implement and final implementation; and
 - Given the ongoing disputes around termination rates, how could the staging of the implementation be structured so that the risk of disputes is minimised in the shortest possible time?

Potential incentives on CPs between statement and final implementation

- 7.25 Announcing a new policy for non-geographic numbers would crystallise the fact that the current regulatory regime would change. However there is little evidence that OCPs are currently universally following the price guidance in the NTNP (with the exception of the 03 range).
- 7.26 The Call Origination Condition on BT means BT does not benefit from higher retail prices and therefore would have little incentive to raise prices.

¹²⁴ A link to this published report can be found at Annex 16.

- 7.27 We expect that OCPs other than BT have already raised retail prices to the maximum level consistent with their commercial freedom and strategic objectives, both in the fixed and mobile environments. Accordingly, we do not consider issuing a statement on future changes to the regime would necessarily encourage further price increases.

Wholesale issues

- 7.28 Currently termination rates are not regulated at the wholesale level and TCPs are free to set termination rates (except where covered by a dispute resolution decision). In such an environment, we have seen a growing number of disputes in recent years.
- 7.29 Ideally, the quicker any change is implemented, the less the scope for intermediate disputes. However, once a clear policy framework for the future had been articulated, it would also provide a clearer basis on which to arbitrate in the event of a dispute and ensure that any decision is consistent with the potential direction of change.
- 7.30 In the event that, subject to the implementation of the revised EU Framework, an unbundled tariff structure is chosen as the approach to take forward, our preliminary view is that TCPs/OCPs should, in that case, move as quickly as possible to a charging structure that mirrors the unbundled outcomes as this would reduce the scope for disputes.

Preliminary views

- 7.31 Given the current consumer detriment and wholesale pressures we would want full implementation as quickly as possible. Given system requirements we consider a period of up to 18 months would likely to be appropriate. In staging implementation, we would wish to see charges moving as quickly as possible to the new structure, even if the full billing differentiation was to lag, provided consumers were given some indication of the change.

Potential implementation of maximum prices

What it might look like

- 7.32 We anticipate the structure of charges under any maximum price would have the following characteristics:
- a) The retail charges of all CPs for relevant non-geographic calls would be at or below the new maximum prices;
 - b) A national information campaign might need to be carried out (though subsequent on-going communication efforts may continue¹²⁵); and
 - c) Advertisements and other information provided in connection with the affected non-geographic number ranges would need to be provided in the form required under the potential maximum prices (e.g. ‘*This call will cost no more than X pence per minute*’).

¹²⁵ We consider that such campaign would be necessary to ensure the changes are effectively communicated, but we have not considered what form it should take and how it should be funded. We intend to engage with stakeholders on this issue during the consultation period.

Systems costs

- 7.33 The extent of the potential changes to billing systems under this option would, we think, be relatively straightforward. There could be an increased number of retail price points as a result of these changes. We have not identified at this stage any issues with supporting a greater level of retail price granularity, e.g. price point per blocks of 10,000 numbers.

Potential communication issues

- 7.34 The communications issues would likely be similar to the potential implementation of the unbundled tariff. While the message would be simpler, with only one maximum price to be communicated for each range, ease of understanding would also depend on the potential complexity of the structure of maximum prices.

Potential implementation duration and intermediate stages

- 7.35 The issues that would need to be considered in reviewing the alternatives for the potential period for implementation and the potential requirement of any intermediate stages are likely to include:
- Potential impact on consumers;
 - Minimum implementation period of each system element;
 - Potential impact of implementation timetable on the potential implementation costs;
 - Potential transition from existing regime; and
 - Potential wholesale issues.

Potential impact on Consumers

- 7.36 The longer the implementation period, the longer the consumer detriment that we have identified in this review would continue. Given the potential relative technical simplicity of the maximum prices, relatively quick implementation should be possible. Consumers would quickly benefit from any maximum price below existing prices even in the absence of information about the changes.

Potential implementation impacts on existing tariffs

- 7.37 While there should be no major technical issues, insofar as maximum prices would reduce OCPs' retention we expect a change to maximum prices to result in a rebalancing of retail prices (the tariff package effect). Depending on the scale of this rebalancing, there may be an argument for a longer transition period.
- 7.38 If we were to only impose maximum retail prices on a few ranges, then it is likely that the magnitude of rebalancing would not be that large. However, imposing maximum prices on all number ranges could lead to a pretty large impact on MNOs (see Annex 7).
- 7.39 We would generally allow a glide path, to phase in reductions in income of large magnitudes (for example as proposed in the Consultation on Mobile Termination

Rates¹²⁶). This would be designed to avoid the disruption from retail prices having to rebalance in a short period of time (e.g. since retail mobile contracts run for up to 2 years) and to avoid disrupting existing investment plans.

- 7.40 On the other hand, existing consumer harm would remain high until the new tariffs were clear and in place. A glide path could therefore risk further confusion, as it would in effect be a moving series of maximum tariffs.

Potential transition from existing regime

- 7.41 As discussed above we do not consider there would be any particular incentives on, and scope for, service providers and communications providers to act in a manner which would be detrimental to consumers in the period between the potential agreement to implement and the potential final implementation date.

Wholesale issues

- 7.42 As discussed in Annex 3, the potential adoption of maximum prices would still leave open questions about what the appropriate division of revenue would be between terminating CPs and originating CPs.
- 7.43 Ideally, the determination of appropriate termination rates should be a matter for commercial negotiations. However, as explained in Annex 3, there are currently inherent tensions in the OCP-TCP relationship. We are not, at this stage, able to comment on how such disputes would be resolved.

Preliminary views

- 7.44 As with the unbundled options, we would want full implementation of any maximum prices as quickly as possible. While appreciating the need to phase in potential tariff adjustments for the sake of consumer clarity, a shorter one-off adjustment would appear more reasonable. Accordingly, and subject to the implementation of the revised EU Directives, our preliminary view is that if we were to impose maximum prices we would expect implementation within six months from the date of the policy Statement completing this review.

Implementation of changes to the structure of the non-geographic call ranges and rules governing individual ranges

- 7.45 In Section 6 we set out our vision for a simplified and more intuitive structure for non-geographic calls. This included changes to the existing regime that would minimise the risk of bill shock and fraud while encouraging competition and innovation in service delivery.
- 7.46 The proposals included consideration of:
- Freephone (080/050/116) should be “free-to-caller”;
 - Changes to 0845 and 0870 ranges so that there is a single non-geographic range (03) which is charged a geographic call rate;

¹²⁶ A link to this consultation is provided at Annex 17.

- Changes to 070/076 ranges to reduce the incentives and opportunities for fraud and ensure 07 ranges are either mobile or closely related to mobile calls in terms of price; and
- Options for allowing charges for calls to 09 above the maximum price, at least in some cases.

7.47 We discuss the options in detail in Annex 7. The key considerations for this Section are:

- Communication and Coordination of changes; and
- Potential duration of the implementation of our options.

Communication and coordination of changes

7.48 With the large number of potential changes to the individual number ranges and to the overall structure discussed above, we would need to consider how this can be communicated to consumers.

7.49 We are therefore seeking to engage at the outset with public and consumer bodies and we wish to engage through this consultation as widely as possible on the possible approaches and the explanation of the potential changes.

7.50 As set out in Annex 9, we have some preliminary ideas on how to present the new structure but we want to engage with stakeholders on this to ensure that the presentations are effective.

7.51 We will be engaging at each stage of the consultation and implementation process. A key challenge will be to ensure that consumers are informed about changes at the right time,

7.52 We will be looking for support from communications providers and consumer groups. We will invite these groups to help us consider how best to communicate with the public and describe the changes.

Potential duration of the implementation

7.53 It is clear that some changes could be managed more quickly than others. The considerations are largely commercial and contractual, though there are related technical issues.

Freephone (080/050/116)

7.54 The key implementation considerations for these ranges would be the revision of commercial arrangements between mobile OCPs, TCPs and SPs and transition time for those SPs unwilling and/or unable to cover the consequential increased costs of Freephone provision.

7.55 The commercial change would require agreement of the appropriate origination payment to mobiles and its translations into contracts. Contractual changes alone would be likely to take a minimum of 3 months so we would expect 3-6 months for implementation. Clearly, there is also the risk of disputes of any revised payment structure, though we do consider that any disputes would operate in parallel with implementation of any new retail charges.

- 7.56 Transition for SPs not willing or able to afford the increased cost of operating a Freephone line could take one of two forms: transition to a new range or seeking a technical solution to block calls from mobiles. While blocking calls from mobiles is technically possible, this is not a facility currently available in the UK, so we do not consider this would be an option available for transition. Accordingly, we would need to consider the time that is appropriate to allow SPs who wish to exit the Freephone ranges to do so.
- 7.57 As we set out in Annex 8, we estimate the costs associated with the potential transition to a new number range would be minimised after 3 years as it would allow many of these costs to be incorporated into the normal renewal cycle for stationary and advertising. However, as we suggest in Annex 7, in the case of Freephone we consider that our proposals do not fundamentally change the purpose of the Freephone ranges.

0845/0870

- 7.58 A key potential implementation consideration for these ranges would be the time allowance for SPs to move either to 03, where a national rate number is desired, or, if we were to decide to close a number range, the potential transition to a new number. As noted above the cost of transition to a new number range would be minimised after three years. Accordingly, we have discussed how we would propose a three year transition programme.

070/076

- 7.59 The implementation issues for these ranges would be the same as for 0845/0870. For legitimate users of these ranges, it would be appropriate to minimise the cost of transition for providers of these services. Accordingly we have again proposed a potential three year transition programme.

Higher charge limits for 09

- 7.60 We have not considered the potential implementation issues for this proposal. We would envisage that if the proposed approach (of pre-call announcements advising consumers of call costs above current limits) is adopted, implementation would be driven by industry in its own time following the formal detailed consultation and statement – at present we consider that this could be completed prior to the end of 2011/12.

Proposed approach to price disclosure obligations

Price Disclosure Obligations on Providers

- 7.61 The effectiveness of an unbundled tariff structure option would rely on consumer understanding how the tariff structure would operate and the consumption choices that they would have. Effective understanding of the tariff structures would require various parties in the value chain to take steps to communicate the new tariffs.

Potential Price Disclosure Obligations on Originating Providers

- 7.62 The successful implementation of an unbundled tariff option would depend on having a simple and clear Access Charge that could be easily understood by consumers. It is our view that this would be best achieved by requiring OCPs to have a single Access Charge for all non-geographic calls for each consumer account.

- 7.63 To ensure the Access Charge would be easily understood by consumers and to promote competition between OCPs on the level of the Access Charge, we would have to consider price disclosure obligations on OCPs. It is worth noting that Ofcom already requires OCPs to make a range of information available in advertising and at the point of sale, including:
- OCPs are required to publish call charges and must give NTS charges (including 0870 and Personal Numbers) the same prominence in terms of location and format given to charges for geographic calls, calls to mobiles and call packages, including bundles;¹²⁷
 - OCPs must publish in advertising and promotional material which refers to call pricing, alongside maximum prices applying to NTS calls (including 0870 and Personal Numbers), a clear reference as to where published price lists can be found;¹²⁸
 - When a new customer signs up for the provider's service, OCPs must provide, as well as maximum prices for NTS calls (including 0870 and Personal Numbers), a clear reference to where a complete set of call charges can be located;¹²⁹
 - Both fixed and mobile providers must, before entering into or amending a contract with a customer, use reasonable endeavours to ensure the customer is provided with a range of clear, comprehensible and accurate information that is provided in a durable form. Information that must be provided to the consumer includes the name of the legal entity entering into the contract, relevant contact details of that entity, a description of the service, key charges, and payment terms; and¹³⁰
 - Mobile providers are also under obligations to ensure that the terms and conditions of any relevant sales incentives are fully disclosed to consumers at the point of sale in a clear, comprehensive and accurate manner.¹³¹
- 7.64 It is our view that it would be necessary to impose obligations on OCPs to make information clearly available to consumers about the relevant Access Charge for each tariff package – in both advertising and at the point of sale. It is our initial position that, as well as amending existing General Conditions to reflect the new NGCS environment, new General Conditions would need to be introduced whereby:
- 7.64.1 At the point of sale (before entering into or amending a contract), an OCP would also have to disclose to the customer in a clear and accurate manner the relevant Access Charge that will apply to their package. Such information would need to be provided in a durable form;
- 7.64.2 Advertising or promotion material for a specific package that refers to call pricing would also need to include the relevant Access Charge for that service; and
- 7.65 We would welcome initial stakeholder views on these proposed new requirements in the event an unbundled tariff structure is adopted. Any new obligations will be consulted upon fully in a follow-up consultation.

¹²⁷ By virtue of General Condition 14.2(b).

¹²⁸ By virtue of General Condition 14.2(b).

¹²⁹ By virtue of General Condition 14.2(b).

¹³⁰ General Conditions 23.5 and 23.6.

¹³¹ General Condition 23.10.

Likely Price Disclosure on Service Providers / Information Providers

- 7.66 In an unbundled tariff environment, the Access Charge would be only one component of the charge that a consumer would face when making a non-geographic call. Information at the point of call is an important means of enabling consumers to make the right consumption choices of NGCs. Given the increased flexibility that Service Providers would have in determining the price point for their service, we consider it important that such Service Providers should have responsibility for communicating that cost to consumers.
- 7.67 At present 09, 0871 and DQ services are all regulated by PhonepayPlus as premium rate services. Such regulation carries a number of responsibilities for parties involved in those services, including an obligation to ensure that consumers are fully informed of the cost of the call prior to incurring any charge. We would expect in a future unbundled tariff environment that this would require Service Providers to inform consumers of the relevant Service Charge and those consumers will also incur the Access Charge as set by their OCP. As is explored in this paper, if the current price cap for 09 calls is raised then it is likely that this will also be complemented by an obligation on TCPs to make very clear the relevant Service Charge for example in the form of a PCA.
- 7.68 The only revenue-sharing range that is not currently subject to SP/IP price disclosure obligations is 0843/4. As noted in our examination of this number range in Annex 7, current concerns include a lack of pricing transparency and the potential for scams being undertaken. Ofcom's ability to regulate the advertising activities of SPs/IPs is limited and we consider that, as well as the introduction of an unbundled tariff, a case can be made for amending the PRS Condition to make 0843/4 services subject to regulation by PhonepayPlus.¹³² We would expect any subsequent regulation to be applied by PhonepayPlus to be 'light touch', but to include an obligation on providers to state the Service Charge in all advertising. The extension of PRS regulation to this number range will be subject to a follow-up consultation in 2011.
- 7.69 At present, we do not consider that there would be a need to impose further pricing transparency obligations on Service Providers operating on non-revenue sharing number ranges. Our proposals for the other number ranges would largely address issues of concern by potentially reducing the total charge paid by the consumer (e.g. 0800 and 03) or by potentially closing down the number range (e.g. 070 and 0870).

Questions on our proposals for change and the implementation plan

- 7.70 The following questions relate to the analysis set out in this Section and Annex 7:

Q7.1 Do you consider 18 months would be a reasonable period for the implementation of an unbundled tariff structure? What are your views on staging for

¹³² The test for amending the PRS Condition to include or exclude certain service categories was established through Ofcom's 2009 Scope Review, http://stakeholders.ofcom.org.uk/consultations/prs_scope/statement/ (http://stakeholders.ofcom.org.uk/binaries/consultations/prs_scope/statement/prs.pdf). We consider a prima facie case exists that in a future unbundled tariff environment there would be sufficient risks of consumer harm associated with the 083/4 number ranges to justify an extension of premium rate regulation. The key risk of consumer harm is that in the absence of any price notification obligations in an unbundled tariff environment it is likely that consumers will be unaware and unable to easily determine the total price they will pay for a 0843/4 call.

the potential implementation? In particular, would it be desirable to move more quickly to restructuring charging to reflect the new regime even if detailed billing would not be ready? What are your views of the technical cost of potentially introducing the new regime and how could implementation be staged to minimise these cost (see also Annex 7 for a discussion of costs)? What are your views on the communications' challenges for potentially introducing this new structure and how should they be addressed?

Q7.2 Do you consider 6 months would be a reasonable period for the implementation of the maximum price structure? What are your views of the cost of the potential new regime and how could implementation be staged to minimise these cost? What are your views on the communications challenges for introducing this potential new structure and how should they be addressed?

Q7.3 What are your views on the implementation period of up to 6 months for the change to Freephone charges? What are your views of the challenges to the implementation of the new regime and how could implementation be managed to overcome these challenges and minimise any cost? What are your views on the communications challenges for introducing this potential new structure and how should they be addressed?

Q7.4 What are your views on the implementation period of up to 3 years for the modification of the 0870/0845/070/076 ranges? What are your views of the challenges to the implementation of the new regime and how could implementation be managed to overcome these challenges and minimise any cost? What are your views on the communications challenges for introducing this potential new structure and how should they be addressed?

Q7.5 Do you consider that the potential approach to the potential price publication obligations would be likely to be effective?

Annex 1

Framework for the analysis and criteria for the assessment of regulatory options

Introduction

A1.1 In this Annex we set out the framework we have used to assess how NGC services currently work for consumers and SPs (Annex 2 and 3) and any appropriate options that may further citizens and consumers' interests. We also use this together with the related assessment criteria to assess both the broad options for intervention (Annexes 4 to 6) and the options for each number range (Annex 1).

Analytical framework

A1.2 This review's main objective is to look at the provision of NGCs and consider whether there is a need for intervention and, if so, what type of intervention would best serve the interests of citizens and consumers. Given the nature of this review we consider it is first appropriate to consider how the market would operate without the existing NGC-specific regulations. This is in line with our regulatory principles and in particular with our principle to impose regulatory obligations only when they are necessary.

A1.3 The available evidence (Annexes 2 and 3) suggests that the current regulatory framework has not been effective in furthering the interests of citizens and consumers. Furthermore, we have built on our understanding of the current situation to understand what would be likely to happen in the absence of NGC-specific ex ante regulation. In particular, we would consider the following existing regulations for the provision of price information would not apply:

- Regulations in the NTNP - in this scenario, the current guidance on BT's call prices is removed, as are the requirements to provide pre-call announcements for some calls (i.e. 080 calls);
- General Condition 10 which sets out information that must be published by OCPs in the interests of transparency, including tariff information relating to all types of usage charges; and
- General Condition 14.2 which requires the published usage charges for calls to NTS numbers, 0870 and Personal Numbers are given the same prominence in terms of location and prominence given to geographic calls, calls to mobiles and call packages.

A1.4 The analysis of the *deregulated scenario* fits well with Ofcom's general preference to minimise regulatory intervention across the markets we regulate. It serves two main purposes in this review:

- it allows us to assess whether competition would suffice to further the interests of citizens and consumers both in the short and the long term. If we concluded that it did not, it would enable us to identify where consumers' concerns may be, how substantial those concerns are likely to be and their possible causes. Having done this work helps to establish the

foundations for deciding whether or not it is necessary to intervene and, if so, how. Annexes 4 to 7 are dedicated to this task; and

- it sets the *deregulated scenario* as the option against which to compare other potential options, if we concluded that competition under deregulation would not suffice to further the interest of citizens and consumers. Among the options we consider we have also included the current regulation – i.e. the *status quo*.

Ofcom's Duties and the objectives of this review

A1.5 As set out in Section 2, the main objective of this review stems directly from our principal and other regulatory duties, particularly Section 3 and 4 of the Act, which relate to consumers and citizens' interests in electronic communications matters. This review considers the extent to which consumers' and citizens' interests are well served with respect to calls to non-geographic numbers, and if not, what we can do to further them.

Consumers' interests

A1.6 In relation to the consumers' interests, our primary focus is on the consumer intended as the "caller" and/or the "subscriber" in line with our duties. However, the demands of SPs who use the hosting services of TCPs in order to reach callers may also have an indirect effect on callers. In particular, the provision of NGCs can be thought of as a two-sided market serving "consumers" on both sides – i.e. callers and subscribers on one side and SPs on the other – meaning the demands of each side are interrelated. Therefore, both would need to be considered in this assessment, as meeting the demands of callers depends on the availability of services (and conversely the demand of SPs depends on how many consumers can reach them). If the regulatory and market features meant that the SP side did not perform well, this will negatively affect callers and subscribers on the other side in the form of reduced service availability and/or innovation. However, we are aware that in some circumstances there may be trade-offs between the interests of these two groups of consumers. In the event that SPs' interests conflict with those of callers then we consider that callers' interests have primacy.

Citizens' interests

A1.7 In relation to citizens' interests, we are aware that a number of services – such as government services and charities – are available via non-geographic numbers. In some case they may be solely available via a non-geographic number or it would be the easiest way to access them. This raises a set of questions, and potential concerns, if the pricing or other terms and conditions made it difficult for, or excluded, some citizens from using these services. In particular, concerns could arise in the case of "vulnerable" consumers – i.e. defined as belonging to disadvantaged socio-economic groups or whose income is particularly low.

The relevant assessment criteria for this review

A1.8 Having considered the rationale and objectives for this review, as discussed in Section 2, we have identified the following assessment criteria by which we can assess the various options considered in Annexes 2 to 7:

- i) **Transparency/consumer price awareness:** In order for consumers to make choices which are in their interest they need to have easy access to price (and non-price) information which is easy to understand and to act upon. If not properly informed, they would be inhibited from making the best subscription and calling choices for their own preferences. In addition, providers could take advantage of the lack of price information and increase their prices or lower the quality of their services;
- ii) **Price:** consumers benefit from prices for NGCs that reflect, as closely as possible, a competitive outcome but also avoid distortions arising from market failures (such as vertical and horizontal externalities). Such prices should provide appropriate signals to encourage efficient consumption of NGCs, geographic calls and other elements of the voice telephony bundle of services;
- iii) **Service quality, variety and innovation:** consumers may often have different preferences in terms of the type and the quality of the services they are interested in. Therefore, it is important to ensure that the regulatory environment is conducive to providers offering those services that consumers demand including appropriate incentives for investment and innovation. Such incentives depend on both prices at either end of the NGC, i.e. the price to the caller or subscriber, which affects the volume of calls that the SP receives, and the hosting price charged to the SP by the TCP (and the revenue share received, if relevant), which affects the SP's costs or revenue per minute. This means that the balance of prices is important to achieve the best outcome for consumers;
- iv) **Access to socially important services:** some non-geographic numbers are used to deliver socially important services. For some consumers this may be the only way to easily access these services. Therefore, it may be particularly important to ensure that we avoid the risk of "vulnerable" citizens and consumers being excluded from using these services; and
- v) **Regulatory burden:** a framework which is disproportionately costly to implement and manage (relative to the benefits it provides) is undesirable and these costs may eventually fall on consumers.

A1.9 Their importance will vary depending on the particular circumstances that apply to each (or groups of) number range(s). Indeed, for some number ranges some criteria may not be relevant at all.¹³³

Transparency/Consumer price awareness

A1.10 Competition at different levels in the value chain is an important tool to ensure that consumers are well served. However, it may not work under all circumstances. This is, in principle a key concern for NGCs, where market failure may currently arise in the form of insufficient price information being provided or being easily available to consumers.

A1.11 Therefore, it is critical to ensure that information on prices is easily accessible, presented in a way that allows callers to make an informed decision when selecting an OCP and when deciding whether or not to call a particular non-geographic number. In this way consumers' price awareness can be improved.

¹³³ This is, for example, the case of 09 or PRS number ranges where the criterion "access to socially important services" does not apply.

- A1.12 Information is not an aim in itself but it is a tool which could enable consumers can make the right subscription and calling decisions. Informed decisions are important for a number of reasons. First, consumers need to know the prices in order to make the correct subscription and consumption decisions. Second, absent easy access to price information for consumers, providers have an incentive to increase their prices, as the demand for their services does not depend on the price they charge, to the potential detriment of consumers. Third, easy availability of price information helps protect callers from bill shock and scams (see below discussion on unintended consequences).
- A1.13 As discussed later in Annex 2, the absence of easily accessible and transparent price information appears to be a critical issue in the provision of NGCs today and even more so if the current degree of regulation was removed. Therefore, we believe that this is generally the single most important criterion (although for some specific number ranges other criteria such as “price” may also be very important).

Price

- A1.14 Consumers benefit from low prices. They also benefit from relative prices that do not distort their consumption or subscription decisions.
- A1.15 Availability of price (and non-price) information – i.e. the presence of informed consumers - and effective competition between providers ensures that consumers enjoy low prices. Above we discussed the availability of easily accessible price information and its importance to ensure that markets deliver good outcomes for consumers. In itself price transparency would not be sufficient to ensure that consumers enjoy low prices. Competition is a critical complementary tool to pursue the interest of consumers (and citizens). Effective competition constrains prices to an appropriate level and provides incentives for providers to maintain service quality.
- A1.16 In the case of NGCs, competition can take place at different levels of the vertical chain. It takes place at the retail level (both between SPs and between OCPs, who compete to attract subscribers and callers), at the wholesale level (with competition between OCPs and TCPs) and in the hosting market (with TCPs competing to provide hosting to SPs). Competition with informed consumers should protect them from an excessive level of overall call charges, arising from market power. Because of its effects, competition is often the best tool to ensure that consumers’ interests are well served. It is, therefore, important to ensure that competition is vibrant at the different levels of the NGC vertical chain.
- A1.17 Another consideration is the relative prices faced by consumers for different services. For example, as consumers have greater awareness of price information on GCs rather than on NGCs this may result in NGCs’ charges being higher than GCs’, hence, leading to too much consumption of GCs relative to NGCs. This would not be a concern if the difference in the relative prices reflected the consumers’ preferences (or the relative costs) but, it could be, if it reflected differences in consumers’ price awareness.
- A1.18 In the case of NGCs, whilst competition is part of the way for consumers to obtain the greatest benefits, it might not be sufficient. This is because there are other sources of market failures in addition to market power, i.e. even competitive markets would not be guaranteed to deliver the best outcome for consumers. As well as the deficiencies in consumers’ price awareness discussed above (but

closely inter-related with such deficiencies), there are “vertical” and “horizontal” externalities.

- A1.19 Vertical externalities relate to coordination between different elements in the value chain, particularly the SPs and OCPs. SPs may choose a particular non-geographic number range in order to offer a specific price (or price range) to the callers to their service provided on the non-geographic call. However, that call price is not under their control (in the absence of regulation) and is set by OCPs. In addition, SPs are the customers of TCPs, so OCPs may not take full account of the preferences of SPs when setting non-geographic call prices.
- A1.20 Horizontal externalities arise because non-geographic number ranges are intended to provide information to consumers about the type of service they can expect and/or the price (or range of prices) they can expect to pay. The value of the non-geographic number ranges in providing reliable information of this type (which can be thought of as a “collective brand”) depends on the behaviour of individual players. For example, although 080 calls are intended to be free to the caller, free calls are not offered by all OCPs. So the value of the 080 number range (as a collective brand) is reduced, because consumers can no longer rely on 080 calls being free.
- A1.21 Consumers may come to believe that 080 calls are not free even on OCPs that do offer free 080 calls, or they may be uncertain about the price they will be charged. They may respond to such perceptions and uncertainty by reducing the number of calls they make, engaging in costly avoidance strategies, or becoming vulnerable to scams. These consumer responses may not be restricted to 080 calls, but may also apply to other number ranges, e.g. due to a loss of consumer confidence in NGCs more generally.
- A1.22 As a consequence, SPs may receive fewer calls and have diminished incentives to invest and innovate. Hence the behaviour of individual players (in this example, OCPs charging for 080 calls) can diminish the value of non-geographic number ranges and have detrimental effects on the system as a whole.

Service quality, variety and innovation

- A1.23 It is important that OCPs and SPs have the correct incentives to ensure that there is a sufficient variety of packages to meet all consumers’ preferences. As we expect consumers to have different and diverse preferences, these should be catered for.
- A1.24 Furthermore, consumers can benefit from new and innovative services being launched or improved versions of existing services becoming available. Dynamic efficiency refers to the idea that it is not sufficient that services are produced using the most cost-efficient technology and that prices are close to costs. Firms should also have incentives to invest in the quality of their current services, and also to innovate by launching new and better products that consumers value.
- A1.25 The original rationale for setting up non-geographic numbers was to promote the availability of value added services by providing a micropayment mechanism between callers and SPs, i.e. to allow callers to pay for the services they receive from SPs on NGCs via the call charge. The availability of services for which there is demand is in the callers’ long term interests. Service availability also requires that SPs involved in the origination, conveyance and termination of the call recover an appropriate contribution to their costs and a reward for their investment. Therefore, how revenues and profits are distributed along the vertical value chain to provide

NGCs is relevant to assess the impact of different options on investment and innovation incentives.

- A1.26 A separate issue relates to the risk that OCPs that are vertically integrated may have the ability and incentives to discriminate against rival SPs that do not operate as originating network providers (for example, for calls to DQ services). Such behaviour, if successful and undetected, may lead to exit of SPs and therefore reduce the quality and variety (but also the price) of the services to consumers. This, in turn, may lead to consumer harm to the extent that the option under consideration may increase the incentives of OCPs to act in this way we would want to take that into account.

Access to socially important services

- A1.27 Although all the other criteria allow us to consider which option is likely to achieve our policy objectives for consumers and citizens as a whole, there may be some distributional concerns we want to consider. In other words, we may care if there are winners and losers under some circumstances (even if the gains to the winners are at least as large as the losses to the losers).
- A1.28 In particular, we believe that distributional impacts may be relevant insofar as there is a disproportionate impact on vulnerable groups. The characterisation we have chosen is of those that either have low income (i.e. less than £11,500 per year) or belong to low socio-economic groups – i.e. D and E.
- A1.29 There are different types of distributional impacts. We intend to discuss the balance of prices and distributional issues between parties along the vertical chain under the criteria of “price” and “service quality, variety and innovation”. That means that there are two remaining areas we may want to cover under the criterion of “access to socially important services”:
- First, there may be a concern about consumer interests. Each option may affect the relative prices for NGCs and GCs. In other words, the relative prices of these two types of calls may differ depending on the chosen option. As different consumers make both types of calls in different proportions, some consumers may be better off, while others may be worse off. Therefore, there may be some distributional effects even if an option is likely to make consumers as a whole better-off. However, we consider that a concern may arise only if a substantial proportion of consumers affected belong to vulnerable groups. We believe that this may be very difficult to assess as it depends on the particular consumption pattern of each consumer. Therefore, we are inclined not to give much weight to this consideration; and
 - Second, there could also be concerns about citizen interests if some citizens may find it more difficult to gain access to socially important services. This would also appear to be a stronger concern if vulnerable citizens are particularly (and negatively) affected. We take this concern into account in our assessment.

Regulatory Burden

- A1.30 Options may also differ in terms of their implementation and on-going costs. For example, they may differ in terms of the ongoing regulatory costs on the parties involved – e.g. if it lead to an increased risk of disputes or if the option is particularly burdensome to administer. As such a burden ultimately is likely to be passed onto

and borne by, at least in part, consumers, it is important to consider these costs under each option relative to the benefits that the option may provide.

- A1.31 Options that require substantially more information to be provided or that require providers to invest in new systems and procedures may impose additional costs that need to be taken into account. Similarly options that required substantial oversight from Ofcom or led to frequent disputes may impose substantial costs in terms of resources, uncertainty and time delays.
- A1.32 Also relevant is whether there may be some unintended consequences under particular options. For example, under some options it may be easier and there may be stronger incentives to engage in scams and frauds. These could lead to direct harm to consumers – e.g. distress, financial loss etc. – and need to be properly considered.

Annex 2

How retail markets work: economic analysis

Introduction and overview

Purpose of this Annex

A2.1 In this Annex we set out our analysis of how the retail market currently works and the effect this has on consumers, including any relevant market failures. We then consider how the market may work absent existing regulation.

Summary of Analysis

A2.2 Non-geographic calls (NGCs) have positive features. They allow micropayments from callers to SPs. These micropayments may provide an income for the SP or reduce the amount it pays the TCP for hosting its non-geographic numbers. They thus support the availability of a range of services including supplements to other products (e.g. customer advice lines, after-sales support) and stand-alone services (e.g. astrology, adult services). NGCs also allow the SP to support lower retail call prices or calls that are free to the caller (e.g. through an origination payment to the OCP), for example to encourage sales enquiries or to provide public services. Moreover non-geographic numbers provide additional features that SPs value e.g. conveying a different impression to callers, such as being a larger business.¹³⁴

A2.3 However, despite these positive features, we consider that both callers and SPs are currently experiencing detriment. Although a few respondents (OCPs) to the Call for Inputs consider that consumers already have access to a sufficient level of information, and that the retail market is currently working well and in the interests of the majority of consumers, others (across the entire supply chain) have raised concerns. In particular, many respondents consider that there are some issues in the retail market which are preventing it from working effectively, most notably high prices (particularly from mobile OCPs) and a lack of price transparency, both of which are resulting in consumer confusion and negative perceptions of NGCs¹³⁵.

A2.4 Our main concerns stem from the way in which the retail markets currently work. We consider that consumers suffer a loss in welfare due to the impact of three related market failures:

- i) Lack of price awareness: Poor awareness of NGC prices arises for a number of reasons, for example: confusion over what each number range represents, the extent of price variation (across and within number ranges, by OCP), most customers believe they call non-geographic numbers infrequently, and many consumers do not consider NGCs to be important in their subscription decision. This has direct impacts on consumer outcomes and behaviour as well as on the

¹³⁴ The 2010 SPs survey, page 16. Annex 16 provides a link to the published report.

¹³⁵ For example,: Alternative Networks Plc response to Call for Input, dated 27th May 2010; FCS response to Call for Inputs, dated 28th May 2010; Talk Talk Group Plc response to Call for Inputs, dated 29th May 2010; Consumer Focus response to Call for Inputs; dated May 2010, P4, BCH Bristol Ltd response to Call for Inputs; Flexitel response to Call for Inputs; IPV6 response to Call for Inputs; The Number response to Call for Inputs; Via-Vox Ltd response to Call for Inputs.

OCP incentives (that is the lack of price awareness means OCPs decisions are less exposed to competitive pressure on prices for NGCs);

- ii) Coordination between different elements in the value chain particularly the SPs and OCPs (the “vertical externalities”). OCPs are not sufficiently motivated by the preferences of SPs of NGC services and thus generally do not take the impact of their call pricing decisions on SPs into account; and
- iii) The impact of individual OCP (and potentially SP) behaviour on the reputation and consumer understanding of individual number ranges and on the market as a whole (the “horizontal externalities”). Neither SPs nor OCPs have sufficient incentives to take into account the impact of their retail pricing on the reputation of an individual number range or the non-geographic number system as a whole.

A2.5 We have grouped the outcomes of these failures into five categories. They consist of direct effects on callers and the consequences that consumer actions have on SPs:

- i) Direct effects of poor consumer price awareness;
- ii) Level of non-geographic prices relative to other telephony services;
- iii) Consumer exposure to fraud;
- iv) Diminished service availability and innovation; and
- v) Distributional concerns.

Direct effects of poor consumer price awareness

A2.6 Callers’ limited awareness of NGC prices, both at the time they make a call and when making their phone company subscription decision, leads to consumer anxiety, bill shock, poor and uninformed decision making (under- or over-consumption), and avoidance activity sometimes incurring greater cost than the call being avoided, all of which suppress demand for NGCs.

Level of NGC prices relative to other telephony services

A2.7 Low NGC price awareness means that NGC prices are likely to be high, and this could result in a distorted structure of retail prices, raising concerns about the level of NGC charges relative to those of other telephony services. Low price transparency and awareness mean competitive constraints on the price of NGCs is weakened, providing OCPs with the ability to increase the prices for these calls without triggering a strong consumer reaction. This may be combined with lower prices for other services (e.g. geographic calls) on which consumers (and therefore competition) are much more focused. As a result, the structure of prices is potentially distorted, meaning consumption choices between NGCs and other telephony services may also be distorted. This may have broader implications for the SP (as the OCPs generally do not take the impact of their call pricing decisions on SPs into account - referred to as the “vertical externality”) and the wider reputation of both particular number ranges and the NGC system as a whole (referred to as the “horizontal externality”).

Consumer exposure to fraud

A2.8 There are also some concerns about consumer protection on some non-geographic number ranges where revenue sharing with the SP is available and/or where price awareness is particularly poor. These concerns arise from the occasional use by any individual consumer of most of the NGC services and the lack of price transparency, as it means consumers are potentially more susceptible to fraudulent use of non-geographic numbers. Therefore poor consumer price awareness means there is reduced consumer protection from frauds.

Diminished service availability and innovation

A2.9 Poor price awareness and the high level of NGC prices is likely to have a negative impact on SPs, particularly given the impact on call volumes this has and the high average retention by OCPs. In particular, incentives to invest and innovate are reduced, resulting in diminished service availability and innovation for consumers.

Distributional concerns

A2.10 Finally, we consider that high NGC prices may cause some distributional concerns. In particular, the high NGC charges have negative consequences for some vulnerable citizens, for whom NGCs are the only way to access essential services (e.g. utilities) or services with a particular social function (e.g. healthcare, social security).

Absent ex-ante regulations

A2.11 Having considered the concerns which exist under the current regulatory regime, we then assess how the market may look without regulation with the aim of removing the impact of existing regulation in order to identify what, if any, market failures exist. Overall, we consider that the market absent regulation may not look too dissimilar from what we observe today. We believe that price transparency could reduce as there would no longer be the BT-regulated price point for consumers, and as a result, we consider that the NGC prices of both BT and other OCPs could increase from the level that occurs today. We consider that absent regulation, the consumer concerns identified above would persist, and could be made worse. For non-BT OCPs, the price level of NGCs is largely already deregulated, and there are several consumer concerns that result from this position today. Therefore the further deregulation (including BT) is unlikely to address the market failures or our consumer concerns.

Structure of this Annex

A2.12 Before we analyse the retail market, we set out how retail effects are transmitted through the supply chain, given the complexity of these relationships.

A2.13 Secondly, we consider the retail market today.

- i) We start by describing the main features of NGC services and how they are provided by both fixed and mobile operators, including the availability of alternatives.
- ii) We then analyse NGC prices today, including the pricing behaviour of OCPs in relation to these calls, variations in prices that occur, and the absolute level of prices.

- iii) Next, we consider consumer awareness of NGC prices and their attitudes towards these calls as well as the demands of SPs.
- iv) Finally, we assess the effect that the level of competition at the point of subscription, the point of call, and between SPs has on consumers before concluding on the consumer harm that exists today.

A2.14 Thirdly, we consider what the retail market may look like without regulation for the provision of NGCs.

How retail effects flow through the supply chain

A2.15 A NGC connects the caller to the SP, with the OCP and TCP acting as intermediaries. Effects at the retail level are transmitted to the other parties in the supply chain. Moreover, NGCs are only one part of a collection of services that the OCP supplies to the caller. The retail price of NGCs is thus interrelated with the retail price of other services such as geographic calls, the monthly subscription charge etc.

A2.16 These various interrelationships are quite complex. To help clarify them, we set out two diagrams that explain the consequences of:

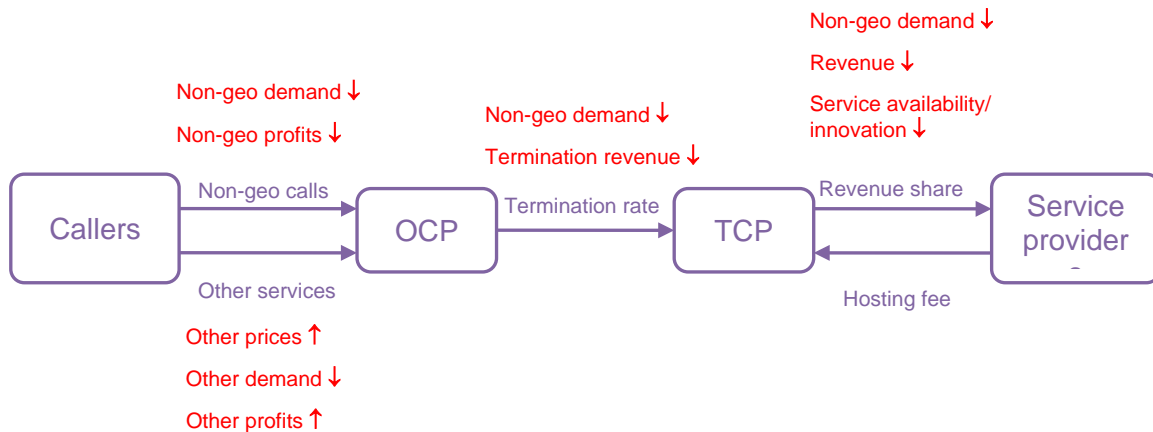
- i) a fall in demand for NGCs; and
- ii) a rise in the retail price of NGCs .

Consequences of a fall in demand for NGCs

A2.17 As explained later in this Section, demand for NGCs is reduced, for example because callers are deterred from making calls because of uncertainty about the price. Figure [A2.1 below shows the effect of a fall in demand for NGCs. This downward shift in demand lowers OCPs' profits from NGCs. This has several consequences.

- First, the overall package of products supplied by each OCP to callers is less profitable (since profits from NGCs are lower). To offset this, OCPs raise the price of other services such as geographic calls (the "tariff package effect"). Higher profits from those other services restore the profitability of the overall package of products that the OCP supplies but reduce demand for those services.
- Second, the fall in demand is transmitted through the supply chain. Lower NGC volumes mean less termination revenue for TCPs. As a result, TCPs reduce the amount of revenue they pass through to SPs (or, alternatively, increase the amount they charge SPs for hosting). SPs' income from NGCs thus falls (or, their costs of providing NGCs increase). This discourages SPs from making services available or from innovating.

Figure A2.1: Impact of a fall in demand.

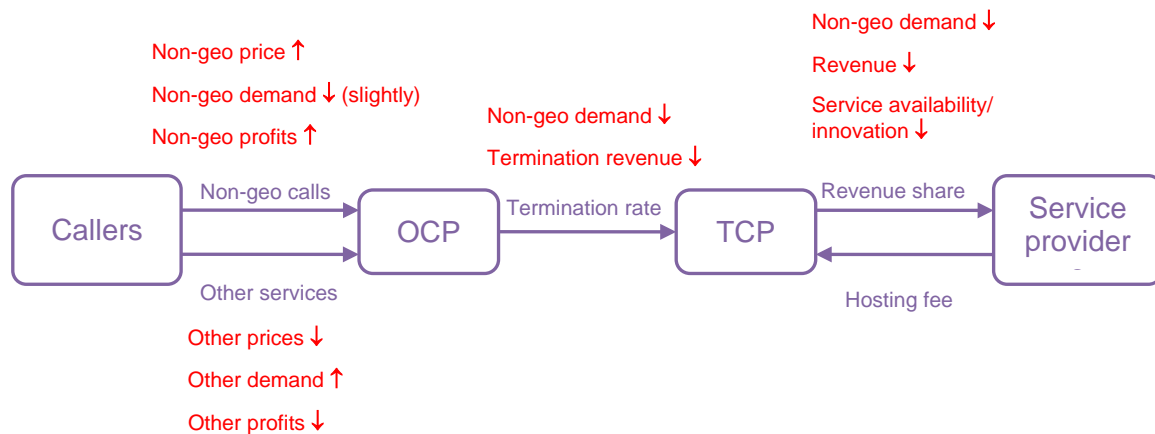


Source: Ofcom's analysis

Consequences of a rise in the retail price of NGCs

A2.18 As explained later in this Annex, OCPs are likely to be able to charge high prices for NGCs, for example because poor price awareness weakens competitive constraints on the price of these calls. Figure A2.2 shows the effect of this rise in the price of NGCs.

- First, the higher price for NGCs reduces demand for these calls. Note that fall in demand is likely to be relatively small compared to the rise in price since the OCP will not raise prices to such an extent that it becomes unprofitable.
- Second, the overall package of products supplied by each OCP to callers is more profitable (since profits from NGCs are higher). Competitive constraints on that overall package means that OCPs reduce the price of other services such as geographic calls (the “tariff package effect”). Profits from those other services thus fall but demand for them increases.
- Third, the fall in demand for NGCs is transmitted through the supply chain. As in the first example discussed above, TCPs' termination revenue falls. This reduction in revenue is passed through to SPs, whose income from NGCs falls. This discourages SPs from making services available or from innovating.

Figure A2.2: Impact of a rise in NGC retail prices

A2.19 We will return to these effects (shifts in demand and higher retail prices) as part of our analysis of the retail market, which we discuss below.

How the retail market is currently working

Consumer access to NGCs and the services provided

A2.20 This Section provides an initial discussion of how NGCs fit into the array of services provided by OCPs and the services provided using these numbers. We also provide an overview of data and information on NGCs which is relevant to assess how the current provision of NGCs works and whether there may be potential consumer harm concerns.

Consumers' consumption of NGC

A2.21 NGCs represent a significant proportion of total call volumes and revenues in the UK. In total, across the fixed and mobile networks considered in The 2010 Flow of Funds study, NGCs accounted for about 12-13% of traffic volumes and generated approximately 10% of call revenues in 2009¹³⁶.

A2.22 However, the distribution of call volumes between fixed and mobile is significant. As shown in Table A2.1, NGCs represent a much greater proportion of total call minutes for fixed operators compared to mobile, and this is reflected in the fact that mobile originated NGCs make up only approximately 11% of total NGC minutes¹³⁷. Interestingly, however, of the total £1,865 million revenue (excluding VAT) entering the NGC market in 2009 (according to responses to the data request), the six mobile operators considered in this analysis¹³⁸ generated £654 million. This

¹³⁶ See: P4 The 2010 Flow of Funds study. While we consider this analysis provides an indicative view, we also note that this study is based on information provided to us by CPs and the quality of some of that information was weak and a number of assumptions underlie it (p23-24 of the 2010 Flow of Funds study).

¹³⁷ See P39 The 2010 Flow of Funds study.

¹³⁸ O2, Orange, T-Mobile, Three, Virgin Mobile and Vodafone. Note, where data was unavailable for Three, Analysys Mason have assumed that Three generates the same number of voice minutes per subscriber as the average of the other four MNOs and that the same proportion of these calls are to non-geographic number ranges.

equates to approximately 35% of total non-geographic retail call revenues generated, yet derives from only 11% of the volume of minutes originated.¹³⁹

Table A2.1: NGC minutes as a proportion of all fixed and mobile call minutes, 2009

	NGC minutes as a proportion of all minutes
Fixed	20%
Mobile*	3%

*Based on four largest mobile operators (O2, Orange, T-Mobile and Vodafone)

Source: p3 and 4, The 2010 Flow of Funds study

How NGCs are sold

- A2.23 Consumers do not purchase NGCs as self-standing services. Rather they can access voice services, including GCs, NGCs and international calls once they have subscribed to an OCP. Therefore, it is only when a consumer has decided which OCP(s) to subscribe to (fixed and/or mobile) that it has access to NGCs. Additionally, for an increasing number of consumers telephony is not purchased on a standalone basis. Increasingly, fixed or mobile voice services are only one component of a bundle of communications services - including telephony, broadband and pay TV services. Around 50% of all UK households now buy two or more communications services from a single supplier in bundle (up from less than a third five years ago)¹⁴⁰. Therefore, access to NGCs follows from a prior subscription decision which includes a variety of services of which NGCs are just one component.
- A2.24 Therefore it is clear that NGCs are sold as part of a wider fixed or mobile telephony service (or potentially wider still to include television and broadband), but unlike many geographic calls which are also provided as part of the subscription, NGCs are (in the vast majority of cases) priced on a ppm (or flat rate) basis rather than included in bundles of inclusive minutes¹⁴¹ (see discussion of pricing below). There appear to be several motivations for this such as the existence of revenue share on some non-geographic numbers, uncertainty over costs and consumer demand, and this is discussed in greater detail below.

Services available by NGC number range

- A2.25 non-geographic numbers are used to provide a large variety of services, ranging from contact points provided by organisations to access its services, helplines, technical advice, and pre and post sales services to direct service provision and sales such as horoscopes, directory services, etc.
- A2.26 Some of these services act as micropayment mechanisms and allow SPs to collect revenues from their service through the telephone bill (especially in the case of 09

¹³⁹ P39 The 2010 Flow of Funds study'

¹⁴⁰ P55, Ofcom Communications Market Report 2010.

http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/Consumer_research_2010_FINAL.pdf

¹⁴¹ We are aware that there are some add-ons packages currently available for consumers that are particularly interested in making NGC. For example, Vodafone offers its post-pay customers the opportunity to pay an additional £2.50 per month to be able to use their inclusive minutes to call 0800, 0845 and 0870 numbers.

numbers), while others are intended largely to provide ease of access, and in the case of Freephone, SPs will cover all or part of the cost of a call.

A2.27 Although the different number ranges are used by different services (i.e. the number ranges are not service-specific), we set out a general picture in 2004¹⁴² which we believe is still likely to be a reasonable representation of use and so is replicated below (with the exception of 0844/0845 which has been updated as discussed), but with the addition of the 03, 070 and 118 number ranges¹⁴³:

- 0800 and 0808 (Freephone numbers) are principally used to access private and public sector voice services such as sales lines and helplines; and telephony services provided by two stage indirect access service providers;
- 03 numbers are UK-wide numbers used for a variety of services including public sector bodies, not-for-profit bodies, and migrations from matching 084 and 087 numbers;¹⁴⁴
- 0844 and 0845 numbers support a wide range of other services, including pre- and post-sales enquiry lines, public sector services, transaction services and information services. Historically, dial-up internet access generated large volumes of traffic although this has fallen sharply as consumers have increasingly switched to broadband;
- 0870 and 0871 numbers are principally used to provide access to pre- and post-sales enquiry lines, some public sector services and services such as international telephony provided by resellers;
- 09 (Premium rate) numbers are used mainly to access sexual entertainment services (SES) services, chatlines, horoscopes, voting services and some post-sales services such as technical support;
- 070 provide personal portable numbers but are now also frequently used for other commercial services such as bed-side hospital numbers;
- 118 numbers are six digit numbers used to access a Directory Enquiry facility¹⁴⁵

Alternatives to NGCs

A2.28 There are sometimes alternative means for consumers to access the services and information that is available through NGCs.

A2.29 In some cases consumers can access the SPs' geographic number instead, perhaps with the aid of websites such as saynoto0870.com. When non-geographic numbers are entered into this website it provides a geographic number for the same

¹⁴² Paragraph A5.7, "Number Translation Services: Options for the Future consultation" 22nd October 2004. http://stakeholders.ofcom.org.uk/binaries/consultations/ntsoptions/summary/nts_future_op.pdf

¹⁴³ We are also looking at other non-geographic ranges as part of this review – 070 (personal numbering services), 076 (radiopaging services) and 0500 (pre-existing free-to-caller numbers not available for new allocation)

¹⁴⁴ National Telephone Numbering Plan

<http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/numplan080410.pdf>

¹⁴⁵ National Telephone Numbering Plan

<http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/numplan080410.pdf>

SP. For those with access to a computer, the internet can also act as a substitute for NGCs. However, it is not clear that a significant volume of consumers are aware of these alternatives. For example, when asked if they were aware of any alternatives to calling 08 and 09 numbers, 68% of respondents stated they were not aware of any¹⁴⁶.

- A2.30 As well as a potential lack of awareness of alternatives, the actual use of alternatives appears to be relatively limited (even though consumer confusion and discontent with NGCs is relatively high – see discussion below). For example, even though 22%¹⁴⁷ of respondents identified the Internet as an alternative to calling 08 and 09 numbers, only 1%¹⁴⁸ of respondents stated they use the internet when asked why they did not make NGCs more frequently than rarely or never from their mobile or fixed phone. That said, it may be that for some services there are not any viable alternatives to a NGC.
- A2.31 Even if there were not alternatives for consumers to make a NGC, many have the option to call from either a fixed or mobile OCP. In Q1 of 2010, 78% of respondents had both fixed and mobile telephony¹⁴⁹. As fixed line NGC prices are lower than those from mobiles there is evidence that consumers are opting for making calls from their fixed connection. Indeed 73% of consumers in our research state that they used a landline more than a mobile when calling these numbers¹⁵⁰.
- A2.32 Calling from work may also be a suitable alternative to using their own phone, with 4% of respondents providing this has a reason as to why they do not call non-geographic numbers more frequently than rarely or never from their mobile phone¹⁵¹.
- A2.33 Therefore, although there may be some alternatives to NGCs, it is not clear that consumers are always able to make the appropriate trade-off decision between NGCs and these alternatives due to unawareness or unsuitability of these alternatives. As a result, uncertainty and confusion around the retail prices of NGCs (see discussion below) may result in consumers incurring unnecessarily high call avoidance costs. This is considered below.

Locked in calls

- A2.34 It may be possible in some cases for consumers to choose among competing service offered via non-geographic numbers. However, it appears that often consumers do not have alternative services on NGCs.
- A2.35 For example, a consumer making a post-sales call to a retailer about a warranty repair of a consumer appliance cannot choose between retailers, and a customer of

¹⁴⁶ Q30: “Are you aware of any alternatives to having to call numbers starting with 08 and 09 numbers? If so, what are the alternatives?” The 2010 Consumer research

¹⁴⁷ Q30: “Are you aware of any alternatives to having to call numbers starting with 08 and 09 numbers? If so, what are the alternatives?” The 2010 Consumer research

¹⁴⁸ Q23: “Why do you not call these numbers more frequently than rarely or never from your own phone?” and Q27: “Why do you not call these numbers more frequently than rarely or never from your mobile phone?” The 2010 Consumer research

¹⁴⁹ Figure 5.67, Ofcom Communications Market Report 2010

<http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/UK-telecoms.pdf>

¹⁵⁰ Q29: “When making calls to 08 or 09 numbers, do you tend to use you landline or mobile or both?” The 2010 Consumer research.

¹⁵¹ Q27: “Why do you not call these numbers more frequently than rarely or never from your mobile phone?” The 2010 Consumer research

a particular retail bank wanting to check his bank balance via the phone will not be able to substitute a call to another bank that he does not have an account with but which may offer cheaper NGCs. Callers in such a position are often referred to as being “locked-in” (although they may have alternatives other than a NGC).

- A2.36 The absence of substitutes for calls to a particular SP might allow SPs (or OCPs) to charge more for those numbers. However, in practice, OCPs are unlikely to be able to increase charges for SP numbers where demand is inelastic because those numbers will be included in blocks of numbers. The issue of whether SPs could exploit locked in consumers was explored in The 2005 NTS Consultation (NTS: A Way Forward)¹⁵². It concluded that it was difficult to assess the extent to which locked in callers are being overcharged for NGCs.
- A2.37 In The 2005 NTS Consultation, SPs were asked to list the five main services they provided on their non-geographic number. Ofcom classified each service as either locked-in or not locked-in based on whether the callers were likely to be able to choose alternative numbers. TCPs and SPs provided sufficient information for Ofcom to perform this analysis for over 420 SPs in this way, and this concluded that on average, approximately 20-30% of 084 and 087 calls were estimated to be locked-in¹⁵³. Table A2.2 below summarises the results of the analysis.

Table A2.2: Proportion of locked-in calls by number range, 2005

Number Range	Proportion of total call minutes
0844	Unknown (insufficient sample size to provide robust estimate)
0845	<5%
0870	45-55%
0871	30-40%
Average for 084 and 087	20-30%

Source: Paragraph 5.74, “Number Translation Services: A Way Forward”, 28th September 2005.
http://stakeholders.ofcom.org.uk/binaries/consultations/nts_forward/summary/nts_way_forward.pdf

- A2.38 In relation to 0845, as explained in Annex 5, we consider the estimate of the proportion of locked in 0845 calls to be unreliable due to the decline in dial-up internet access. 0845 calls accounted for over 200 SPs in the analysis and was dominated by pay-as-you-go dial-up internet traffic at the time of the analysis (calls to dial-up ISPs accounted for 85% of 0845 traffic at the time¹⁵⁴) which Ofcom considered not to be locked-in since callers are able to choose between alternative dial-up metered ISPs with relative ease. Given the decline in dial-up internet access volumes since 2005, we anticipate that the current volume of “locked in” 0845 calls is significantly higher. In 2005, the average proportion of locked in calls for the 084

¹⁵² The 2005 NTS Consultation, 28th September 2005.

http://stakeholders.ofcom.org.uk/binaries/consultations/nts_forward/summary/nts_way_forward.pdf

¹⁵³ P8, “Number Translation Services: A Way Forward”, 28th September 2005.

http://stakeholders.ofcom.org.uk/binaries/consultations/nts_forward/nts_way_forward.pdf

¹⁵⁴ Paragraph 5.29, “Number Translation Services: A Way Forward”, 28th September 2005.

http://stakeholders.ofcom.org.uk/binaries/consultations/nts_forward/nts_way_forward.pdf

and 087 number ranges was 20-30%. Since this overall average depends on (and is strongly influenced by) the 0845 figure, we consider that it is likely to understate the current proportion of locked in calls across 084 and 087 number ranges. As a result, both the 0845 estimate and the overall average that we calculated in 2005 are likely to understate the current proportion of locked in calls

- A2.39 On the other ranges considered in the analysis, the proportion of calls that are locked in ranges from approximately one-third to half. Although not assessed in the analysis, it appears unlikely that callers to 09 or PRS are locked in because these tend to be stand alone services rather than a follow on from another purchasing decision. Consequently substitute services are readily available¹⁵⁵.
- A2.40 This picture is confirmed by the 2009 Consumer research where participants were asked what they would do when calling a number that they know is not contained in their package and they also don't know the cost (for example calling a number beginning 0845 or 0871 or 0870): 37% said that they would go ahead and make the call most (over 50%) of the time¹⁵⁶. All the respondents who would make the call were then asked why they would still make the call? By far the most frequent response (63%) was "I have to make the call"¹⁵⁷. In the most recent consumer research (The 2010 Consumer research), when asked about feelings associated with non-geographic numbers, 39% of fixed line users and 33% of mobile users feel forced to call them¹⁵⁸.
- A2.41 Although we have not specifically investigated whether lack of substitute SPs leads to consumer detriment through high prices for NGCs, we note that alternatives to NGCs are not available to many consumers and this may contribute to higher prices and/or consumers' frustration and alienation¹⁵⁹.

Charges for NGC

- A2.42 As set out above, consumers access NGCs as part of a wider bundle of services, and so the tariffs for each type of call will depend on what type of plan they purchase.
- A2.43 Many consumers opt for call plans from their fixed provider which offer them unlimited calls at certain times of the day or week (for example weekends, evenings, or all day), while mobile consumers can purchase bundles of inclusive minutes (either through monthly subscription price for contract customers or

¹⁵⁵ However, we note that even when there are alternatives (such as PRS), it does not necessarily mean there is a real choice for consumers as it can be difficult to find information on the alternative services available. Therefore even though calls to numbers such as 09 may not be "locked in" in the sense that they are not a complement to other services already accessed/purchased (such as banking and the post-sales helplines), consumers may still have few substitute services.

¹⁵⁶ Q39: "Let's say you are calling a number that you know is not contained in your package and you also don't know the cost (for example, calling a number beginning 0845, 0871 or 0870), how often would you make the call?". The 2009 Consumer research, summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

¹⁵⁷ Q40: "When calling a number that you know is not contained in your package and you also don't know the cost (for example calling a number beginning with 0871), why do you still make the call?". The 2009 Consumer research, summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

¹⁵⁸ Q24 and 28: "How do you feel when you call these non-geographic numbers from a landline/mobile?" The 2010 Consumer research

¹⁵⁹ This is reflected in our discussion of the unbundled tariff remedy option, and in particular the service charge element, discussed in Annex 5.

individual bundles for PAYG customers) for which there do not tend to be time of day/week usage restrictions.

- A2.44 However, more often than not, NGCs are not included in inclusive bundles, and this is the case for both fixed and mobile OCPs. This is supported by Table A2.3 below which sets out the proportion of calls within bundles for fixed and mobile OCPs according to data we received in response to the S135 information requests. This data indicates that 03 calls are an exception for mobile OCPs as almost all 03 calls are included in bundles, which is likely to reflect the pricing guidance set out in the NTNP for this number range (namely geographic pricing) as discussed below.
- A2.45 There are only a few examples where other NGCs are included in standard bundles, but even then they may use the inclusive minutes at a faster rate than geographic calls¹⁶⁰. For fixed OCPs, the 0845 and 0870 number ranges (and to a lesser extent 03) tend to be included in bundles more often than other non-geographic number ranges, which may reflect the requirement on BT to price these calls at the geographic price level (which, depending on the subscription chosen would result in them being included in bundles), a policy preference also followed by some other fixed OCPs.

Table A2.3: Proportion of NGCs that are sold in and out of inclusive bundles by number range

	Fixed		Mobile	
	% of calls "within bundle"	% of calls "out of bundles"	% of calls "within bundle"	% of calls "out of bundles"
03	13%	87%	92%	8%
070	4%	96%	0%	100%
080	0%	100%	3%	97%
0843+4	1%	99%	3%	97%
0845	20%	80%	3%	97%
0870	20%	80%	1%	99%
0871+2+3	1%	99%	0%	100%
09	0%	100%	0%	100%
118	0%	100%	0%	100%
Across all NGCs	7%	93%	5%	95%

Source: Responses to QA1 S135 information requests¹⁶¹.

- A2.46 It is also worth noting that NGC prices are often higher than GCs (with the exception of 03, 080, 0845 and 0870 calls when OCPs follow the policy preferences set out in the NTNP¹⁶²). In 2009, NGCs accounted for approximately 20% of fixed call minutes but 23% of fixed call revenue. If 080 calls are excluded, that approximately 23% of call revenue came from 13% of fixed call minutes¹⁶³. As a

¹⁶⁰ For example, T-Mobile customers on 'Flex' price plans, calls to 08 numbers are included within the monthly allowances. Therefore a call that is nominally rated at 40 pence per minute could cost a Flex customer 5.16 pence per minute in real terms if the call is paid for out of the customer's monthly Flex call allowance. On the 'Flex 100' tariff, a customer receives £775 worth of credit for a monthly recurring charge of £100. A one-minute call to an 08 number with a nominal charge rate of 40 pence per minute would use up 40p worth of the monthly credit value of £775, which actually cost the customer only £100. Pro rata, this would account for only 5.16p out of the £100 monthly credit.

¹⁶¹ Mobile relates to data received from O2, Orange, T-Mobile, Virgin Media and Vodafone only.

¹⁶² This includes BT as well as some other OCPs

¹⁶³ P3, 2010 Flow of Funds study

result, even in the case of fixed OCPs, NGCs are (on average) relatively more expensive than other calls.

- A2.47 This can be shown in a more granular level by comparing the geographic and NGC prices set out in Table A2.4 and Table A2.7. For example, Virgin Media either includes geographic calls in the monthly subscription or charges 8.5ppm, depending on the package selected¹⁶⁴. This is consistently lower than the maximum prices for NGCs (excluding 080) set out in Table A2.4. This difference is much less stark for BT given the regulatory constraints on its NGC prices, meaning its daytime rate of 6.4ppm for GCs on its most popular tariff (Unlimited Weekend)¹⁶⁵ is much more in line with many more NGC prices (with the exception of 0871 and 09), as set out in Table A2.4.
- A2.48 This difference between GCs and NGCs is also evident in the case of mobile OCPs. For the five MNOs which provided data¹⁶⁶, NGCs accounted for approximately 3% of mobile voice call minutes and nearly 6% of total mobile call revenue in 2009 according to The Flow of Funds¹⁶⁷. Again, this difference is shown in Tables A5.5 and A5.8. For example, O2 (and indeed other mobile OCPs) includes GCs in inclusive minutes for post-pay customers while, with the exception of some 080 calls, no NGCs are included in bundles for the most popular post-pay tariff (see Table A2.5).¹⁶⁸ This difference is less stark for pre-pay customers who pay 25ppm for GCs (which is in line with many NGC prices on the most popular pre-pay tariffs set out in Table A2.5), although this does reduce to 5ppm after the first three minutes which is significantly lower than NGC prices¹⁶⁹. This is echoed for Vodafone who includes GCs in inclusive minutes for post-pay customers and charges 21ppm for pre-pay¹⁷⁰, both of which are lower than prices for NGCs under the most popular tariffs (see Table A2.5).
- A2.49 However, it is perhaps unsurprising that NGCs have a higher retail price than other call types given that several non-geographic number ranges support a degree of revenue sharing with the SP (e.g. 0845, 0844, 0871/2/3 and 09).
- A2.50 We asked operators for a high level description of their pricing policy towards NGCs, and how they determine whether NGCs will form part of an inclusive bundle¹⁷¹.
- A2.51 From this information, it appears that there are a variety of different pricing strategies used by OCPs for NGCs, with some suggesting they are not a particularly significant focus in their own right (viewing them as part of an overall bundled proposition), while others consider cost recovery on each non-geographic

¹⁶⁴<http://shop.virginmedia.com/phone/compare-packages.html>

Accessed 12th November 2010

¹⁶⁵<http://www.productsandservices.bt.com/consumerProducts/displayCategory.do?categoryId=CON-HOME-PHN-R1>. Accessed 11th November 2010

¹⁶⁶ O2, Vodafone, T-Mobile, Orange and Three

¹⁶⁷ P4 2010 Flow of Funds study.

¹⁶⁸ Although GCs have an out of bundle price of 20ppm, most consumers stay within the limits of their inclusive minutes (only 14% of mobile contract users claimed to usually exceed their inclusive minutes in the 2008 Communications Market Report – Figure 5.7) and so most face an effective per minute charge of zero for GCs. 2008 Communications Market Report is available at <http://stakeholders.ofcom.org.uk/binaries/research/cmr/telecoms2.pdf>

¹⁶⁹ http://shop.o2.co.uk/tariffs/Pay_and_Go Accessed 11th November 2010

¹⁷⁰ <http://www.vodafone.co.uk/personal/price-plans/pay-as-you-go/call-charges/index.htm>

Accessed 11th November 2010

¹⁷¹ Responses were provided in confidence so have been redacted.

range individually. There also appears to be quite a distinction between the pricing decisions of fixed and mobile operators, most noticeably in terms of the inclusion of NGCs in retail bundles (see Table A2.3). The reason why they are not included in bundles by some OCPs is, at least in part, due to the revenue share arrangements on some number ranges. Additionally, some OCPs have implied that the demand for NGCs is relevant to the pricing policy chosen (discussed further below), and one has suggested the demand from consumers may not be significant (which may affect the absolute price levels – see further discussion below).

A2.52 This description of the pricing policy and consumer attitudes appears to be supported by some recent price changes. For example, BT has included 0845 calls in inclusive call plans since January 2009 (unless they are used for internet access). In response to a question asking BT how consumers had reacted to this change, BT stated:

“the cost of 0845 calls is only one factor among many which affects customer perceptions, which are affected by the prices for a whole range of services, not least the overall rates for bundled propositions. As a result, BT argued that it is difficult to trace any direct effect on value for money perceptions from just from one price change¹⁷².”

A2.53 The term NGC includes a wide array of services with a wide variety of charges. It is, therefore, not straightforward to summarise what the charges for NGCs look like. However, for the purpose of this review we believe that it would be important to establish the following facts:

- i) What is the degree of price variation?
- ii) What are the absolute levels of prices for NGCs and what are the incentives of OCPs in setting these?

A2.54 The first question in particular is important to understand price transparency, the horizontal externality of consumers' perceptions of the meaning of different number ranges (such as the reliability of the call price they expect to pay) and the possible implications for consumers and the risk of consumer harm. The second links to the horizontal and vertical externalities¹⁷³, and these are also discussed in more detail below.

A2.55 Before investigating the above questions, it is important to highlight regulatory obligations on NGC. As set out above, the way retail prices are set in practice depends on the NGC range and the OCP.

A2.56 The NTNP indicates the prices that consumers may incur when calling different number ranges and sets out some specific requirements which include specific price guidance for BT¹⁷⁴, pricing guidance for all OCPs on some number ranges

¹⁷² BT response to Q6, informal information request

¹⁷³ The vertical externality is discussed in more detail below where we consider the demands of SPs.

¹⁷⁴ On 22 October 2010 we published a consultation entitled "Changes to the Numbering Plan - A proposal for modifications to the National Telephone Numbering Plan to facilitate the increase in VAT from January 2011". This document proposed a change to the way the prices of calls to 0843/4, 0871/2/3 and 09 numbers are designated in the National Telephone Numbering Plan ("the Plan"). The consultation closes on 11 January 2011 and can be found at: <http://stakeholders.ofcom.org.uk/consultations/addendum-numbering-plan/>

(e.g. 03) and some price publication requirements that are applicable to all OCPs, as follows¹⁷⁵:

- For 080 calls of all OCPs, there should be no charge to the customer, except where charges shall be notified to callers at the start of the call;
- 0845 calls for BT customers are required to be charged (before discounts and call packages) at BT's Standard Local Call Retail Price inclusive of value added tax. 0845 calls of other OCPs should also be charged at that OCP's local call price, but other OCPs are not obliged to follow this policy preference and their prices may vary;
- 0870 calls of all OCPs should be charged at no more than the caller would pay for a call to a geographic number with calls to 0870 numbers counting towards inclusive call minutes if the customer has remaining inclusive minutes and included in any discount structure that apply to geographic calls, except where call charges have been published in accordance with General Condition 14.2;
- 0843/44 calls for BT customers are required to be charged at up to and including 5ppm or per call; the price charged by other OCPs may vary;
- 0871/2/3 calls for BT customers are required to be charged at up to and including 10ppm or per call. The price charged by other OCPs may vary;
- BT's price for 09 calls is capped at £1.50 ppm or per call. Unlike 0843/4 and 0871/2 TCPs are not able to choose a price point for their call. The price charged by other OCPs may vary.

A2.57 The regulation of 080 and 0870 numbers applies to all OCPs in the same way as it does to BT, in that all OCPs (including BT) do not have to follow our stated policy preferences for call prices to these numbers¹⁷⁶ if they follow the price publication requirements. However, aside from price publication requirements, other OCPs' prices are not directly regulated and therefore they have commercial freedom to set their prices in all ranges. This has resulted in considerable variation in prices and pricing practices (e.g. the inclusion of 0845 and 0870 in call plans/inclusive minutes) across call providers, as discussed in more detail below.

Degree of price variation in NGCs

A2.58 We consider three types of price variations in NGCs:

- a) Variation between OCPs – we examine how the charges to call a specific number – e.g. a call to a bank – vary between providers¹⁷⁷;

¹⁷⁵ The NTNP <http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/numplan080410.pdf>

¹⁷⁶ Although not formal pricing regulations, we have set out a policy preference for retail call prices for particular number ranges (which is discussed in greater detail below). Our policy preference for 080 calls is summarised in The 080 Dispute Determination, paragraphs 2.32 to 2.35. Available at: http://stakeholders.ofcom.org.uk/binaries/consultations/draft_deter_bt_tmobile_vodafone/non_conf.pdf. Our policy preference for 0870 calls is summarised in the 0845/0870 Dispute Determination, paragraph 2.2. Available at: http://stakeholders.ofcom.org.uk/binaries/enforcement/competition-bulletins/closed-cases/all-closed-cases/761146/Final_Determination.pdf

¹⁷⁷ We do not consider variation in NGC prices between different tariffs of the same OCP as consumers are heterogeneous and have different preferences for the balance of prices across the

- b) Variation within each OCP's tariffs –we consider whether prices for NGCs vary within each number range (i.e. whether customers of a particular tariff face multiple price points for the same number range) for each tariff; and
- c) Variation between each OCP's tariff for similar number ranges – how retail prices vary for calls to non-geographic numbers with similar digits, for example 0844 and 0845, and 0870 and 0871.

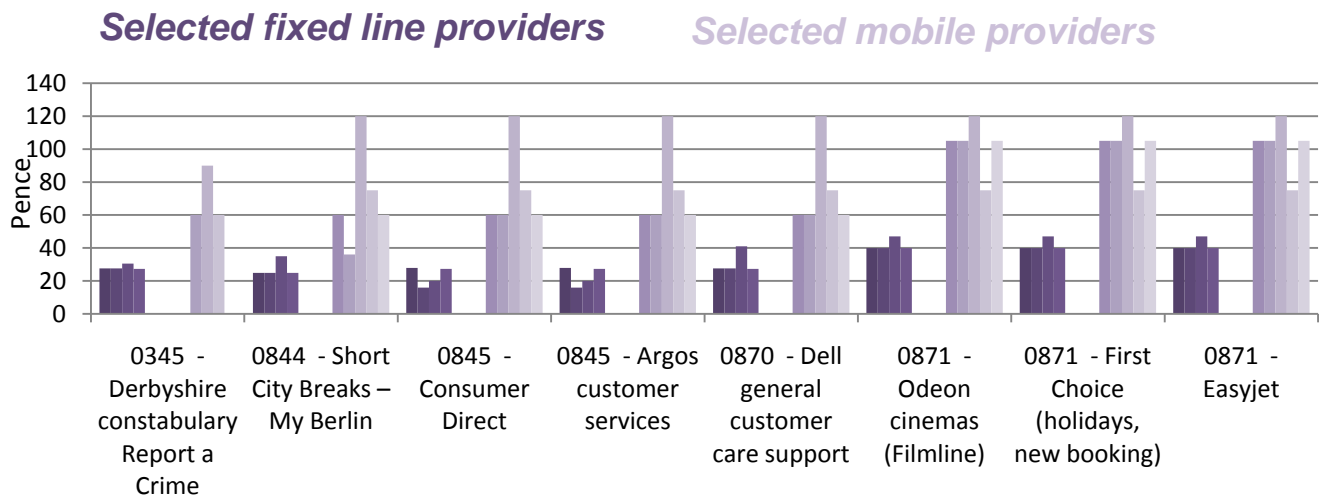
A2.59 We now consider each of these below.

Variation between OCPs

A2.60 This analysis is important because it reveals the extent of price variation faced by consumers across OCPs for calls to the same number. Consumers may only be affected by this at the time of choosing which OCP to subscribe to, although for those with access to both a fixed and mobile service it may also be relevant to a lesser degree at the point of call. In order to consider the extent of this variation, we asked OCPs about the cost of a three minute call under their most popular tariff to specific SPs (e.g. Odeon cinemas, Argos, and Easyjet) which use different non-geographic numbers.

A2.61 Firstly, we consider the overall variation between fixed and mobile services. The results of this are presented in Figure A2.3 below.

Figure A2.3: Variation in price of three minute call to specific SPs under Fixed CP's "most popular" tariff in daytime and Mobile CPs "most popular" post-pay tariff



Source: S135 information requests

A2.62 Figure A2.3 above shows there is a significant variation in the price of calls to the same non-geographic numbers across a selection of both fixed and mobile. Calls from mobiles tend to be significantly more expensive than calls from fixed lines, but even with the fixed and mobile categories there are some variations for calling the same number, although these variations are less frequent and significant for fixed

different services they purchase, and so we would expect OCPs to offer different tariffs to reflect these preferences, However, variation between OCPs is relevant as it has wider implications for the effectiveness of the pricing message delivered by the non-geographic number prefix.

OCPs. However, as stated above, with the exception of consumers who have both fixed and mobile access for whom the limited consideration of the variation between their fixed and mobile CPs may be relevant, it is unlikely that this variation across all CPs will be of day to day relevance to the majority of consumers other than when selecting their OCP.

- A2.63 That said, this variation dilutes the pricing message delivered by the non-geographic number prefix and so is likely to contribute to consumer confusion around these numbers.
- A2.64 Additionally, this level of variation between CPs is likely to be an issue for SPs who are unable to accurately provide retail pricing information to consumers. Not only are SPs not involved in the price setting by OCPs (meaning there is likely to be a delay before they are aware of any retail price change), but the variation across OCPs means it is almost impossible for SPs to provide accurate pricing information for all consumers. As a result SPs can currently only provide a generic message such as “calls cost 10ppm from a BT landline, costs from other providers may vary and from mobiles it may cost considerably more”, which is also likely to contribute to price uncertainty for consumers.
- A2.65 The features leading to variable prices between OCPs and reduced competition is not a lack of competitors, but absence of easily available price information and the externalities (these are discussed in more detail below).

Variation within each CP's tariff

- A2.66 The price variation considered above could only have an effect on consumers at the point of subscription (or at the choice between making the call via mobile or fixed line for those who have access to both). Although this may dilute the pricing message associated with each range, it does not necessarily directly contribute to confusion at the point of call given consumers largely only subscribe to one OCP/tariff at a time (one fixed and/or one mobile). Here we consider the variation in prices faced by consumers once they have subscribed to an OCP (and a particular tariff), and hence the range of prices they potentially have to remember in order to make an informed choice when calling non-geographic numbers from their chosen CP. This is important because consumers subscribe to one OCP (one fixed and/or one mobile), and if the number of price points within each number range is high, the number range will provide little information as to the charges to expect. Also one can expect consumers not to learn that much because inferring the charge for a number range from the charge of a single number would not help.
- A2.67 Table A2.4 and A2.5 show that for many OCPs, there is a range of price points within a single number range for an individual tariff, meaning for customers of that tariff, there is not a single price point to remember for a specific number range. In particular, we note that although mobile prices tend to be higher than fixed NGC prices (see discussion below), multiple price points within a number range appear to be more common for fixed OCPs. Although there is sometimes a single price within a tariff for the lower end of NGCs (i.e. 0800, 0845 and 0870), this becomes much less common at the higher end where a range of prices appears to be more prevalent for both fixed and mobile OCPs (and this range can be relatively wide)¹⁷⁸.

¹⁷⁸ There can also be multiple price components for NGCs – namely a call setup or connection charge and a pence per minute price – which further complicates the pricing structure for consumers.

Table A2.4: Range of retail prices for non-geographic number ranges for customers of specific tariff for each fixed OCP

Daytime (excluding any call set up charges)	BT Unlimited Weekend Plan	Talk Talk Plus Plan	Virgin Media "M" Package	Sky Talk Freetime package
0800	free	free	free	free
0844	1-5ppm	0.5-5ppm	0-30.11ppm	6ppm
0845	2ppm	Inclusive in package up to 60 mins per call then 5.8ppm thereafter	10ppm	6ppm
0870	0 or 5.9ppm depending on time of week	Inclusive in package up to 60 mins per call then 5.8ppm thereafter	10ppm	4.95ppm
0871	1-10ppm or up to 10p fixed fee	5 or 10ppm	0-12ppm	1-10ppm or 5-150p fixed fee
090	5-130ppm or up to 50p fixed fee	1.5-165ppm	0-149ppm	5-149.99ppm

Source: Respective company websites accessed August 2010

Table A2.5: Range of retail prices for non-geographic number ranges for customers of specific tariffs for each mobile OCP¹⁷⁹

	Vodafone		Orange		O2		T-Mob		Virgin Mobile*	
	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay
0800	0-20ppm	0-25ppm	0-15ppm	0-25ppm	0-20ppm	0-20ppm	0-40ppm	0-40ppm	Up to 15ppm	Up to 15ppm
0844	20ppm	25ppm	10, 12 or 75ppm	40p min. charge	20ppm	25ppm	40ppm	40ppm	No more than 50ppm	No more than 50ppm
0845	20ppm	25ppm	20ppm	40p min. charge	20ppm	25ppm	40ppm	40ppm	40ppm	40ppm
0870	20ppm	25ppm	20ppm	40p min. charge	20ppm	25ppm	40ppm	40ppm	No more than 50ppm	No more than 50ppm
0871	35ppm	25ppm	35ppm	40ppm	35ppm	35ppm	40ppm	40ppm	No more than 50ppm	No more than 50ppm

¹⁷⁹ From our research, the mobile OCPs do not vary their NGC prices between tariffs – the only distinction is between pre-pay prices and post-pay prices. Therefore we have not provided details for the tariffs used for the mobile OCPs.

090	50-200ppm	50-200ppm	50-170ppm or pc	50-170ppm or pc	50 or 80ppc or 80, 100, 150 or 200ppm	50 or 80ppc or 80, 100, 150 or 200ppm	75-300	75-300	50-250ppm	50-250ppm
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**Information provided is for mobile-only tariffs, and so excludes any tariff available when bundled with TV and/or broadband*

Source: Respective company websites accessed August 2010

A2.68 In addition to the range of price points within individual non-geographic number ranges, we also note that in order for consumers to access the information, it often involves opening large files from the website of an OCP and searching for the specific number in question, potentially using up to five, six or even seven digits. Whilst this is most prevalent for the 070, 09 and 118 number ranges¹⁸⁰, some OCPs also appear to use such lists for 0844 and 0871¹⁸¹. In addition, some OCPs use such a price list only to provide a call classification code which then requires a customer to search another list to find the actual price¹⁸² which may even be in a different file/on a different webpage¹⁸³.

A2.69 This kind of variation means there are potentially a range of prices relating to individual non-geographic number ranges that consumers would have to remember once they have subscribed to a particular tariff and OCP. In addition, the range of prices does not appear to be particularly easy for consumers to find, potentially requiring a search through a lengthy table of prices across a variety of webpages. This is highly likely to directly contribute to the confusion and uncertainty consumers have in relation to NGC prices.

Variation between each OCP's tariff for similar number ranges

A2.70 A relevant consideration for consumer price awareness is also the extent of variation in prices for calls to non-geographic number ranges which have similar digits and may only differ in the fourth digit, such as 0844 and 0845 or 0870 and 0871. This is because if there is consumer confusion around different prefixes (discussed in greater detail below) and there is significant variation in the prices charged for calls to these non-geographic number ranges which share similar digits, consumer confusion may be higher and, depending on the extent of variation, be more costly¹⁸⁴.

¹⁸⁰ See for example, the pre-pay price list for T-Mobile http://support.t-mobile.co.uk/resources/sites/TMOBILE/content/live/DOCUMENTS/0/DO113/en_GB/Non%20Standard%20Charges%20-%20PAYG.pdf, and the post-pay price list for Orange http://www1.orange.co.uk/service_plans/downloads/09-Premium-rate-numbers-August-2010.pdf

¹⁸¹ For example, Talk Talk has a 258 page price list for "specialised numbers" which includes 070, 0843/4, 0871/2 and 09 numbers with a seven digit number prefix for checking prices.

<http://media.talktalk.co.uk/sites/TalkTalk/Global/PDF/Non-Geographic-Price.pdf>

¹⁸² See for example, BT's tariff guide for "Prices for calls to Specialised Numbers from BT Residential Fixed Lines"

<http://www.productsandservices.bt.com/consumer/consumerProducts/pdf/SpecialisedNos.pdf>

¹⁸³ Virgin Media's guide "Calls from home UK non-geographic calls"

http://allyours.virginmedia.com/pdf/004498%20Non-geo_phonebook_1st%20July_V1.pdf

¹⁸⁴ Vodafone raised concerns about consumers' practical ability to distinguish subtle differences between NTS numbers at a 3 or 4 digit level (e.g. between 0845 and 0844/3/2) in its response to the Call for Inputs, paragraph 14, May 2010.

- A2.71 As shown in Tables A2.4 and A2.5 above, consumers of particular fixed and mobile tariffs face quite different retail prices for some NGCs with similar prefixes, although this variation appears to be less for mobile customers. For example, the maximum price for 0871 on those fixed tariffs considered are consistently above the maximum price for 0870, and for some of them, 0871 calls may be double the price of 0870 calls. There is a similar picture for 0845 and 0844 calls from the fixed tariffs, where some 0844 calls are more than double the 0845 price (even three times the price for Virgin Media “M” customers). For those mobile tariffs considered in Table A2.5, price variations between non-geographic number ranges with similar digits are much less common, particularly for 0844 and 0845.
- A2.72 We note that this variation is perhaps unsurprising given that pricing, in part, reflects the extent of revenue share which varies across these numbers (for example there is no revenue share for 0870 but there is for 0871), which is discussed in greater detail below. Indeed, even the regulation for BT prices set out in the NTNP sets quite different pricing obligations for these non-geographic numbers with similar digits.

Absolute price levels and price setting incentives of OCPs

- A2.73 Although we are not establishing the exact prices for NGCs across all OCPs (in part, due to the significant variation in these prices as set out above), there are some broad inferences that can be made about the absolute retail prices:
- i) Prices appear high in absolute terms;
 - ii) NGC prices do not reflect the policy preferences that Ofcom has expressed in relation to specific number ranges
 - iii) Differences between mobile and fixed prices;
 - iv) Incentives of OCPs in setting prices

A2.74 We now consider each of these.

High prices in absolute terms

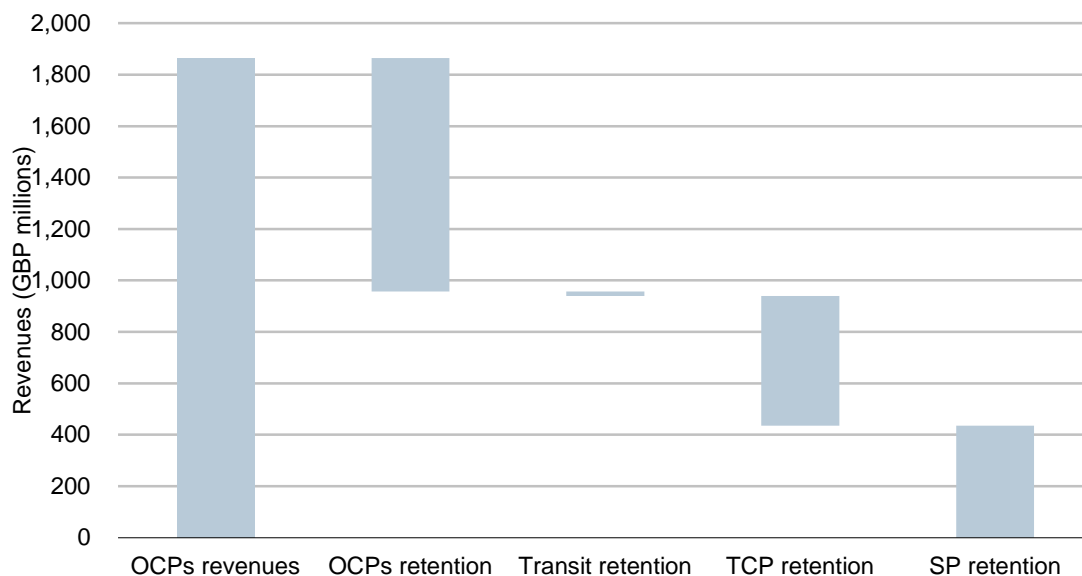
- A2.75 As set out above, NGCs do not tend to be included in bundles and therefore are subject to ppm or ppc charges. In general, there is not a like-for-like comparison between NGC prices and geographic call prices (or indeed any other service), given the existence of revenue share on many numbers. That is, some NGC prices include the micropayment by the caller to the SP for the service the SP provide on the NGC, as well as covering the cost of the call itself (only the latter applies to geographic calls). However, this is not always the case. For example, the NTNP sets out a policy preference that 0870 calls are priced at the equivalent level of geographic calls, and indeed the termination rate payable by BT is such to facilitate this pricing¹⁸⁵. However, Figure A2.3 sets out the cost of a three minute call to a 0870 numbers from a variety of CPs. Given that geographic calls are included in bundles for many consumers (particularly post-pay mobile subscribers), it is clear from this that many consumers are likely to be paying significantly higher prices for 0870 calls than they do for geographic calls under the most popular tariffs.

¹⁸⁵ The “0870 Dispute Determination”, 17th June 2009.

<http://stakeholders.ofcom.org.uk/binaries/consultations/resolve0870calls/statement/determination.pdf>

A2.76 In addition, it is clear that OCPs are retaining a significant amount of revenue from NGCs (£908m in 2009¹⁸⁶) which may also suggest absolute price levels are high. For example, as shown in Figure A2.4, OCPs retained the highest proportion (49%¹⁸⁷) of revenue generated by NGCs, despite the significance of revenue share on some number ranges¹⁸⁸. For example, for 0845, OCPs retained 68% of the 5.2ppm average revenue generated despite the existence of revenue share on this number range (see Table A2.6). This means that even though revenue share is supported and encouraged on 0845, of the revenue generated, the retention of OCPs is nearly double that received and shared between transit, TCPs and SPs.

Figure A2.4: Retention at each level of the value chain across all non-geographic number ranges



Source: Figure 5.17, *The 2010 Flow of Funds study*

A2.77 We also note that the absolute levels of retention vary quite significantly across number ranges and although the proportion of revenue retained by OCPs reduces for the more expensive NGC ranges (i.e. 09 and 118), the absolute prices for these calls are higher and so this does not necessarily mean their retentions are “small”. Indeed, as shown in Table A2.6, OCPs are able to retain not insignificant amounts of revenue from the different non-geographic number ranges, and given the figures presented are averages, it is possible that some OCPs are retaining significantly more than indicated.

¹⁸⁶ P38 *The 2010 Flow of Funds study*

¹⁸⁷ P39 *The 2010 Flow of Funds study*

¹⁸⁸ The NTS Call Origination Condition imposed on BT permits cost-recovery only by BT for BT originated calls, meaning all excess revenue flows to the terminating end of the call. We also note that the data provided by OCPs implies “a rough consistency of termination pricing” (*The 2010 Flow of Funds study*). This therefore suggests that OCPs are paying similar termination rates (including revenue share where appropriate), but non-BT OCPs are able to retain any extra revenue from a price increase while BT is required to pass it on to TCPs.

Table A2.6: Average retail revenue and OCP retention¹⁸⁹

Number Range	Average retail revenue	Average proportion retained by OCPs	Absolute average amount retained by OCPs
0843/4	6.0ppm	47%	2.8ppm
0845	5.2ppm	68%	3.5ppm
0870	7.3ppm	57%	4.2ppm
0871/2/3	12.7ppm	22%	2.8ppm
09	79.2ppm	27%	21.4ppm
118	79.8ppm	20%	16.0ppm

Source: *The 2010 Flow of Funds study*

A2.78 This implies that OCPs are retaining a significant proportion of NGC revenue, even where the number range supports revenue share with the TCP/SP. This suggests OCPs are able to price at a level high enough to cover not only the transit and termination costs (which include the revenue share element), but also to retain a significant level of revenue for themselves which on average can be as high as 21ppm depending on the number range. As a result, it appears that NGC prices are likely to be high in absolute terms in order to support this level of revenue generation at the origination end (on top of any revenue share with the terminating end).

A2.79 This is supported by considering OCP retention on NGCs broken down by fixed and mobile OCPs, and is particularly evident with mobile originated NGCs (see Figure A2.5). To consider these figures in the context of other call types, the Flow of Funds study estimated that revenue retention on UK geographic calls for fixed OCPs is of the order of 1ppm or slightly higher on average, and as high as 7ppm for calls to mobiles. This implies that fixed OCP retention on most non-geographic number ranges is above the levels for UK geographic calls, but below the level of calls to mobiles (other than for premium rate or directory enquiries numbers). For mobile OCPs, it estimated that retention for calls to fixed lines and mobile numbers is between 5 and 10ppm on average. This is likely to be substantially below the revenue retention for calls to most of the non-geographic number ranges (as shown in Figure A2.5).¹⁹⁰

A2.80 Finally, we also note complaints from consumers to the Ofcom Advisory Team (OAT) who raised concerns about the absolute prices of NGCs. We present extracts from such complaints in Annex 15. Below are some example:

¹⁸⁹ These estimates were calculated using the data underlying the 2010 Flow of Funds study. AnalysysMason set out the limitations of the analysis on pages 23-24 of that study. We have included these estimates in this document to allow stakeholders to comment on them and help us better understand how accurate they are.

¹⁹⁰ P53, The 2010 Flow of Funds study

Consumer experience Box A2.1

“Consumer called to complain about [a fixed OCP] charging an excessive amount of money for calls to '08' number. He states he received a bill for over £200 due to making such calls.”¹⁹¹

Consumer experience Box A2.2

“Consumer was charged 39.00 GBP to call two premium rate numbers from his landline. He states that he feels these charges to call these numbers is far too high.”¹⁹²

Non-geographic call prices do not reflect the policy preferences that Ofcom has expressed in relation to specific number ranges (as reflected in the NTNP)

A2.81 The current structure of regulation also fails to deliver the policy outcomes originally envisaged for many of the ranges. This leads to a dichotomy between the stated purposes and outcomes, further undermining consumer confidence and understanding. The purpose of the Numbering Plan is that numbers should inform consumers about call prices. On some number ranges we have expressed a policy view on the level of retail call pricing:

- i) 03 calls: calls are charged at up to the same rate the customer would pay to call a UK geographic number, counting towards inclusive call minutes and included in any discount structures that apply to UK geographic numbers;¹⁹³
- ii) 080 calls: Our current policy preference is that 080 calls ought to be free to the caller, and if they are not free, that they are as close to free as possible¹⁹⁴; and
- iii) 0845 and 0870 calls: Our current policy preference is that these calls should be priced at the same rate as geographic calls.¹⁹⁵

A2.82 The extent to which OCPs abide by our policy preferences for the retail price of calls to these number ranges varies:

- i) OCPs do generally price in line with our price guidance in the case of 03 calls – see Table A2.7 and Table A2.8 below;

¹⁹¹ Complaint received 14th October 2010

¹⁹² Complaint received 11th August 2010

¹⁹³ 03 numbers are designated in the NTNP as “UK-wide Numbers at a geographic rate”.

<http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/numplan080410.pdf>

¹⁹⁴ Our policy preference for 080 calls is summarised in The 080 Dispute Determination, paragraphs 2.32 to 2.35. Available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/draft_deter_bt_tmobile_vodafone/non_conf.pdf

¹⁹⁵ Our policy preference for 0845/0870 calls is summarised in the 0845/0870 Dispute Determination, paragraph 2.2. Available at: http://stakeholders.ofcom.org.uk/binaries/enforcement/competition-bulletins/closed-cases/all-closed-cases/761146/Final_Determination.pdf

- ii) For 080 calls, fixed OCPs follow the policy preference and do not charge for these calls. While mobile OCPs do not charge for calls to some 080 numbers (such as those THA members which are non-profit making helplines), in general they charge for 080 calls (see Table A2.5 above)^[9]. For example, T-Mobile charges some of its customers up to 40ppm^[10] and Vodafone charges up to 35ppm^[11]. According to the Flow of Funds study, 080 calls generated £76m of revenue from consumers in 2009 which was practically all from mobile OCPs, as shown by the fact that mobile operators receive revenue of around 14.5p per minute for 080 call origination¹⁹⁶; and
- iii) For 0845 and 0870 calls, some fixed OCPs (for example BT) price these calls identically to geographic calls. Other fixed OCPs (for example, Virgin Media) set higher prices for 0845/0870 calls. Mobile OCPs almost always charge higher prices for 0845/0870 calls than for geographic calls. See Table A2.5 above for more detail.

Table A2.7: Example of geographic and 03 calls prices from fixed OCPs, ppm

Daytime ppm (excluding any call setup fees)	BT Unlimited Weekend Plan	Talk Talk Plus Plan	Virgin Media "M" - Talk Weekends	Sky Talk Freetime Package
01/02	6.4	Inclusive, up to 60 minutes	8.5	5.9
03	6.4	Inclusive, up to 60 minutes	8.5	5.9

Source: Respective company websites accessed November 2010

Table A2.8: Example of geographic and 03 calls prices from mobile OCPs, ppm

	Vodafone		Orange		O2		T-Mobile		Virgin Mobile*	
	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay
01/ & 02	Inclusive	21	Inclusive	20	Inclusive	25*	Inclusive	25	Inclusive	25
03	Inclusive	21	Inclusive	20	Inclusive	25*	Inclusive	25	Inclusive	25

* 25ppm for first three minutes, then 5ppm after;

Source: Respective company websites accessed November 2010

- A2.83 We also have policy concerns about the use of 070 and 076 numbers where the use of these numbers is now frequently quite different from the original intentions – we discuss this more in Annex 7.
- A2.84 Consumers also raise concerns about the retail prices for calls to these non-geographic numbers in complaints to the OAT:

Consumer experience Box A2.3

*Consumer is concerned about the costs of 0845 and 0870 numbers and seeks to log a complaint.*¹⁹⁷

^[9] They are able to do this by offering a pre-call announcement as permitted by the NTNP.

^[10] Based on PAYG service. <http://www.t-mobile.co.uk/shop/mobile-phones/price-plans/pay-as-you-go/costs/> viewed on 8th September 2010

^[11] Based on £25 per month sim-only service. <http://shop.vodafone.co.uk/shop/sim-only-plans/all-sim-plans> viewed on 8th September 2010

¹⁹⁶ P44, the Flow of Funds study

¹⁹⁷ Complaint received 20th September 2010

Consumer experience Box A2.4

Consumer has moved into a property and wishes to obtain a telephone service. All the telephone numbers she has located for OCPs are 080 numbers and as she has only a mobile phone she cannot call these without great expense.¹⁹⁸

- A2.85 Although we note that some OCPs do follow our policy preferences, there are still services for which the actual retail price deviates from our policy preference for a particular number range (such as doctors' surgeries and HMRC who use the 0845 number range). This variation from our policy preference is evident in Tables A2.4 and A2.5 above.
- A2.86 The deviation in non-geographic prices from our policy preferences (alongside the variation of retail prices within number ranges as detailed above) undermines the pricing message intended to be delivered by non-geographic numbers¹⁹⁹. This leads to a dichotomy between the stated purposes of a number range and outcomes, further undermining consumer confidence and understanding. Not only does this contribute to the lack of caller awareness of non-geographic prices, it can also have important implications for the level of demand for socially valuable services for which it is important for citizens to be able to access at reasonable prices but are provided via NGCs (see discussion below). This is the case even for 080 calls where OCPs with above-zero retail prices have to provide a pre-call announcement to that effect, as although consumers know the price is not zero, it does not provide information on the actual price level.
- A2.87 For example, access to doctors' surgeries is sometimes provided via a 0845 number for which our policy preference is a local geographic call price. But it may be subject to significantly higher prices from some OCPs²⁰⁰. Therefore because it is not formal pricing regulation, deviation by some OCPs from our policy preference for some non-geographic numbers is not prevented and may not only undermine the pricing message of a particular number range, exacerbating uncertainty and confusion around retail pricing, but may also mean certain consumers are unable to access socially valuable services as the call prices are prohibitive (particularly mobile-only consumers). This distributional concern is discussed further below. This is all likely to foster negative views of non-geographic numbers, to the detriment of consumers.²⁰¹
- A2.88 We note that, as part of our analysis of potential interventions, we consider whether our policy position in relation to these numbers ranges should change.

A comparison between retail mobile and fixed NGC charges

- A2.89 As shown in Figure A2.3 above, it is clear that NGC charges for mobiles are substantially higher than those from fixed lines. In addition, Figure A2.5 below

¹⁹⁸ Complaint received 15th September 2010

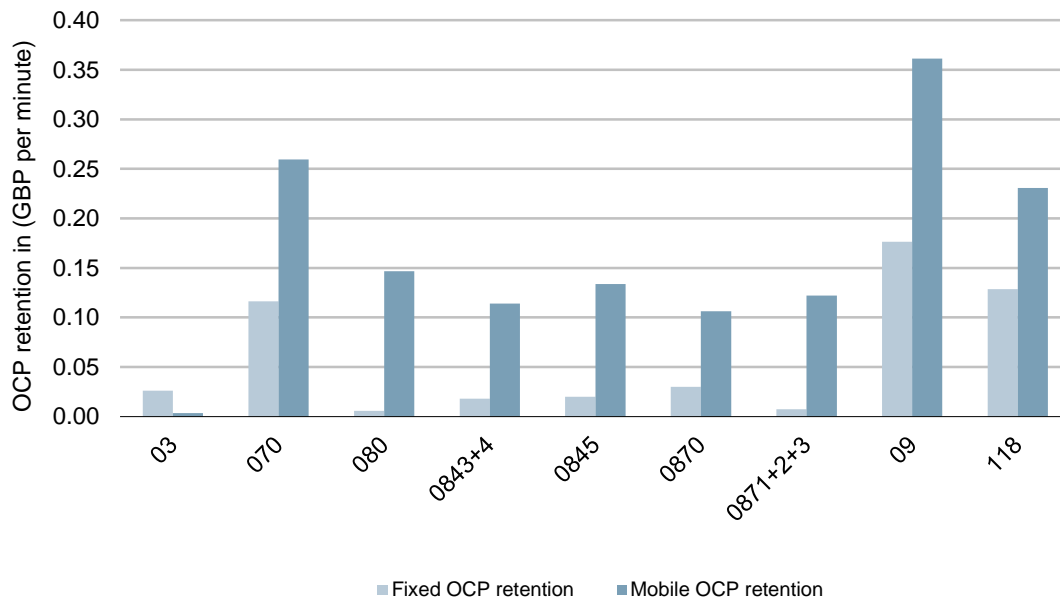
¹⁹⁹ This contributes to the horizontal externality, discussed in greater detail below.

²⁰⁰ <http://www.homephonechoices.co.uk/government-crackdown-on-costly-0845-nhs-numbers-15092009.html>

²⁰¹ This discussion sets out our policy preferences for particular number ranges as they currently stand, but as part of our analysis of potential interventions, we consider whether our policy preferences in relation to these numbers ranges should change – see discussion in Section XX.

shows the average retention by number range for fixed and mobile OCPs, and, given that the data provided by OCPs implies “a rough consistency of termination pricing”²⁰², it also supports the view that NGC from mobiles are more costly than from fixed lines. Although some of this premium may be due to the increased cost of call origination on mobiles, it is very unlikely this is the entire justification, given the scale of the price differences.

Figure A2.5: Per-minute revenue retained by fixed and mobile OCPs for each number



Source: Figure 5.31, *The 2010 Flow of Funds study*

- A2.90 Callers avoid making NGCs from mobiles, with 73% tending to use a landline either exclusively or mainly when making calls to 08 and 09 numbers²⁰³, in part reflecting the (generally correct) view that non-geographic numbers are cheaper to call from fixed lines. This is further supported by the fact that mobile originated minutes make up only approximately 11% of total NGC minutes²⁰⁴.
- A2.91 Additionally, following the agreement between DWP and mobile companies in January 2010 that calls to its 0800 helplines would now be zero rated²⁰⁵, there was a significant change in calling patterns between mobile and fixed originated calls. In a sample week before the agreement, 15% of calls came from mobiles (with the remaining coming from landlines or a payphone – 47% and 38% respectively). But this changed to 52% from mobiles (and 30% and 18% from landlines and payphones) in the first week of June 2010 following the change (as shown in Table A2.9).

Table A2.9: Origin of calls to the DWP benefit claim services

	From Mobile	From Landline	From Payphone
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²⁰² P40 The 2010 Flow of Funds study

²⁰³ Q29: *When making calls to 08 or 09 numbers, do you tend to use you landline or mobile or both?* The 2010 Consumer research.

²⁰⁴ P39, The 2010 Flow of Funds study

²⁰⁵ <http://www.dwp.gov.uk/previous-administration-news/press-releases/2010/january-2010/dwp007-150110.shtml>

Pre-introduction of zero-rating from mobiles			
Week ending 4 th December 2009	15%	47%	38%
Post introduction of zero-rating from mobiles			
Week ending 5 th March 2010	43%	35%	22%
Week ending 4 th June 2010	52%	30%	18%

Source: Submission to Ofcom.

A2.92 Finally, the Flow of Funds analysis indicates that of the total of £1,865 million retail revenue (excluding VAT) in 2009, the six mobile operators considered in the analysis²⁰⁶ generated £654 million. This 35% of total revenues derives from only 11% of the volume of minutes originated.²⁰⁷ Therefore based on all the evidence above, it appears that mobile-originated NGCs are significantly more expensive than fixed-originated.

Price setting incentives of OCPs

A2.93 As well as price variations, the nature of the supply chain gives rise to particular private incentives which may not be in the interests of all parties involved in the provision and use of NGCs, and these are exacerbated by the poor price awareness. There are two externalities that result from these incentives – the vertical and the horizontal externality.

Vertical externality

A2.94 Firstly, the vertical externality occurs when the SP may prefer a particular retail price for calls to its service, but it has no control over the actual price charged (subject to a few exceptions which are discussed in Annex 7). When OCPs set their retail NGC prices, they may not have an incentive to fully take into account the preferences of SPs or the impact the chosen price has on SPs. Rather the OCP is interested in its own profits/objectives only. Therefore it may increase NGC prices, particularly given the lack of price transparency, without taking into account the impact this has on SPs. We discuss this in more detail below in considering the demands of SPs.

Horizontal externality

A2.95 Secondly, each non-geographic number range (and indeed, the non-geographic calls system as a whole) is effectively a collective brand created by all in the supply chain. However, individual OCPs and SPs²⁰⁸ may not have an incentive to take into account the impact their NGC pricing has on the reputation/brand perception of a particular number range, or indeed the entire NTS system as a whole. We refer to this effect as the “horizontal externality”. The evidence above in relation to the relative and absolute price levels of NGCs and subsequent variations supports this view of a horizontal externality. This effect is exacerbated by the lack of price transparency (see discussion below) as it is that which makes it easier for OCPs to increase their prices for NGCs without necessarily losing customers as a result.

²⁰⁶ O2, Orange, T-Mobile, Three, Virgin Mobile and Vodafone

²⁰⁷ P39 The 2010 Flow of Funds study

²⁰⁸ While SPs have a similar incentive meaning it is possible for them to cause a similar externality, we consider that the majority of SPs have very limited influence over the retail price for calls to non-geographic numbers (see discussion above), and so under the current regime it is unlikely that they would be able to act on this incentive.

- A2.96 In the case of OCPs, each OCP would be aware that consumers decide whether or not to make a call with poor price information, and potentially based on an expected “average” price for a particular number range (in other words, they make calls largely independently of the actual retail price). Knowing this, they would each have an incentive to raise their NGC charges as by doing so they would not necessarily reduce demand for NGCs from their customers, and so they may be better off. In other words, there is an incentive for individual OCPs to free ride on the reputation of a number range, which ultimately undermines that reputation.
- A2.97 For example, if all OCPs priced 0845 calls at the geographic level and then one OCP sets a higher retail price, that OCP gains all the profit associated with this price increase. Indeed, we have noted that some OCPs have moved away from geographically rating 0845 calls over time. However, over time this weakens the brand perception of the 0845 number range, making consumers less confident about what they might pay for a NGC. But whilst this may lead to a reduction in demand, the volume loss would not solely be faced by the OCP that raised its prices – it would also affect other OCPs (even if they had not raised their prices). So the OCP raising price gains all the profit increase associated with that price rise, but it does not face all of the costs. This impact on the reputation of the 0845 number range also extends wider as given the substantial nature of a range like 0845, it is also likely to have a negative impact on the reputation of similar numbers in the 08 number range. This incentive to increase prices is present even in a competitive market. The lack of price transparency exacerbates the OCPs’ incentives, and increases their prices without triggering a strong consumer switching response. Therefore it leads to higher (and potentially variable) NGC prices.
- A2.98 This potentially leads to an outcome that is not in the interests of all those involved in the provision of NGCs in the sense that consumers are now less confident about what they might pay for NGCs, potentially affecting call volumes. This is shown in Table A2.12 below where confidence in the retail prices is very low for fixed and mobile customers. Despite 0800 calls being free from all fixed lines, only 46% of respondents answered that they were confident of the cost of calling 0800 from their fixed line²⁰⁹. This may in part be attributable to a dilution in the “Freephone” brand of 080 calls from fixed providers as a result of higher prices charged by mobile OCPs.
- A2.99 As explained above, this affects all OCPs, TCPs and SPs, not just the OCP who increased its retail price, but the OCP does not have an incentive to take this effect into account, and so there is a horizontal externality. In other words, the “brand” of each number range and the price information this conveys is collectively created by all the OCPs, but can be diluted by the actions of one or a few OCPs. This would result in NGC charges that are “too” high.
- A2.100 There could be a similar effect where SPs are able to influence the retail price of NGCs. For example, in our survey of SPs, when asked about the importance of exact pricing information on a scale of 1 (not important) to 5 (very important), the average score for 080 SPs was 3, which was also the average answer when asked how desirable it would be to inform callers on the maximum price they could be charged²¹⁰. As noted by Analysys Mason, we would have expected SPs in the 080 range to be most strongly in favour of these suggestions, but it appears that the SPs value increased information only marginally more than the average SP across

²⁰⁹ Q35 / 36. *How confident are you that you know the costs of calls per minute to these numbers from your fixed line/ your mobile?* The 2010 Consumer research

²¹⁰ Figure 4.6 The 2010 SPs survey

all number ranges. Both of these examples suggest that where SPs are able to influence retail prices, the horizontal externality could result in NGC charges that are too high, as SPs are potentially able to “free-ride” on the NTS “brand”.

- A2.101 Therefore the horizontal externality is likely to be exacerbated by the lack of consumer transparency and the limited exposure of NGCs to retail competition as it strengthens both the incentive and ability for OCPs to increase their retail prices without necessarily taking into account the effect on the NGC “brand”. In fact, given the lack of control any one OCP has on consumer understanding of the range, the incentive is for them to maximise the returns on these call types through high prices rather than encouraging volume growth through lower charges. This is because limited price transparency means consumers are less likely to respond to the price signals, particularly given the horizontal externality caused by other OCPs who also charge high prices. Where it is possible for SPs to influence retail prices for access to their services, a similar incentive and ability is also likely to be relevant.

Preliminary views on NGC Prices

- A2.102 From our analysis it is clear that there is a significant variation in prices for NGCs. In particular there is significant variation in prices across OCPs (both within mobile and fixed OCPs) suggesting that the lack of price transparency and awareness leads to an environment where there is limited competitive pressure for NGC charges. Second, variations in prices for NGCs within the same number range are also evident among many OCPs for consumers of individual tariffs, resulting in multiple price points per number range for each consumer to remember. This means that callers cannot necessarily learn information on prices in a number range if they learned the charges for a number within that range. Third, consumer awareness is likely to be complicated by the similarity in some non-geographic number prefixes (where they only differ by the fourth digit) but there is variation between the prices charged. Finally, the absolute prices of NGC appear to be relatively high, and often diverge from the indications provided in the NTNP. This is likely to significantly add to consumer confusion in relation to the prices of these calls.

- A2.103 In part, this seems to be a consequence of the externalities caused by the private incentives of the various operators (particularly OCPs) under the current environment where there is very limited price awareness. It is however also important to recognise that consumer confusion may also come from the proliferation of number ranges that has occurred in the last few years, for example, the use of similar prefixes which may only differ in the fourth digit, as discussed above.

- A2.104 We now consider consumers’ access to pricing information and their attitudes towards NGCs, as well as the nature of competition in NGCs.

Consumer awareness of NGC prices and attitudes towards NGCs

- A2.105 The evidence above suggests there is a significant level of variation between NGC retail prices, In light of this, it is necessary to consider the ease with which consumers are able to access and understand pricing information, and how this affects their view and consumption of NGCs. In order to do this, we consider the following issues:

- a) Availability and accessibility of price information;

- b) Consumer awareness of prices;
- c) Consumer attitudes towards NGCs; and
- d) Call avoidance costs.

Availability and Accessibility of Price Information on NGCs

A2.106 The search costs of acquiring information on voice telephony charges can be high relative to the price of a single call. In general, consumers do not currently appear to attempt to find pricing information. In the 2009 Consumer research, 82% of respondents answered “no” when asked if they had ever looked up pricing information to determine the cost of a call²¹¹, and of the 18% who answered they had, 52% answered that they looked up the information less than a quarter of the time²¹². Of those who looked up pricing information to determine the cost of a call, the most popular type of telephone number to look up pricing information for was a number that begins with 08, identified by 29% of respondents²¹³.

A2.107 There appeared to be a number of potential ways for consumers to access NGC price information in the 2009 Consumer research. Table A2.10 shows the sources of information identified. Although there appear to be a variety of sources available, there may be some limitations to their accessibility. None of the options allows callers to obtain the information at the point of sale, and some may require significant search costs. For example, published price lists on suppliers’ websites are the most popular source, although NGC tariffs are sometimes not easy to access and are complex. Indeed, as discussed above tariffs can vary by call plan and time of day, and NGC prices can be more difficult to find on a CP’s website (for example price lists for 0871 and premium rate numbers are often quite lengthy and in PDF documents where each number block is listed with its tariff). Therefore consumers would need access to a computer and the Internet²¹⁴, know how to use the search function in a price list, and search with the first five or six digits of the number they want to dial. Sometimes there are no price tariffs given there but codes representing tariff bands which are listed elsewhere. This difficulty is illustrated by the documents which must be referred to in order to determine the cost of BT and Virgin calls to the main NGC number ranges²¹⁵.

Table A2.10: Sources of pricing information

Source	% of respondents
Price lists published on suppliers’	51%

²¹¹ Q33: “Have you ever looked up pricing information to determine the cost of a call?” The 2009 Consumer research summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

²¹² Q34: “How often do you look up information to determine the cost of a call?” The 2009 Consumer research summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

²¹³ Q36: “For what type of telephone numbers do you look up pricing information?” The 2009 Consumer research summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

²¹⁴ We note that there may be some distributional concerns in relation to access to broadband, and these are discussed in greater detail below

²¹⁵ <http://www.productsandservices.bt.com/consumer/consumerProducts/pdf/SpecialisedNos.pdf>
http://allyours.virginmedia.com/pdf/004498%20Non-geo_phonebook_1st%20July_V1.pdf

websites	
Information printed on your bill	29%
Paper copies of price lists	11%
Internet	6%
Phone up	1%
Telephone directory	1%
In shop	1%
Customer service	1%
Other	4%
Don't know	3%

Source: Q35: "What sources of pricing information do you use?" *The 2009 Consumer research*

A2.108 The difficulty consumers face in getting price information is illustrated by the following complaint to Ofcom²¹⁶:

"The customer is with BT for line and calls. She rang 118500 and was charged £11 for a 3 minute call. She complained to BT about the cost and they told her that she asked to be connected to the number, the customer is adamant she did not. She asked BT where she could have got information as to the charge for calling 118500 and was told that this information was not available unless she has access to the internet which she does not. The customer wrote a letter of complaint to BT on 06/07/10 and is awaiting a reply."

A2.109 In relation to information provided on bills, for both fixed and mobile providers, NGC prices are often distinct from the price of GCs (as discussed above). Telephone bills often do not indicate the price of calls unless consumers specifically request and pay for an itemised bill, and our qualitative research suggested charging for paper billing had meant very few consumers received an itemised break down of their calls and charges²¹⁷. As a result, their visibility of call activity was greatly reduced. This is supported by the fact that information printed on a bill was only identified by 29% of respondents who accessed pricing information (see Table A2.10 above). In addition, most respondents in our qualitative research were signed up to a bundle of services and would simply look at a monthly headline cost without considering the individual elements of their bill. If the bill was within the usual range, and generally it was, then that was enough detail for most²¹⁸. Additionally, 59% of mobile connections were pre-pay in 2009²¹⁹, and these customers do not even receive a bill. Therefore for those consumers who do not have itemised billing, differences in NGC prices compared to expectations would only be noticed if they led to a material change in the headline bill.

²¹⁶ OAT complaints 12 July

²¹⁷ Currently Section 3.1 (p5) of The 2010 Consumer research

²¹⁸ Currently Section 3.1 (p5) of The 2010 Consumer research

²¹⁹ Figure 5.26, Ofcom Communications Market Report 2010, <http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/UK-telecoms.pdf>

- A2.110 Finally, it appears that customer service agents of the OCPs themselves may be unable to provide accurate pricing information. For example, in a mystery shopping exercise carried out by Consumer Focus, over half (57%) of customer service agents gave wrong price information, less than three in 10 (28%) of agents gave the correct price information and 15% of agents were unable to give any price information when asked about the cost of voting on *The X Factor*²²⁰. Additionally, of those who did provide price information, the majority (68%) quoted prices that were higher than the actual price that would be charged.
- A2.111 Therefore although there are a range of sources available to consumers to check NGC prices, there appear to be some potential concerns around the accuracy of information provided and its accessibility, either due to the technology used, the significant variability in prices, or the cost of securing the information.
- A2.112 As explained above, the vast majority of consumers do not even access the pricing information that is available. The top six reasons identified by 82% of respondents who have never looked up call costs are set out in Table A2.11. Although it is positive that 23% feel informed of prices, there is still likely to be a significant volume of consumers who do not feel well enough informed, but yet are not accessing the pricing information (despite the variety of sources available set out in Table A2.10). Most notably, 15% are not accessing it because it is too much effort, and 14% did not know where to find the information – these represent quite a large number of consumers who directly attribute not accessing pricing information to a current lack of pricing transparency, and so are adversely affected as a result.

Table A2.11: Reasons for never looking up call costs

Reason	% of respondents
I feel well enough informed about call costs	23%
I don't make very many calls	21%
I generally make calls within my package so I'm not interested in individual calls costs	15%
The effort to find the information is just not worth it	15%
I did not know where to find the information	14%
I do not care about call costs	12%

Source: Q37 "What is the reason(s) you have never looked up call costs?" *The 2009 Consumer research*; sample size: $n=1008$.

²²⁰ P10, "Strictly unclear: Research into information on the cost of TV voting", Consumer Focus, September 2010.

A2.113 Additionally, the vast majority of consumers in our qualitative research found it difficult to engage with non-geographic numbers and therefore did not consider non-geographic numbering to be ‘front of mind’²²¹.

Consumer awareness of prices

A2.114 Callers also have a very poor understanding of NGC prices, which is likely to be a result of the lack of price transparency and the horizontal externality (discussed above). They lack confidence, generally overestimate prices, and, when asked to estimate prices, a significant proportion answer simply that they “don’t know”. Table A2.12 below shows the level of confidence consumers have in knowing the cost of calling different non-geographic numbers. Although generally consumers are marginally more confident calling from fixed lines than from mobiles, there are significant proportions of consumers of both who are not confident of the prices charged for calling different non-geographic numbers. With the exception of landline calls to 0800, 60-70% of consumers lacked confidence about the price of calling a non-geographic number. Even for 0800 landline calls (which are free from all fixed providers and there is a PCA for mobile originated calls) 44% were not confident.

Table A2.12: Confidence of consumers in the cost of calls to non-geographic numbers from mobile and fixed lines

	0800		0844 / 0845		0870 / 0871		09xx	
	Fixed line	Mobile	Fixed line	Mobile	Fixed line	Mobile	Fixed line	Mobile
Confident	46%	25%	27%	21%	21%	18%	18%	18%
Neutral	10%	12%	15%	13%	17%	14%	14%	12%
Not confident	44%	63%	58%	66%	62%	68%	68%	70%

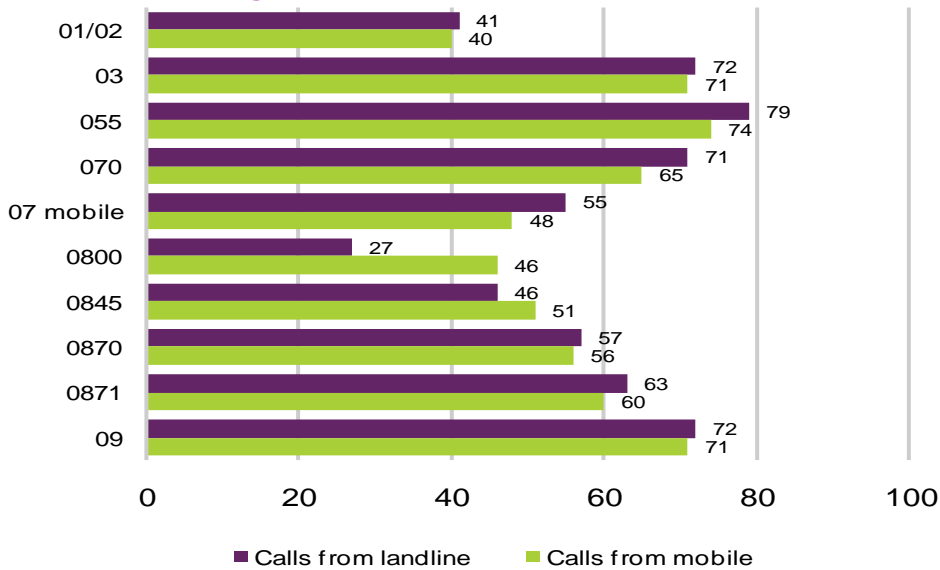
Source: Q35 / 36. “How confident are you that you know the costs of calls per minute to these numbers from your fixed line/ your mobile?” The 2010 Consumer research.

A2.115 This is supported by The 2009 Consumer research which found that a significant proportion of consumers when asked to estimate the retail price of NGCs did not even provide an estimate but answered “don’t know”²²². This is shown in Figure A2.6 below. The proportion stating they do not know the price is consistently high (45-70% for the main number ranges), and with the exception of 0800 landline calls these figures are consistently higher than for geographic calls (i.e. to 01/02 numbers).

²²¹ Section 3.1 of The 2010 Consumer research’

²²² In addition, many of those who provided an estimate actually overestimated the price – see discussion below

Figure A2.6: Percent of respondents who stated that they did not know the cost of a call to a number range²²³



Source: Q43 /44: "How much do you think it costs to call the following types of telephone numbers from your landline/mobile phone at home during the daytime on a weekday?" The 2009 Consumer research.

A2.116 Not only are consumers generally uncertain of NGC retail prices, for those that do estimate, many tend to overestimate non-geographic prices. For example, the average of callers' expectation of the price of a 0845 call was 30ppm for calls from a landline and 46ppm for calls from a mobile (see Table A2.13 below). This is markedly higher than the 2010 Flow of Funds study's estimate of the actual average price in 2009, namely 3.6ppm for a call from a fixed OCP and 15ppm for a call from a mobile OCP²²⁴.

A2.117 It is also higher than the prices provided to us by OCPs. We asked some OCPs the price of calls to particular 0845 numbers under their most popular tariff plan. For fixed OCPs, the connection fee varied between 9.9ppm and 11ppm and the per minute charge varied between 0ppm and 6ppm. For mobile OCPs, the retail price varied from 25-40ppm for pre-pay subscribers and 20-40ppm for post-pay subscribers.²²⁵ This difference between perceived and actual prices (which, we note, is much starker for most NGCs than for GCs as shown by the examples in Table A2.13 as well as Tables A5.4 and A5.5), combined with the fact that NGCs are relatively expensive is likely to foster a negative view of NGCs.

²²³ Although around 40% of respondents stated that they did not know the cost of calling geographic numbers, this is not a concern in the same way as it is for NGCs as often these calls are included in bundles (and so there is not an explicit published price) which is not the case for NGCs, they have a greater focus by consumers (and therefore competition), and where there is a ppm charge for these calls it tends to be lower.

²²⁴ Ofcom calculations using the 2010 Flow of Funds study.

²²⁵ BT response dated 23 June 2010 to question A5 of our information request dated 23 June 2010. BSkyB, Talk Talk, Virgin Media, Everything Everywhere, Vodafone and O2 responses to question A6 of our information request dated 23 June 2010.

Table A2.13: Mean expected call price by number range

Number range	Mean price expected by respondents		% responding “Don’t know”		Example “actual” prices	
	Landline	Mobile	Landline	Mobile	Landline (BT)	Mobile*
01 & 02	8ppm	18ppm	41%	40%	6.4ppm daytime**	21ppm
0800	6ppm	29ppm	27%	46%	Free	Up to 25ppm
0845	30ppm	46ppm	46%	51%	Local geographic rate (included in bundles)	25ppm
0870	39ppm	51ppm	57%	56%	National geographic rate (included in bundles)	25ppm
0871	41ppm	52ppm	63%	60%	Up to 10ppm or per call	25ppm
09	70ppm	70ppm	72%	71%	Between £0.10 and £1.50 per minute or per call	50p to £2 minimum charge

*Based on Vodafone pre-pay call charges, <http://www.vodafone.co.uk/personal/price-plans/pay-as-you-go/call-charges/index.htm>

**Daytime price based on BT’s “Unlimited Weekend Calling Plan”

Source: Q43 and 44: “How much do you think it costs to call the following types of telephone numbers from your landline/mobile phone at home during the daytime on a weekday?” The 2009 Consumer research. Mean price rounded to nearest ppm

A2.118 Consumer confusion about the differences between number ranges, the regulations applying to them and their prices has led to large number of complaints about NGCs to the OAT. This is shown in Table A2.14 below, where it is clear that complaints about NGCs are significantly higher than complaints about calls to 01/02 and 07 mobile number ranges, and made up more than 70% of those numbering complaints set out in Q1 2010.

Table A2.14: Number of complaints to the Ofcom Advisory Team (OAT), 2008-10

Number range	2008				2009				2010
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
01/02	13	8	3	9	5	2	6	1	3
07 Mobile	9	16	14	11	6	9	6	7	35
070	86	86	142	37	37	39	51	36	28
0844/0845	81	70	100	91	86	89	81	78	75
0870/0871	153	178	115	101	91	79	82	30	21
Uncategorised NTS	137	144	110	77	68	36	19	14	10
09	42	51	25	37	33	39	22	24	15

Source: OAT

Consumer attitudes towards NGCs

A2.119 The general picture that emerges from our analysis points to persisting, if not worsening, poor consumer price awareness. Consumers do not have a clear understanding of what services are offered under each number range, and indeed many do not recognise the range at all even at the one-digit level. While consumers are generally aware of service definitions for landlines and mobile, they generally associate other 08 ranges with premium rate (largely with the exception of 0800). Notably, most incorrectly associated 0845 and 0870 numbers with premium rate services, which helps to explain why consumers, on average, perceive calls costs for these number ranges to be high. For example, 34% of respondents believed 0845 is used to provide PRS even though the NTNP actually sets out 0845 to mean “local rate” geographic calls (see Table A2.15. below):

Table A2.15: Perceptions of services on different number ranges

Number range	Respondents claiming to recognise range	Services respondents believe to be provided on that range (% of all responses)
01/02	94%	Landline (93%)
070	24%	Mobile (21%), premium rate (4%), landline (3%)
077/078/079	92%	Mobile (92%)
0800	88%	Freephone (63%), premium rate (13%), landline (6%)
0845	74%	Premium rate (34%), local rate (15%), national rate (6%), business (3%)
0870	56%	Premium rate (39%), national rate (5%)
0871	34%	Premium rate (25%), national rate (3%)
09	20%	Premium rate (20%)

Source: Figure A5.4, "Review of the 070 Personal Numbering Range", 15 October 2008.

<http://stakeholders.ofcom.org.uk/binaries/consultations/070options/summary/070options.pdf>

A2.120 Callers have a negative view of NGCs. Many think they are expensive (either due to the actual price or a perception of high prices – see discussion about perceptions above), with 29% of fixed line customers and 42% of mobile users stating they think they are too expensive when asked why they do not call NGCs more often²²⁶. Some also feel forced to make these calls, with 39% of fixed line and 33% of mobile-only consumers who make NGCs stating that they feel forced to call and would rather not²²⁷. This is supported by the fact that a significant proportion of respondents would still make at least some calls to out of bundle numbers when they do not know the cost (see Figure A2.7 below), and when asked why they still made the call, most (63%) said it was because they had to²²⁸. This could reflect the feeling of a lack of alternatives to a NGC for a particular number/service, meaning callers are forced to incur an unknown charge (due to the uncertainty around retail pricing), creating consumer dissatisfaction with NGCs.

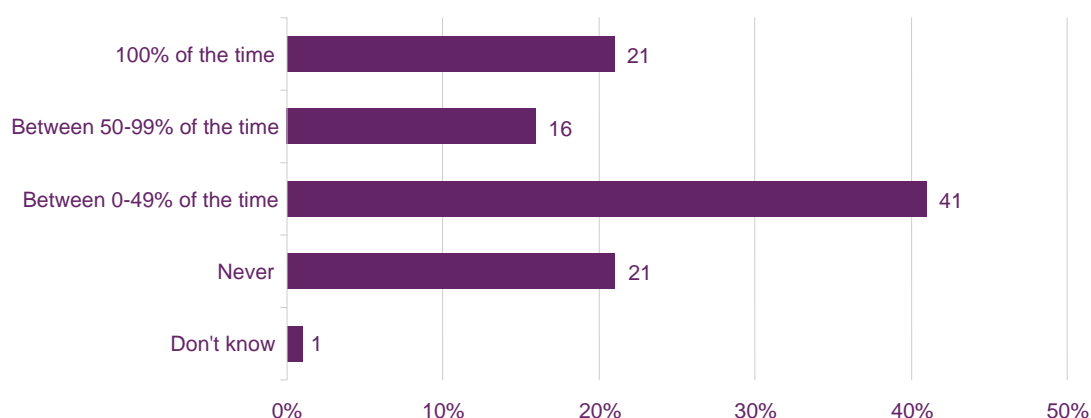
²²⁶ Source: Q23/27: "Why do you not call these numbers more frequently than rarely or never from your own phone/from your mobile phone?" The 2010 Consumer research

²²⁷ Q24/28: "How do you feel when you call these non-geographic numbers from a landline / mobile?" The 2010 Consumer research

²²⁸ Q40: "When calling a number that you know is not contained in your package and you also don't know the cost (for example calling a number beginning 0871), why do you still make the call?" The 2009 Consumer research

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

Figure A2.7: Stated frequency that consumers would make calls to out of bundle numbers that they don't know the cost of (e.g. 0845, 0870 or 0871 numbers)



Source: The 2009 Consumer research

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

Q39: Let's say you are calling a number that you know is not contained in your package and you also don't know the cost (for example calling a number beginning 0845 or 0871 or 0870), how often would you make the call?

A2.121 NGCs also appear to be relatively less important to consumers in subscription decisions compared to other aspects of a telephony service, and this is discussed further below.

Call avoidance costs

A2.122 Linked to the above, uncertainty about the call price and/or the fact that some of these call prices are relatively high from some OCPs is likely to result in consumers adopting call avoidance strategies. Although 68% of respondents were not aware of any alternatives to calling 08 and 09 numbers²²⁹, we are aware that some adopt strategies to avoid calling NGCs.

A2.123 Some such strategies could go beyond substituting mobile for fixed line access (discussed above) to not accessing a valuable service via a non-geographic number but using potentially inferior or more expensive alternatives. For example, consumers may perceive NGCs to be expensive and so seek alternative access to the information they require, such as the geographic numbers (e.g. using "saynoto0870.com" to find a geographic alternative to the non-geographic number) or the Internet (for example, standardised FAQs on company websites). However, such alternatives may not provide the correct or most relevant information, for example standardised FAQs may not directly address the consumer's specific query, or a geographic number may not direct a consumer to the correct department as well as the non-geographic number may have done. Others use more extreme (and therefore costly) call avoidance strategies, such as seeking alternative access to a phone line in order to avoid incurring the costs themselves (e.g. at a Citizens' Advice Bureau, discussed in more detail below), which also potentially delays the call quite significantly.

A2.124 Alternatively, consumers could avoid accessing the services completely or reduce the duration of NGCs. For example, in our research, 30% of pre-pay mobile

²²⁹ Q.30: "Are you aware of any alternatives to having to call numbers starting with 08 and 09 numbers? If so, what are the alternatives?" The 2010 Consumer research

respondents (26% of post-pay) answered that they consciously spent less time on that particular number/those particular numbers next time when asked what effect, if any, paying more for a call than you expected have on your mobile usage, while a further 30% (28% of post-pay) answered that they tried not to phone that particular number/those particular numbers again²³⁰. For landline users, 24% consciously spent less time calling and 21% tried not to phone again²³¹.

- A2.125 Seeking alternative ways to obtain the services which are accessible through NGCs from their own mobile or landline causes the caller to incur call avoidance costs which may be high, meaning they are not necessarily better off. The scale of avoidance costs may be reduced if consumers were better informed about the actual retail call price or if the retail price were more closely aligned with our policy preference/preferences of SPs for some specific number ranges as it enables consumers to make an informed choice. The scale of avoidance costs is likely to be exacerbated by the fact that consumers frequently overestimate the price of NGCs.
- A2.126 Therefore, not only may consumers under-consume NGCs due to their inflated expectations of the retail prices (or indeed because of relatively high actual prices of some calls), they may also have to settle for less valuable alternatives than they would otherwise do if they had a better understanding of the retail prices. Either way, this is likely to mean consumers are worse off than if they have greater price awareness.

Preliminary views on consumer awareness/understanding of NGCs

- A2.127 It is clear from the above that many consumers have difficulty accessing information on NGC prices at the point of sale, meaning they do not have the information and/or do not search for it. As a result, there is little opportunity for consumers to learn charges when they use the numbers as many do not have (or indeed check) itemised bills, and a call within a number range is not necessarily informative of charges to other numbers within the same range. Therefore awareness of NGC retail prices and confidence in the knowledge of these costs is low. This confusion contributes to the negative views many consumers appear to have in relation to NGCs.
- A2.128 Without pricing information, consumers appear to believe that prices are higher than they actually are, potentially because they are risk averse or from past experience. As a result, they may seek alternative ways to obtain the same services which they could access through NGCs, and this may involve high costs meaning they are not necessarily better off. Alternatively, they may just not make the call at all, meaning they do not access the information or service they require.

²³⁰ Q26/31: "What effect, if any, did paying more for a call than you expected have on your mobile usage?". Base: All respondents who check their bill when they have been surprised by the size of their mobile phone bill in the last 12 months (exc. billing error) / all respondents who have been surprised by the cost of some of their calls on their PAYG mobile phone. The 2009 Consumer research summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

²³¹ Q20: "What effect, if any, did paying more for a call than you expected have on your landline usage?". Base: All respondents who check their bill when they have been surprised by the size of their landline bill in the last 12 months (exc. billing error). The 2009 Consumer research summarised at <http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

Demand from SPs

A2.129 The provision of NGCs could be defined as a two-sided market. In a two-sided market there are two sets of customers that are brought together by a platform. The value of the platform depends on the balance of prices between the two sets of customers, not just the level of the combined price (as in a single-sided market). For NGCs, the platform is the combination of the originating and termination/hosting networks, which bring together callers to non-geographic numbers at the originating end and non-geographic service providers at the terminating end²³². The demand from callers depends on the amount, quality and price of the SPs' services they can reach. Conversely, the demand from SPs depends on how many callers willing to access and purchase their service there are. This matters because changes to one side of the market are likely to have an impact on the other side. For example, if the number and quality of SPs was negatively affected, the demand from NGC callers will be reduced.

SP control over retail prices and the vertical externality

A2.130 SPs argue that they are unable to control the price of calls to their service (except from BT), and in our research, only 5% of SPs indicated that they have an influence over the retail price²³³. Indeed, as shown in Figure A2.3, there can be a wide variety of retail prices for calls to the same non-geographic number depending on the originator. This makes it very difficult for SPs to forecast demand for their services. Two main points seem to emerge.

A2.131 Firstly, the lack of influence over the call price exacerbates the price transparency problems for consumers, as SPs are unable to provide a clear pricing message in their promotional material²³⁴. In their advertisements, SPs are currently only able to provide accurate pricing information for calls from a BT landline due to the fact they have no control over any element of the retail price charged by all other OCPs. As a result, SPs are unable to provide an important piece of information to prospective customers (potentially at the point of call) in a clear way.²³⁵ Rather, SPs typically provide a message such as "calls cost 10ppm from a BT landline, costs from other providers may vary". In the 2008 study carried out for PhonepayPlus by Analysys Mason, stakeholders (both SPs and consumers) felt that a lack of price

²³² As noted in the 0845/0870 Determination, for a number of reasons, the situation for NGCs is significantly more complex than a straightforward two-sided market. Since the platform involves at least two networks, the value chain involves at least three prices: the retail call price paid by the caller to the OCP, the wholesale termination charge paid by the OCP to the TCP, and the price paid by the SP to the TCP (or revenue received by the SP from the TCP). There may also be a third network involved in the platform, a transit operator, which implies a fourth price in the value chain. If the caller is a customer of a MVNO, then there is a fifth price, the wholesale price paid by the MVNO to its host MNO. Furthermore, MNOs and MVNOs sell a range of services to their customers, not just NGCs, and these other prices may also affect and be affected by the arrangements for NGCs. P38, http://stakeholders.ofcom.org.uk/binaries/enforcement/competition-bulletins/closed-cases/all-closed-cases/761146/Final_Determination.pdf

²³³ The 2010 SPs survey

²³⁴ This issue was reflected in the Call for Inputs, for example from Via-Vox Ltd

²³⁵ This may actually encourage SPs to price at a higher level than they would if prices were more transparent, either in order to benefit from confusion (for example, through fraud) or because they feel they may as well since consumers already have a negative view of non-geographic numbers but they are unable to directly influence the retail price of calls to their service to improve this view for a significant proportion of customers. This further adds to the consumer issues detailed above.

transparency was having a significant negative impact on consumer perceptions of phone-paid services²³⁶.

A2.132 Secondly, there is a concern not only that the retail prices for NGCs may vary substantially by OCP, but also that they could be set too high (allowing OCPs to earn high margins). The SP may prefer a particular retail price for calls to its service, but it has no control over the actual price charged (subject to a few exceptions which are discussed in Section 5). As well as resulting from the uncertainty and confusion of consumers (see discussion above), this could also be the case if there is a “vertical externality”. This means that when OCPs set their NGC retail price, they may not have an incentive to fully take into account the impact the chosen price has on the SP (even in a competitive market), as the SP is (generally) vertically separate from the OCP. As a result of this, the pricing preferences of the OCP and the SP are not necessarily aligned, and the OCP is interested in its own profits/objectives only²³⁷. This, combined with the OCPs’ ability to charge high margins (see discussion above) exacerbates a vertical coordination problem for SPs i.e. retail prices that significantly diverge from the levels desired by SPs, and revenue sharing that does not necessarily reflect these higher prices.

A2.133 A comment received from a consumer reflects this vertical externality:

Consumer experience Box A2.5

Mr. X is a mobile customer of Company Y for his mobile services and has recently made a call to a DQ number. They have billed him £12 for the cost of this. The consumer feels this cost is extortionate. The DQ provider has stated they only charge £4 and the difference is charged by their mobile OCP.²³⁸

A2.134 The effect of the vertical externality is likely to be intensified by the lack of price transparency which weakens competitive pressures on NGCs as these provide the incentives and ability for OCPs to raise their NGC retail prices without a strong consumer reaction. As a result, the structure of prices does not reflect either callers’ or SPs’ preference, and so NGC charges are likely to be higher and so demand from consumers weakened. Therefore there is potentially a significant impact (externality) on SPs from the pricing decisions of OCPs which is not taken into account. This is likely to be a material issue across the non-geographic number ranges, not just those for which we have expressed a policy preference (such as 080, 0845, 0870 and 03) which is not followed by some OCPs. For example, in research carried out for PhonepayPlus by Analysys Mason of phone-paid services, a particularly difficult issue was the mobile charges over and above interconnection costs, which was widely considered to be a source of consumer mistrust and bill shock, and was criticised by stakeholders at all positions along the value chain

²³⁶ “UK Phone-paid services market: current conditions and future trends”, Analysys Mason for PhonepayPlus, December 2008, p.45 <http://www.phonepayplus.org.uk/upload/ResearchDec08AM.pdf>

²³⁷ This externality effect has been considered previously in relation to NGCs, for example in paragraph 4.6 of the Final Determination to resolve a dispute between BT and each of Vodafone, T-Mobile, H3G, O2, Orange and Everything Everywhere about BT’s termination charges for 0845 and 0870 calls (10th August 2010). http://stakeholders.ofcom.org.uk/binaries/enforcement/competition-bulletins/closed-cases/all-closed-cases/761146/Final_Determination.pdf This vertical externality is a standard issue in vertical supply chains (it is closely related to double marginalisation).

²³⁸ Complaint received 25th October 2010

(apart from mobile OCPs)²³⁹. Indeed there is some evidence that SPs are blamed for high prices, even when the OCP is responsible²⁴⁰.

- A2.135 Both of these concerns and the resulting reduction in demand are likely to have important implications for the ability of SPs to plan their business, and on their incentives to invest. As a result, the introduction of new services and innovation in service delivery is likely to be stifled, to the detriment of consumers. For example, The Number UK Ltd has informed us that due to recent increases in mobile time-based charges (i.e. ppm), it is currently reviewing whether to remove certain services currently available (such as the restaurant booking service) as well as whether to halt plans to offer better value call completion as it considers the charges to be too onerous for customers given the length of calls potentially required. As a result, The Number states that it is now making strategic product decisions for the future of 118118 based on the limitations of not controlling or influencing the price on most calls, rather than basing decisions on what consumers would like and use]²⁴¹.

Concerns about price transparency

- A2.136 The concern relating to price transparency is also one shared by SPs. In the 2010 SPs survey²⁴², the main problem identified in the current market is the absence of price transparency for consumers, and a lack of understanding of the purpose of the different non-geographic number ranges. They consider that this problem has been exacerbated by some operators – MNOs in particular – charging large mark-ups at the retail level to customers. This has the perceived effect of reducing call volumes (and therefore, long-term revenues) for SPs. This uncertainty therefore has wider implications for SPs’ incentives and ability to innovate in service provision.
- A2.137 Therefore, in summary, the lack of retail price control by SPs combined with limited price transparency and the OCPs’ ability in some circumstances to charge high margins exacerbates a vertical coordination problem for SPs - i.e. retail prices that significantly diverge from the levels desired by SPs. In addition to high prices, there is a significant risk that different OCPs charge different prices. Both of these concerns not only increase uncertainty for the SPs’ businesses, but also limit the ability of SPs to compete on price and/or contribute to improving price transparency. As a result, aggregate demand for NGCs (and thus SPs’ services) is diminished. Overall this may reduce the SPs’ incentives to innovate and invest in non-geographic services, and in turn negatively affects the benefits callers can derive from NGCs in the long run.

Competition in the provision of NGCs

- A2.138 Competition could take place at different levels of the vertical supply chain of NGCs. OCPs potentially compete to attract subscribers, SPs potentially compete to attract callers and TCPs potentially compete to attract SPs. Here we focus on the first two (the latter is discussed in Annex 3), and in particular competition between OCPs at the point of subscription, competition between OCPs at the point of call, and competition between SPs for callers.

²³⁹ “UK Phone-paid services market: current conditions and future trends”, Analysys Mason for PhonepayPlus, December 2008, p.46 <http://www.phonepayplus.org.uk/upload/ResearchDec08AM.pdf>

²⁴⁰ The 2010 SPs survey

²⁴¹ Note from The Number UK Ltd, “Who is harmed by high mobile charges for DQ”. 3rd September 2010

²⁴² The 2010 SPs survey, see Annex 16 for a link to the published report

Competition between OCPs at the point of subscription

- A2.139 We have previously concluded that retail competition between fixed providers and (separately) mobile providers is effective – i.e. no operator has SMP at the retail level. In the Fixed Narrowband Retail Services Market review in 2009 we concluded that most of the UK retail markets (with the exception of Hull) are now effectively competitive²⁴³. In the 2009 Mobile Sector Assessment, we stated that we believe effective retail competition is occurring within the mobile sector²⁴⁴.
- A2.140 Whilst overall retail competition in fixed line and mobile provision is considered to be effective, it is useful to consider the role of NGCs within this wider context.
- A2.141 In essence, competition at the point of subscription involves callers taking the price of NGCs into account (alongside other factors, such as monthly subscription charge) when making subscription decisions. For competition to be effective and deliver consumer benefits, it requires consumers to be well informed about prices and to take them into account. In particular, in the choice of OCP a well informed consumer would consider his or her potential use of all telephony services (subscription, GCs, NGCs, international roaming etc), the charges for each service and assess each OCP on the basis of all these components.
- A2.142 However, the evidence collected shows that consumers have a poor understanding of prices and do not take NGC charges into account when selecting an OCP.
- A2.143 For example, the majority of respondents to our consumer research do not consider that the charges for 08 and 09 calls would be important when deciding which fixed or mobile operator to subscribe to. In the Ofcom consumer research in 2010, only 11% of respondents spontaneously mentioned “the cost of calls to 08xx/09 numbers” as an important factor when choosing a new landline supplier (the eighth most popular response – most popular was “monthly cost of the package” which was spontaneously mentioned by 65% of respondents)²⁴⁵. This figure was 9% for respondents choosing a new mobile supplier (similarly, this was the eighth most popular response - “cost of calls/texts” was the most popular, spontaneously mentioned by 65% of respondents)²⁴⁶. The total mentions of the cost of 08xx/09 numbers (prompted and unprompted) were 30% for fixed line customers (sixth most popular response in total) and 21% for mobile customers (the seventh most popular response in total)²⁴⁷. This is compared to 81% for the most popular response (prompted and unprompted) from fixed-line customers (“monthly cost of package”)

²⁴³ More specifically, we concluded that BT no longer has significant market power (“SMP”) in the provision of retail fixed narrowband analogue access and retail calls markets in either the residential or business sectors. Paragraph 1.2, Fixed Narrowband Retail Services Market Review Statement, 15th September 2009. http://www.ofcom.org.uk/consult/condocs/retail_markets/statement/statement.pdf, Paragraph 1.2

²⁴⁴ In particular, we noted that over the previous few years there had been shifts in retail market shares between existing players, robust switching levels, new suppliers (such as MVNOs) entering the market, and service providers innovating with new product and price options. Paragraph 3.36, “Mobile Evolution: Ofcom’s mobile sector assessment”, 17th December 2009.

http://www.ofcom.org.uk/consult/condocs/msa/statement/MSA_statement.pdf

²⁴⁵ Q5: “If you were considering switching your landline supplier, what elements would be important when choosing a new supplier? (spontaneous)” The 2010 Consumer research

²⁴⁶ Q6: “If you were considering switching your mobile operator, what elements would be important when choosing a new supplier? (spontaneous)” The 2010 Consumer research

²⁴⁷ Q5/7 and 6/9: “If you were considering switching your landline supplier/Mobile operator, which of these elements would be important when choosing a new supplier? (Total Mentions)” The 2010 Consumer research

and 79% for the most popular from mobile-users (“cost of calls/texts”).²⁴⁸ Therefore, even when prompted, the price of 08XX and 09 calls does not appear to be an important consideration for consumers when selecting their landline or mobile provider.

A2.144 When asked why they did not mention the cost of 08/09 call, the main reasons were as follows:

- a) When selecting a fixed OCP, the main reasons for not mentioning 08/09 calls were “rarely use these numbers” (29%) and “don’t use these numbers” (28%)²⁴⁹; and
- b) When selecting a mobile OCP, the main reasons for not mentioning 08/09 calls were “don’t use these numbers” (30%), “don’t use a mobile for these numbers” (16%) and “rarely use these numbers” (10%)²⁵⁰.

A2.145 How often callers consider they call non-geographic numbers is a relevant consideration as this affects the role of NGCs in their subscription decisions. Callers were asked to estimate how often they called different number ranges – see Table A2.16 below.

Table A2.16: How often respondents estimate they call particular number ranges from their landline and mobile phone

	Regularly (every week)		Sometimes (every month)		Rarely (less than once a month)		Never	
	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile
0800	11%	1%	23%	7%	44%	18%	22%	74%
0844/0871	3%	1%	14%	4%	38%	13%	45%	82%
0845/0870	6%	2%	22%	7%	39%	14%	33%	77%
09	0%	0%	4%	1%	16%	6%	80%	92%

Source: Q21/25: “How often do you make calls to the following numbers from your own landline/your mobile phone?” The 2010 Consumer research

A2.146 Overall, evidence suggests that callers believe that they call non-geographic numbers infrequently (especially on their mobile phones). This suggests that the majority of callers would place little emphasis on the price of these calls when switching supplier.

A2.147 Although NGCs do not appear to be an important consideration for many consumers when choosing their OCP, the lack of price transparency may actually be a contributing factor to this. For example, as shown in Figure A2.8 below, only 29% of respondents who had switched or considered switching fixed providers in the past 12 months had received information about 08/09 numbers. Although 62% of those respondents had received information about 08/09 numbers were not more attracted to the supplier as a result, 38% were. Additionally, 55% of those who did not receive this information answered “yes” or “maybe” when asked if they would have liked to receive this information, and 32% of these answered that they would

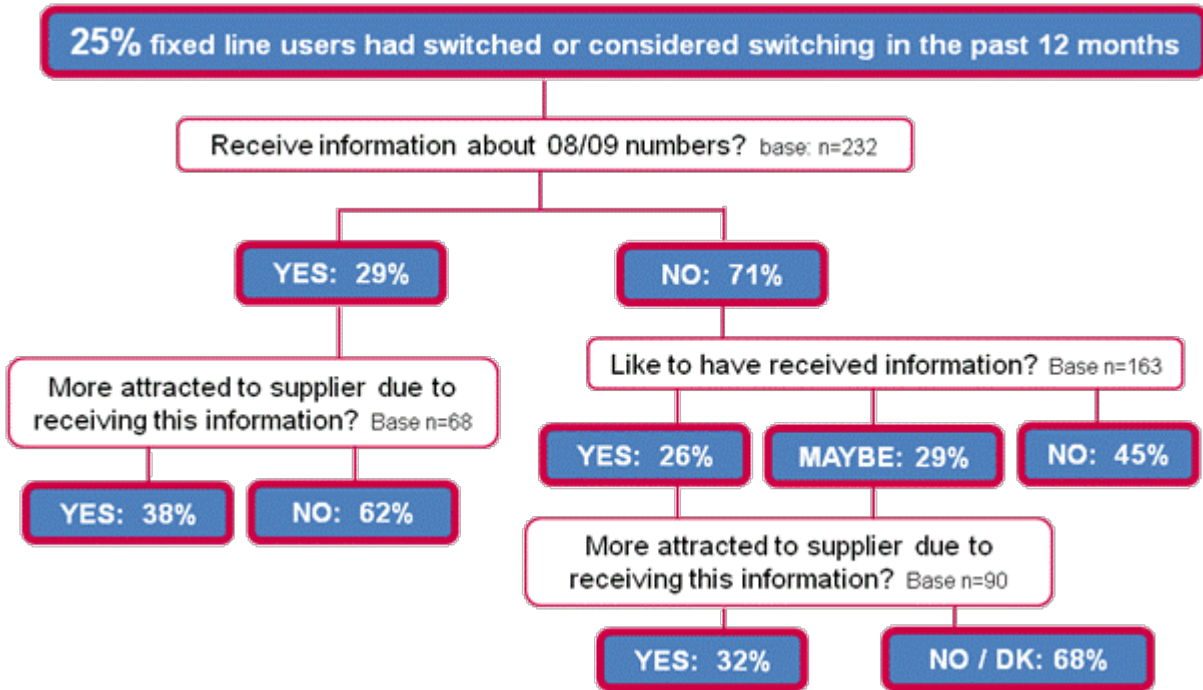
²⁴⁸ Q5/7 and 6/9: “If you were considering switching your landline supplier/Mobile operator, which of these elements would be important when choosing a new supplier? (Total Mentions)” The 2010 Consumer research

²⁴⁹ Q8: “You did not mention the cost of call to 08xx/09xx numbers when choosing a fixed line provider, why was this?” The 2010 Consumer research

²⁵⁰ Q10: “You did not mention the cost of call to 08xx /09xx numbers when choosing a mobile provider, why was this?” The 2010 Consumer research

have been more attracted to the supplier as a result of receiving this information (see Figure A2.8 below). As a result, there appear to significant numbers of consumers who are not receiving 08/09 pricing information at the point of subscription, and many would like to be better informed, even if ultimately it does not significantly affect the subscription choice for many.

Figure A2.8: Information about 08/09 calls when switching – Fixed customers

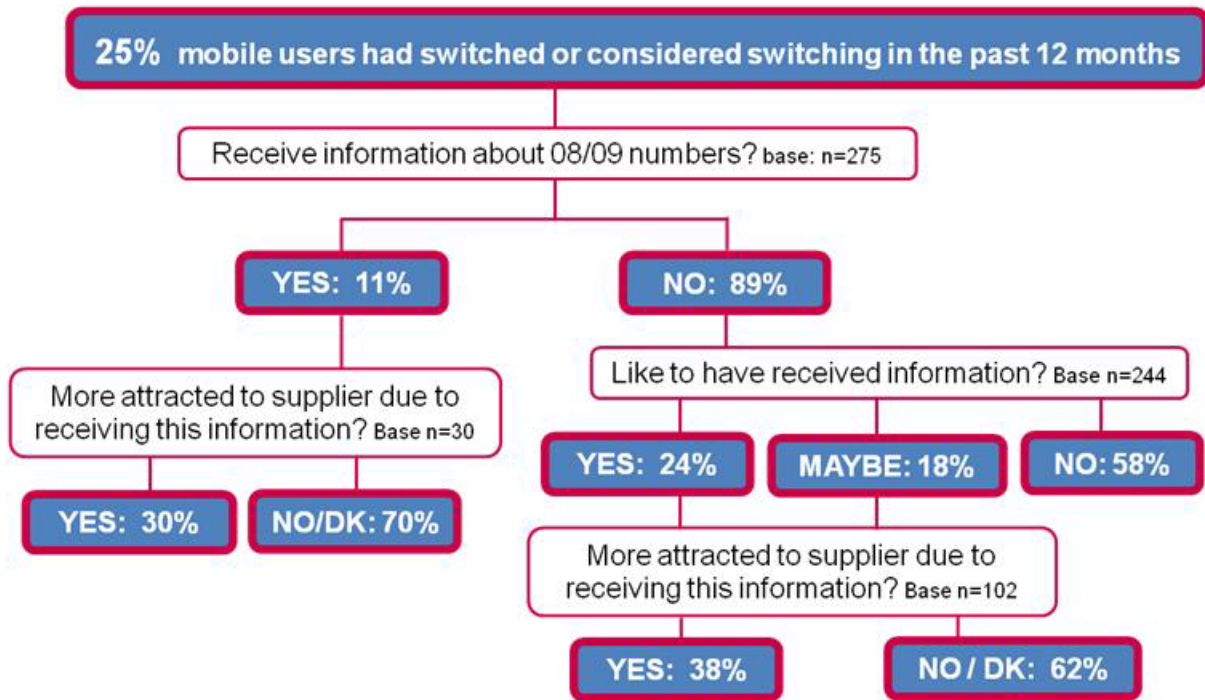


DK = Don't know

Source: Q11: "Have you switched, considered switching you fixed line provider in the past 12 months?" Q12: "Did you receive any information about 08/09 numbers from the landline provider?" Q13: "Did receiving this information make any difference to your choice of provider?" The 2010 Consumer research

A2.148 These results are similar for mobile customers who have switched or considered switching as shown in Figure A2.9, although interestingly the proportion who did not receive information about 08/09 numbers is higher (89%).

Figure A2.9: Information about 08/09 calls when switching – Mobile customers



DK = Don't know

Source: Q16/17/18/19/20: "Have you switched, considered switching you fixed line provider in the past 12 months?"; "Did you receive any information about 08/09 numbers from the landline provider?"; "Did receiving this information make any difference to your choice of provider?"; "If not received, would you have liked information?". The 2010 Consumer research

A2.149 Therefore there appears to be a significant proportion of consumers who are not receiving 08/09 pricing information at the point of subscription, but some would like to be better informed in order to inform their subscription. Interestingly, some would like more information even if ultimately it does not significantly affect their subscription choice. However, it is worth noting that even if pricing information is shared at the point of subscription, the current variation in price points across all non-geographic number ranges (as shown in detail above) is likely to make it difficult for many consumers to assimilate.

A2.150 In light of the above, it appears that the perceived infrequent use and relative unimportance of NGC prices compared to other elements of a telephony service (such as geographic calls) for consumers combined with a lack of pricing information weakens any potential competition in NGC prices at the point of subscription, In particular, the lack of easily accessible price information is likely to contribute to this consumer view of NGCs (see discussion above) and further weaken competitive constraints on OCPs in pricing NGCs at the point of subscription

Competition between OCPs at the point of call

- A2.151 Competition may also occur when consumers decide which device to use to make a call²⁵¹. For example, the majority of callers (78% in Q1 2010²⁵²) have access to both a landline and a mobile. The strength of competition depends on callers' ability to recall the prices of NGCs for both their fixed and mobile OCPs when considering whether to make a call, and also their ability to substitute between the two.
- A2.152 Although research indicates that only a minority of consumers (18%²⁵³) have ever looked up pricing information to determine the cost of a call, callers do seem able to form a view on the direction of relative price differences of mobile and fixed calls (notwithstanding callers' general poor awareness of prices). We asked callers about the relative price of fixed and mobile calls. For 0800 calls, 79% thought mobiles were more expensive (11% responded "don't know")²⁵⁴. For other 08 and 09 calls, 77% thought mobiles were more expensive (14% responded "don't know")²⁵⁵. In addition, most NGCs originate from fixed lines (only approximate 11% of NGC minutes originate from mobiles²⁵⁶), suggesting that consumers use this awareness to select the cheaper option when possible using this broad rule of thumb.
- A2.153 While callers seem able to reach broad 'rules of thumb' about the price of these calls, our consumer research found that callers do not think in terms of charges for each call. Rather they tend to think in terms of inclusive call minutes, and most respondents in our qualitative research only looked at the headline monthly charge without considering the individual elements of their bill. If the bill was within the usual range, and generally it was, then that was enough detail for most.²⁵⁷ Additionally, for some NGCs it is much more difficult for consumers to switch between mobile and fixed lines, for example for car breakdown services.
- A2.154 Overall, the extent of competition at the point of call depends on callers' ability to remember the retail prices of NGCs from the different services they subscribe to. Although callers appear to understand that mobile call prices are higher than fixed originated NGCs, the combination of low price awareness/high confusion, the relative unimportance of NGCs to consumers at the point of subscription, and the occasional inflexibility between fixed and mobile means it is unlikely that consumers exert a strong competitive constraint on NGC retail prices at the point of call. This is perhaps shown by the fact that callers avoid making NGCs from mobiles, with 73% tending to use a landline either exclusively or mainly when making calls to 08 and 09 numbers²⁵⁸, but we still observe relatively high NGC prices from mobiles²⁵⁹.

²⁵¹ The majority of consumers are unlikely to subscribe to multiple fixed and/or multiple mobile services at the same time, and so competition between fixed OCPs and between mobile OCPs at the point of call is likely to be relatively limited.

²⁵² Figure 5.67, Ofcom Communications Market Report 2010, <http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/UK-telecoms.pdf>

²⁵³ Table 33, pp69-70, 2009 Consumer research summarised at <http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

²⁵⁴ Q33: "Thinking about 0800 numbers only, do you think the cost of calling an 0800 number from a landline is different or the same to calling an 0800 number from a mobile?" The 2010 Consumer research

²⁵⁵ Q34: "Leaving aside 0800 numbers, do you think the costs of calling number starting with 08 and 09 are different when calling from a landline to calling from a mobile?" The 2010 Consumer research

²⁵⁶ P39 The 2010 Flow of Funds study

²⁵⁷ Section 3.1 (p5) of the 2010 Consumer research

²⁵⁸ Q29: "When making calls to 08 or 09 numbers, do you tend to use you landline or mobile or both?" The 2010 Consumer research

Competition between SPs at the point of call

- A2.155 There are two aspects to competition between SPs at the point of call. Firstly, there is the issue of “locked-in” NGCs. As discussed earlier, some callers to NGCs are locked-in to a particular number in the sense that they do not have a choice between different NGCs for access to a particular service due to an earlier consumption decision. For example a customer of a particular retail bank wanting to check his bank balance via the phone will not be able to substitute a call to another bank that he does not have an account with but which may offer cheaper NGCs. Therefore these consumers do not have access to substitutes (although they may have alternatives other than NGCs), and so there is no competition between SPs at this point.
- A2.156 However, not all calls are locked-in (as set out above). Therefore there is some potential for competition between SPs at the point of call across all non-geographic number ranges for substitutable services. For example, there is likely to be competition between SPs who offer stand alone services (such as PRS) that do not follow on from another purchasing decision and so substitute services are readily available e.g. substitute horoscope services. However, we note that even when there are alternatives (such as PRS), it does not necessarily mean there is a real choice for consumers as it can be difficult to find information on the alternative services available. Therefore even though calls to numbers such as 09 may not be “locked in” in the sense that they are not a complement to other services already accessed/purchased (such as banking and the helplines used to contact the bank), consumers may still have difficulties in exercising choice between substitute services.
- A2.157 Additionally, the pricing practices of OCPs (vertical externality) may limit the ability of SPs to differentiate themselves from their substitutes based on price. Also, their ability to extract any of the additional revenue from high prices from OCPs may be limited, and, as set out above, the incentives for SPs to invest in their service may be reduced due to uncertainty around retail pricing and consumer demand. This may also limit the scope for competition based on quality/innovative services. As a result, competition between SPs may be limited.

Preliminary views on competition

- A2.158 There is significant consumer confusion and lack of awareness in relation to the price of NGCs and in any event these calls do not appear to be an important consideration for consumers when selecting their landline or mobile provider. Therefore, lack of easily accessible price information weakens the potential competition in NGC prices at the point of subscription, meaning that the prices of NGCs are not very relevant compared to charges for other services for the consumers choice of OCP. As a result, it seems that there are often weak competitive constraints for OCPs in pricing NGCs at the point of subscription. There is perhaps a bit more constraint later on as the largest majority of consumers have a choice between fixed and mobile OCP at the point of call. However, whilst this may affect the volume of fixed- and mobile-originated NGCs, it does not appear to exert a substantial constraint on retail prices at the point of call.
- A2.159 Therefore low NGC price awareness means competition in NGCs at the points of subscription and calling is relatively limited, and consumers may be deciding

²⁵⁹ We discuss the potential (efficient and inefficient) reasons why NGC prices may be high later in this Section.

whether or not to make NGCs independently of the actual prices charged by their OCP, based on their often incorrect expectations about prices (as well as other factors such as necessity of the call). As a result, any negative effect of a price increase on the OCP is relatively limited, and there are only limited benefits to an OCP from reducing NGC prices. In other words, price competition is not as prominent in NGCs as it is in other parts of the market, meaning NGC prices are higher than they would be if consumers were better informed.

A2.160 In relation to SPs, there may be some competition among services, but many calls are either “locked-in” or competition is limited due to unawareness of substitutes, the inability for SPs to influence retail price (and the vertical externality), or the limited ability of SPs to extract a greater share of any additional revenue generated from the higher retail prices (in order to invest to improve the quality or range of available services).

What this means for consumers

A2.161 So far we have set out current conditions in the retail market and how it operates, and through this, we have identified some potential concerns. In particular, we have identified some of the causes of the lack of pricing transparency (e.g. the extent of price variations) and the horizontal and vertical externalities, all of which contribute to relatively high NGC prices, and explained the level of consumer confusion and uncertainty that results.

A2.162 Now we seek to explain the detrimental impact this can have on consumers:

- i) Distorted structure of retail prices – the lack of price transparency and the limitations in competition that result mean OCPs are able to increase NGC prices, and in general, each OCP has an incentive to increase prices even if collectively they would be better off with lower prices (the horizontal and vertical externality). This results in a tariff package effect, which may disproportionately affect vulnerable citizens and consumers;
- ii) Distorted consumption decisions – we consider that without pricing information, consumers may make inefficient consumption decisions or fail to make a purchase at all;
- iii) Risk of fraud; and
- iv) Reduced innovation by SPs – as a result of the two-sided nature of the market, high NGC prices deter innovation by SPs resulting in lower quality and variety of services available to consumers.

Distorted structure of retail prices – potential consumer and citizen harm

A2.163 Below we consider whether there are factors that may lead to NGC prices being too high relative to those of other services. We then consider whether this may affect the prices of other services, which we refer to as the tariff package effect, potentially resulting in a distorted structure of prices.

A2.164 Above we discussed that NGC charges may currently be too high. In particular, we consider that under some circumstances concerns may arise if NGC prices were too high relative to other service elements of voice telephony. This could result in a distorted pricing structure, with high NGC margins used to support lower margins on

other products (such as GCs) which consumers do focus on when selecting their provider.

- A2.165 It is, therefore, necessary to distinguish between a number of different factors that may lead to high NGC prices relative to those of other services.
- A2.166 Firstly, if consumers had different preferences for the various elements of voice telephony services this may result in common costs being recovered proportionally more from some services than others. For example, if consumers were less sensitive to prices of NGCs than to those for GCs we would expect that more common costs would be recovered from the former than the latter. As a result NGC charges may be higher relative to GCs. We would not be concerned if high NGC charges reflected some consumers' preference for such a tariff structure, indeed this will be an efficient outcome. Therefore, if there is evidence that consumers have diverse preferences – e.g. some may prefer a tariff with low GC prices and high NGC charges while others may prefer cheaper NGC charges and higher GC charges – in a well-functioning market these preferences would be reflected in the OCPs' tariff packages²⁶⁰.
- A2.167 Secondly, the relative charges of NGCs may be high if they reflected some form of market failure. As this would be a concern to us, we may want to distinguish various potential factors that may lead to market failure:
- i) We believe that currently the most important factor that may lead to NGCs' relative prices being too high is substantial lack of price awareness affecting NGCs (but not necessarily other service elements) as discussed above. Under these circumstances the amount of calls to NGCs that consumers make is largely independent of the price of their OCP. Hence, each OCP individually is likely to have an incentive to increase its prices for NGCs. Overall this may result in NGC charges being too high if price transparency on services other than NGCs is better;
 - ii) Secondly, each non-geographic number range (and indeed, the non-geographic calls system as a whole) is effectively a collective brand created by all in the supply chain. However, individual OCPs and SPs do not have an incentive to take into account the impact their NGC pricing has on the reputation/ brand perception of a particular number range. We refer to this effect as the "horizontal externality" above; and
 - iii) Separately, OCPs may not take the impact of their call pricing decisions of NGCs on SPs into account. This could be a concern if it was an example of double marginalisation – i.e. if providers at different levels of the vertical chain (i.e. SPs and OCPs) had some market power. We define this as a "vertical externality" above.
- A2.168 These three features are inter-related and reinforce each other. For example, the lack of price awareness, which the available evidence suggests is a serious deficiency in the current regime, exacerbates the vertical and horizontal externality effects.

²⁶⁰ For example, our consumer research showed that when asked "Which would you prefer? To keep the costs for these 08 and 09 calls the same as they are now, or reduce the costs of these calls and increase the costs of local and national calls?", 70% answered to keep the costs the same, and 9% wanted to reduce the costs of 08 and 09 calls (Q42, new consumer research).

- A2.169 In light of this, it is now necessary to consider whether high NGC prices have any effect on the prices of other services.
- A2.170 High NGC prices may lead to excessive returns in NGCs, which could be competed away in lower charges for other services such as GCs and subscriptions (we refer to this as the “tariff package effect”²⁶¹). As discussed below this may lead to under-consumption of NGCs and over-consumption of the other services. In order to understand to what extent this may be likely, one needs to understand the linkages between the charges for the various services.
- A2.171 The tariff package effect²⁶² is relevant to understand the nature and materiality of the distortion resulting from high NGC charges. In the absence of a tariff package effect consumers would suffer from high NGC prices but charges for other service elements would be unaffected. But if the tariff package effect existed, consumers would suffer less from high prices because what they lose out on NGCs they may gain to some extent (depending on the strength of the effect) from lower charges elsewhere. Even in the case where the tariff package effect was complete, however, they would suffer from harm because their relative consumption of all the service would be distorted (compared to the most efficient outcome).
- A2.172 Below we briefly discuss the concept of the tariff package effect and assess its potential relevance for the consumer harm assessment of the current situation.

The Tariff Package Effect

- A2.173 A tariff package effect can arise when a range of services are provided in a bundle by all suppliers, and the demand for one service is linked to usage of the other services. These linkages imply that changing the prices of one service may have effects on the prices of the other services. However, the linkages could also exist on the supply side and lead to a tariff package effect. An example is when there are costs that are common to both services, and so a change in the common cost allocated to the price of one service may affect the price of another service. Therefore, a necessary condition for a tariff package effect to arise is that there must be linkages between the two or more set of services on either the demand or the supply side. In the extreme, if demand and costs of two services were completely independent a tariff package effect would not arise.
- A2.174 The existence of a tariff package effect does not depend on providers having market power – it could take place under strong competition between providers. In essence, though, the question whether a tariff package effect exists and, if so, what is its extent is an empirical question.
- A2.175 The strength of any tariff package effect (i.e. the proportion of additional revenue that is passed through elsewhere) is in part dependent upon the intensity of competition in the retail market. This is because if competition is strong, extra revenues generated on NGCs are more likely to be competed away in lower prices for other elements of the bundle (such as GCs and subscriptions) where competition is stronger. For example, if OCPs earn significant profits on NGC calls, but competition between OCPs for other services is strong, each OCP will face competitive pressure to offer lower prices on these other services (the OCP’s

²⁶¹ See for example, paragraph 4.16 of the *080 Dispute Determination*, http://stakeholders.ofcom.org.uk/binaries/consultations/draft_deter_bt_tmobile_vodafone/nonconf.pdf

²⁶² While the tariff package effect is discussed generally in terms of prices it may also manifest in changes in variety or quality of services.

incentive to do so is that it needs to compete for customers and it is still profitable overall for the OCP to offer lower prices for the other services, which attract the new customer, because of the profits earned on the NGCs that the new customer will make).

- A2.176 The concern is if the tariff package effect is caused by market failure so that relative prices may be distorted. In other words, the distortion to the structure of prices may still be a concern even if in total across all services, the OCP does not earn excessive profits (i.e. the tariff package effect is complete).
- A2.177 We considered the magnitude of a type of tariff package effect in Mobile Call Termination (MCT), where it is caused by the competitive bottleneck and is referred to as a waterbed effect. The bottleneck service is MCT, because each MNO has market power in the provision of termination of calls to its own network. The competitive services are the other mobile services, such as mobile calls, data services, subscription etc, in which the MNOs compete against each other. In MCT, we considered that, although MNOs are able to set excessive charges for MCT, the additional profits are likely to be competed away to a significant extent (i.e. at least partially handed back to consumers in the form of incentives to buy mobile services, such as lower call prices or handset subsidies)²⁶³. Ofcom's view that there is a significant waterbed effect in MCT has also been accepted by both the Competition Appeal Tribunal and the Competition Commission.²⁶⁴
- A2.178 This is relevant because there may be a useful analogy between the waterbed effect in MCT and the tariff package effect in the context of NGCs. The fact that the waterbed effect in MCT is well-established and accepted, both in theory and in practice by regulators (including appeal bodies), suggests that we should also recognise its relevance in this review of NGCs.
- A2.179 Past market reviews on MCT concluded that:
- the waterbed was likely to exist and be significant, because of the extent of competition between MNOs in retail mobile services; but
 - it was likely to be incomplete – i.e. not profit neutral – so that not all profits earned through excess MCTs would be passed through to lower prices elsewhere for consumers.²⁶⁵
- A2.180 The source of the excess revenues which are passed through are different as between NGCs and MCT (in NGCs it is an OCP's own subscribers whereas the

²⁶³ Paragraph 5.24, "Wholesale mobile voice call termination.", 1st April 2010, available at http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/summary/wmvct_consultation.pdf.

²⁶⁴ See paragraphs 7.64-7.66 in the 0845/0870 Determination and the references to Competition Appeal Tribunal and Competition Commission documents therein.

²⁶⁵ For example, in the context of the MCT Market Review we have recently stated that: "In conclusion, while the evidence is not conclusive, we think that the waterbed effect is unlikely to be 100% complete. Given the inconclusive nature of the evidence, however, we do not rely on excessive prices overall when assessing the harm flowing from unregulated SMP in MCT. As explained in the following paragraphs, even if the waterbed effect were fully effective, excessive termination charges may give rise to other problems." See Ofcom, "Wholesale mobile voice call termination.", 1st April 2010, para 5.30, available at http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/summary/wmvct_consultation.pdf.

source in MCT is ultimately subscribers of other OCPs²⁶⁶). However, as discussed above, the extent of the pass through – i.e. how complete the waterbed effect is depends on the level of competition in the retail market. Therefore we believe that it is not unreasonable to consider the waterbed in MCT as an indicator of the potential magnitude of the tariff package effect for NGCs.

- A2.181 In addition, it does not seem unreasonable to consider that the tariff package effect in NGCs is of at least a similar magnitude to that in MCT due to the level of competition in the retail market that is consistent across the two scenarios.²⁶⁷ This is because overall both the fixed and retail origination markets are largely competitive (see discussion above), meaning it is in the interests of OCPs, given the competitive constraints they face, to reduce the prices of those services where consumers do focus in order to attract subscribers (who, as part of their subscription, will also make some higher cost NGCs themselves).
- A2.182 For completeness, we also note that there are also a few empirical studies on the waterbed effect in MCT. Genakos and Valletti²⁶⁸ assessed whether the introduction of regulation on the Fixed to Mobile (FTM) termination charges has affected the structure of prices but not the overall profitability of mobile operators. They concluded that a waterbed existed, though it was not complete – i.e. it was not profit neutral. This means that overall the profits declined as a result of reductions in termination rates. Their main conclusion is that in examining the costs and benefits of regulatory intervention in MCT one cannot ignore the waterbed effect.
- A2.183 Andersson and Hansen²⁶⁹ also examined the issue of profit neutrality of mobile, and, in particular, Mobile to Mobile (MTM) termination charges. This relates to the proposition that if the mobile market were strongly or perfectly competitive, then even in the presence of high termination rates they would make zero excess profits. They empirically tested the profit neutrality assumption on a panel data covering European mobile operators and found that the waterbed effect is 100% with all termination profits lost being recouped in mobile services.
- A2.184 Baranes, Benzoni and Vuong²⁷⁰ presented evidence that the waterbed effect is unlikely to exist in Europe, especially in the presence of several mobile OCPs with asymmetric sizes in each market. In particular, the study found that when the MTRs were regulated to lower levels, later entrants generally cut retail prices to gain more market share since overall profits should depend more on the retail markets. In other words, when mobile OCPs derived less revenue from wholesale markets due to lower MTRs, they raised their retail profits by lowering (not raising) service prices in retail markets to increase their subscriber bases. Consequently there was no waterbed effect at country level. They concluded therefore that although in general the waterbed effect exists at a theoretical level and may be observable with individual cases, in the context of European mobile markets, the waterbed effect is unlikely to exist.

²⁶⁶ This was identified in the 0845/0870 Dispute, paragraph 7.147, http://stakeholders.ofcom.org.uk/binaries/enforcement/competition-bulletins/closed-cases/all-closed-cases/761146/Final_Determination.pdf

²⁶⁷ A similar conclusion is reached at paragraph 7.147 in the 0845/0870 Dispute.

²⁶⁸ Genakos, C. and Valletti, T., (2007), "Testing the "Waterbed" Effect in Mobile Telephony", mimeo Paper No' CEPDP0827, available at <http://cep.lse.ac.uk/pubs/download/dp0827.pdf>.

²⁶⁹ Andersson, K. and Hansen, B., (2007), "Network Competition: Empirical Evidence on Mobile Termination Charges and Profitability", mimeo (version of 15 December 2007).

²⁷⁰ Baranes, E., Benzoni, L., and Vuong, C.H. (2008), "Revisiting the waterbed effects across Europe's mobile markets", Tera consultancy report, November 2008, available at www.teraconsultants.fr.

- A2.185 Similarly, Growitsch, Marcus, and Wernick²⁷¹ considered whether the belief that lower MTRs would tend to lead to lower (not higher) retail unit prices for most end-users (and that the lower retail prices would be associated with higher usage) was true. They used a WIK research project to study the impact of MTRs on retail prices and demand for 61 MNOs from 16 European Member States in the period between 2003 and 2008. They concluded that lower MTRs tended to result in a lower retail price (and greater call volumes), but provided two qualifications to their conclusions:
- a) First, lower retail prices on average with lower MTRs does not exclude the possibility that some customers (e.g. those with lower disposable income) might be worse off.
 - b) Second, for consumer retail prices to be lower on average does not necessarily mean that all components of the retail price are lower; with a two part tariff, it is probable that monthly fees (for instance) would be higher while per minute fees were lower.
- A2.186 As part of the consultation on wholesale call termination²⁷² Ofcom commissioned and published a study by Veronese and Pesendorfer on the relationship between MTRs and a number of performance variables²⁷³. Contrary to other (more sophisticated) studies, this did not find evidence of a statistically robust relationship between the level of MTR and the level of mobile retail charges. The study tested different proxies for mobile retail prices.
- A2.187 A more recent paper by Genakos and Valletti²⁷⁴ also examined the impact of regulatory intervention to cut termination rates of calls to mobile phones, and argued that regulatory cuts should have a differential impact according to the type of tariff the mobile customer subscribes to. They showed that the waterbed effect is diluted, but not eliminated, for customers with pre-paid phones, and strongest for consumers with post-paid subscription contracts. However, irrespective of the type of subscription, they concluded that all mobile customers may suffer because of a waterbed effect, albeit to varying degrees.

Implications for tariff package effect and NGCs

- A2.188 The key question for this review is to understand the implications of the tariff package effect for consumer harm. We now discuss these implications in light of our conclusion that a tariff package effect is likely to exist in NGCs.
- A2.189 There are two potential implications of the tariff package effect. Although the tariff package effect means that some of the higher charges for NGCs result in lower charges, say, for GCs and subscriptions, consumers may still be harmed overall. This is because the higher NGC prices are caused by some forms of market failure (i.e. lack of price awareness and the vertical and horizontal externalities, as set out above). So, even if OCPs may not make extra profits overall, by having to

²⁷¹ Growitsch, C., Marcus, J.S., and Wernick, C. (2010), "The effects of lower Mobile Termination Rates (MTRs) on Retail Price and Demand", Working Paper, 8 April 2010.

²⁷² Wholesale mobile voice call termination, preliminary consultation on future regulation, 20 May 2009, http://stakeholders.ofcom.org.uk/binaries/consultations/mobilecallterm/summary/mobile_call_term.pdf

²⁷³ Veronese, B and Pesendorfer, M, 20 April 2009. "Wholesale termination regimes, termination charge levels and mobile industry performance", <http://stakeholders.ofcom.org.uk/binaries/consultations/mobilecallterm/annexes/annex7.pdf>

²⁷⁴ Genakos, C and Valletti, T (2010), "Seesaw in the Air: Interconnection Regulation and the Structure of Mobile Tariffs".

compete away these profits (if the tariff package effect was complete), the impact of the market failure on NGCs would translate in charges that are “too high” for that service and “too low” for the other services. This would lead to a different, and an inefficient, relative consumption of the two sets of services compared to a situation where the market failure was not present. As a result, the structure of prices does not reflect either callers’ or SPs’ preference. Therefore, we believe that there is a negative impact of the market failures in NGCs even in the presence of a complete tariff package effect.

A2.190 In addition, there may be some equity or distributional considerations that we take into account in accordance with our duties. Stemming directly from the distortion in the relative prices brought about by the market failures affecting NGCs, some consumers may be better-off while others may be worse-off compared to a situation where there was no market failure. It would be of particular concern if the distortion resulted in “vulnerable” consumers and citizens being worse off.

A2.191 There are two separate distributional aspects which arise if the citizens and/or consumers affected belong to “vulnerable” groups:

- i) First, currently high relative NGC charges put consumers who make significant use of NGCs relative to other services at a disadvantage. As different consumers make both types of calls in different proportions, some consumers or callers may gain and some may lose from the current situation compared to one where market failure did not contribute to high NGCs. We believe that such assessment is very difficult in the absence of very detailed information on individual usage of the various service elements of voice telephony and information on whether or not they are “vulnerable” consumers; and
- ii) Second, there could also be concerns about citizens’ interests if some citizens may find it more difficult to gain access to socially important services.

A2.192 We consider below the evidence on the second concern, which is important given our principal statutory duty to further the interests of citizens in relation to communications matters, in particular, by securing the availability of a wide range of electronic communications services.²⁷⁵ In performing that duty, Ofcom must have regard, among other things, to the vulnerability of those whose circumstances put them in need of special protection, as well as the needs of those with disabilities and the elderly and those on low incomes.

Evidence on distributional concerns

A2.193 The current NTNP offers the greatest level of protection to BT’s customers. Other customers of fixed OCPs may benefit from this too, to the extent that their OCPs feel constrained by BT’s prices (but these competitive constraints may be relatively weak, as set out above). Mobile customers experience higher NGC prices, although, in some circumstances, they may have the opportunity to substitute fixed for mobile NGCs if they also have a fixed telephone line. Mobile-only customers, however, have fewer options. As discussed above, even if high NGC charges are, on average, counterbalanced by lower GC prices, there will be distributional effects of higher NGC prices in that consumers with high relative consumption of NGCs are likely to lose out. In particular, a concern arises where vulnerable mobile-only consumers need to access socially important services through non-geographic numbers. This is the concern we focus on.

²⁷⁵ Communications Act 2003, s3(1)(a), S3(2)(b) and S3(4)(h) and (i)

- A2.194 Although there may be different ways to define what “vulnerable consumers” are, we believe that the definition used in the Ofcom April 2010 consultation on MCT²⁷⁶ is also appropriate in this context. There we defined vulnerable consumers as those that either have a low income or belong to socioeconomic groupings D and E.
- A2.195 In order to perform this analysis we also need to define, though not necessarily precisely, what socially important services are. We believe that these are essential services and services with a particular social function which it is important that citizens, and especially “vulnerable” citizens, should have easy access to. In other words, they would be put at a strong disadvantage as citizens if they did not have such access. Examples include public information helplines, some doctors’ surgeries, utility helplines, Citizens’ Advice Bureaus (CAB) and HMRC (which use non-geographic numbers).
- A2.196 As discussed above we believe that the main concern in this area is restricted to those consumers who can realistically only access these services through their mobiles. However, this does not mean that concerns could not emerge for vulnerable consumers that have access to both a mobile and a fixed OCP as in some circumstances they may have no option than to make a mobile NGC.
- A2.197 We first provide some examples of the type of detriment that some consumers may experience. We then assess the potential magnitude of the harm on citizens.
- A2.198 As a result of high mobile NGC prices, callers either pay high prices or take onerous actions to avoid making such calls, such as seeking out public payphones or calling from a Citizens’ Advice Bureau. In fact, the CAB provided us with the following example:

Consumer experience Box A2.6

*“A Hampshire CAB reported a case in which their client, who had recently been discharged after a four month stay in hospital, came to the bureau for help in resolving some problems about his benefit entitlement. The client had initially tried phoning Jobcentre Plus to sort this out himself by calling them from his mobile phone but had been forced to give up after being put on hold and incurring substantial costs. In total, the client had spent £20 credit trying to contact them”.*²⁷⁷

- A2.199 The CAB also drew attention to important private sector services such as helplines for gas suppliers which have numbers which would be low rate from a BT landline but are considerably more expensive for mobile customers. Therefore, for low income, mobile-only callers, the negative effects of high prices coupled with the uncertainty and confusion discussed above are potentially of greater consequence since they have access to fewer avoidance strategies (no fixed alternative or limited access to broadband), and the cost of other avoidance strategies are proportionately higher relative to their income.
- A2.200 Another major concern identified in the Call for Inputs was the principle of public organisations charging consumers for getting in touch with them by phone. For example, Consumer Focus raised the possibility that vulnerable individuals could suffer downstream consequences as well as stress and anxiety as a result of the deterrence of high or perceived high NGC prices for public services or helplines.

²⁷⁶ http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/wmvct_annexes.pdf.

²⁷⁷ CAB response to Call for Inputs, 28th May 2010

For example, a consumer calling HM Revenue and Customs to resolve a problem with payment of child tax credits is required to use an 0845 number. If the cost of the call prevents the consumer from resolving the issue, negative consequences could include an impact on the consumer's ability to work if the cost of childcare cannot be met.²⁷⁸ They pointed out that many essential services are provided via helplines on 0800 and 0845. If price of calls act as a barrier then the downstream impact could be high.

A2.201 In order to assess the potential magnitude of the harm, we consider whether vulnerable consumers are likely to be disproportionately affected by high NGC prices. As shown in Table A2.17 below, our research found that those consumers who live in households with an annual income of less than £11.5k per annum, and those in the DE socio-economic group, are disproportionately more likely to live in mobile-only households. These demographic groups account for 49% and 39% of mobile-only households respectively, compared to 17% and 27% of the total sample of respondents.

Table A2.17: Proportion of households who are on low incomes in Q1 2009

	DE socioeconomic group	Income less than £11.5k p.a.
Proportion of all respondents	27%	17%
Fixed-only	46%	42%
Mobile-only	49%	39%
Fixed and mobile	22%	11%

Source: Ofcom Technology Tracker Q1 2009

Base: 6090 adults 15+

A2.202 Additionally, as shown in Table A2.18 below, when pre- and post-pay mobile NGC prices are not the same, prepay is often higher than post pay mobile prices. Of the 64% of mobile only respondents who used prepay in Q1 2009, 34% were from socioeconomic group DE and 28% had income less than £11.5k p.a.²⁷⁹, meaning vulnerable groups also make up a disproportionate percentage of pre-pay mobile only consumers. This view is echoed in our 2009 consumer research which found that 72% of respondents who use a mobile phone and are in socioeconomic group DE use prepay, compared to the average across all mobile respondents of 55% (and 41% for group AB)²⁸⁰.

Table A2.18: Mobile prices for three minute pre- and post-pay calls to specific non-geographic numbers using OCP's most popular tariff

Pence	O2		Orange		T-Mobile		Virgin Mobile		Vodafone	
	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay	Pre-pay	Post-pay

²⁷⁸ P3, Consumer Focus response to Call for Inputs, May 2010.

²⁷⁹ Ofcom Technology Tracker Q1 2009. Base: 6090 adults 15+

²⁸⁰ Q2: "Which of these best describes the mobile payment method you personally use most often?"

The 2009 Consumer research summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

0345 - Derbyshire constabulary Report a Crime	75	0	60	60	75	90	60	60	60	0
0800 - Royal Bank of Scotland (private banking, joining)	45	60	75	45	120	120	30	60	75	60
0844 - Short City Breaks – My Berlin	75	60	120	36	120	120	75	75	75	60
0845 - Consumer Direct	75	60	120	60	120	120	75	75	75	60
0845 - Argos customer services	75	60	120	60	120	120	75	75	75	60
0870 - Dell general customer care support	75	60	120	60	120	120	75	75	75	60
0871 - Odeon cinemas (Filmline)	105	105	120	105	120	120	75	75	75	105
0871 - First Choice (holidays, new booking)	105	105	120	105	120	120	75	75	75	105
0871 - Easyjet	105	105	120	105	120	120	75	75	75	105

Source: S135 information requests

A2.203 Finally, we note that the disproportionate impact of high NGC prices on vulnerable mobile-only consumers may be exacerbated as the ability of vulnerable groups to avoid high NGC prices appears to be lower. For example, 54% of socioeconomic group DE reported having a broadband connection at home in 2010, compared to 88% of ABs²⁸¹. Additionally, when asked if they were aware of alternatives to calling a non-geographic number, overall 68% of respondents were not aware of any alternatives, but this lack of awareness varied by socioeconomic group: for AB it was 60% compared to 74% for DE²⁸².

A2.204 Therefore, we regard it as important that citizens are able to essential services (e.g. utilities) and services with a particular social function (e.g. healthcare, social security) at reasonable prices. However, the evidence available to us appears to suggest that the higher mobile prices for NGCs has a disproportionate effect on vulnerable consumers, and so causes distributional concerns for consumers accessing socially important services. Additionally, the negative effects of price uncertainty and confusion discussed above are potentially of greater consequence since they have access to fewer avoidance strategies (no landline alternative or limited access to broadband), and the cost of other avoidance strategies are proportionately higher relative to their income.

Distorted consumption decisions

A2.205 If consumers are not aware of prices for NGC they may not only face higher prices, but they may also consume NGCs inefficiently. As a result of poor NGC price transparency and very complex information, consumers may make inefficient call choices or may fail to make a purchase at all.

A2.206 In particular consumers may:

- i) under-consume some NGCs, either by reducing the duration of calls or failing to call at all (because they over-estimate the call charges, or they are deterred by the uncertainty about the price²⁸³). Harm may arise because had they had better

²⁸¹ Figure 4.16, 2010 Communications Market Report

<http://stakeholders.ofcom.org.uk/binaries/research/cmr/753567/UK-internet.pdf>

²⁸² Q.30: "Are you aware of any alternatives to having to call numbers starting with 08 and 09 numbers? If so, what are the alternatives?" The 2010 Consumer research

²⁸³ For example, if consumers knew that the price could vary substantially they may be risk averse and hence deterred from making the call for fear of being charged "too much".

price information, consumers may have made more and/or longer calls. This reduction in consumption is the harm generated by consumers reduced awareness of charges²⁸⁴; or

- ii) over-consume other NGCs (because they under-estimate the price). Conversely, had they known the charges for NGC some consumers would have made fewer and/shorter calls. This is often referred to as “bill shock” where consumer’ bills are much larger than expected.

A2.207 The second type of concern (over consumption) is supported by the number of complaints the OAT receives for NGCs relative to complaints about calls to geographic and mobile numbers as set out in Table A2.14. Additionally, 21% of landline respondents who had checked their bill when they were surprised by its size paid more for a call than they expected to a 08 or 09 number (the second highest response)²⁸⁵. The equivalent for mobile users was 25% (also the second highest response)²⁸⁶.

A2.208 However, there is evidence suggesting that generally the first type of concern is more common and overall, more serious. This is indicated by patterns in total NGC volumes. For example, at a high level we observed that volumes of calls to non-geographic numbers have generally declined between 2008 and 2009, with total retail originated traffic volumes decreased by 14% (from around 24.4 billion minutes to 20.9 billion minutes)²⁸⁷. This is supported by BT data which shows that BT’s NGC consumer originated minutes has declined by [X] between April 2007 and July 2010, compared to a [X] reduction in geographic call minutes. However, the number of NGCs, to which these call minutes relate, has only decreased by [X] (compared to [X] for geographic calls)²⁸⁸. Therefore not only have call minutes declined at a faster rate than geographic calls, call durations also appear to be shortening, although this may reflect the decline of dial-up internet access]²⁸⁹.

A2.209 Looking at BT’s data at a more granular level, we have seen a decline in NGC minutes for all non-geographic ranges over time, as shown in Table A2.19.²⁹⁰

²⁸⁴ Alternatively, there may be some consumers who are aware of non-geographic retail prices, but they also under-consume because the actual prices are relatively high due to the lack of price transparency for the majority of consumers

²⁸⁵ Q19: “When you paid more for a call than you expected, what sort of number was it?” The 2009 Consumer research summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

²⁸⁶ Q25: “When you paid more for a call than you expected, what sort of number was it?” The 2009 Consumer research summarised at

<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>

²⁸⁷ This decrease in volumes was generally observed across most number ranges. One notable exception, however, was the 0871/2/3 number range where retail originated traffic volumes increased by around 10% in 2009 from 2008. 0871 volumes appear to have risen in 2009 (compared to 2008), probably due to SPs migrating from 0870 following the reduction in termination rates. P25 and 33, The 2010 Flow of Funds study

²⁸⁸ Data provided by BT “NGCS Review Ofcom Actions submitted 070910.ppt” via email from Nicola Robbins on 7th September 2010

²⁸⁹ Reduced call volumes and call durations have an impact on the investment and innovation decisions of SPs, and this effect is discussed further below.

²⁹⁰ The exception is the 03 number range which was only opened in 2007 and so the traffic volume has been growing since 2007/8 from a very low base.

Table A2.19: Changes in BT originated NTS annual call volumes

Range	2007/8 to 2008/9	2008/9 to 2009/10	2007/8 to 2009/10
0800	[✂]	[✂]	[✂]
0845	[✂]	[✂]	[✂]
0870	[✂]	[✂]	[✂]
0843/4	[✂]	[✂]	[✂]
0871/2	[✂]	[✂]	[✂]
09	[✂]	[✂]	[✂]

Source: BT

A2.210 There appear to be potential reasons for at least some of the reduction in demand for NGCs to be linked to the market failures discussed above:

- i) As set out above, consumers appear to lack confidence in the retail price they will be charged for NGCs (which also contributes to negative perceptions about these numbers). Further, 78% of respondents stated that they would make calls to out of bundle numbers (such as 0845 and 0870) less than 100% of the time when they do not know the price of the call (see above);
- ii) Consumers tend to overestimate NGC prices; and
- iii) Prices for NGCs are higher as set out above, resulting in a distorted structure of prices between NGCs and GCs.²⁹¹

A2.211 As a result, consumers may not make some NGCs (or shorten the duration of those NGCs they do make) because these call prices are high and/or on the basis of their expected price which is higher than the actual price and/or because of their uncertainty about the price they will be charged. Therefore there is potentially a significant volume of NGCs that are not being made due to these factors but which would be made if consumers were more confident, had more accurate awareness of the prices and if the prices were lower.

Risk of Fraud

A2.212 The combination of relatively high NGC prices and low price awareness provides the conditions for fraudsters and scammers to use non-geographic numbers, to the detriment of consumers. For example, as shown in Table A2.15 above, 21% of respondents believed the 070 number range is used for mobile services, and a significant proportion do not know the costs of calls to these numbers (see discussion above). The combination of these two factors means there is an opportunity for scams to occur on the 070 range. In such scams there will inevitably be a degree of revenue sharing (although prohibited by the Numbering Plan), whereby the SP using a 070 number encourages consumers to call them and so makes revenue on each call made.

A2.213 The most common scam is known as the 'wangiri scam', where automated dialling equipment is used to make thousands of short duration calls to consumers. Many consumers who see that they have missed such a call will, out of curiosity, call the

²⁹¹ It is only this latter effect that leads to the tariff package effect (see discussion above), the others are a deadweight loss for consumers as call volumes are lower than they would be if consumers knew the price.

number back, mistakenly thinking that they are calling a mobile number that would be within their bundle of calls. However, the actual call price paid can be relatively high. Indeed, our research carried out in July 2008 in order to understand whether consumers would call back certain numbers that appeared as missed calls found that 21% of respondents would ring back a mobile number, 10% an 070 number, 10% an 09 number, 27% an 0845 number and 19% an 0870 number²⁹². This suggests some consumers are willing to call back unknown numbers instinctively, regardless of number range, and so as concluded in The 070 Statement, we “consider that it is likely that missed call scamming could occur on any range...”²⁹³.

A2.214 This issue of fraud is reflected by some complaints received by the OAT in the boxes below.

Consumer experience Box A2.7

*Consumer called to complain about the mis-use of the 070/074 number range. He states that these are being used by scammers to entice people to call them using such numbers...He states he receives such solicitations via Spam SMS messages on his mobile.*²⁹⁴

Consumer experience Box A2.8

*Caller has received ten calls in last month from a company called XXX solutions (using a geographic number). He says he is working on behalf of [company x] and asks the consumer to go to her computer and start making changes to her set up. She has refused to do so as she believes it is a scam and puts the phone down. When she rings the calling number back it says the number is no longer valid and asks you to call a 070 number instead.*²⁹⁵

A2.215 Although we do not consider that fraudulent use of non-geographic numbers is isolated to the 070 range, it is useful to consider the analysis conducted around scams in The 070 Consultation. In particular we analysed artificially inflated traffic (AIT) data, which relates to where the flow of calls to a number is, as a result of any activity on or on behalf of the party operating that number, disproportionate to the flow of calls which would be expected from good faith commercial practice and usage of the network. Communications providers typically have processes in place to identify AIT, following which, subject to a dispute process, they may withhold payment of fees to terminating operators in cases where they suspect that AIT has occurred.²⁹⁶ We found that based on AIT data we had received from originating operators in response to our information request (including AIT data transiting BT's

²⁹² Paragraph 3.17 to 3.20, The 070 Statement, 27th February 2009

<http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>

²⁹³ Paragraph 3.17 to 3.20, The 070 Statement, 27th February 2009

<http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>

²⁹⁴ Complaint received 1st November 2010

²⁹⁵ Complaint received 28th October 2010

²⁹⁶ Paragraph A6.69 to A6.72, The 070 Consultation,

<http://stakeholders.ofcom.org.uk/binaries/consultations/070options/summary/070options.pdf>

network), the value of AIT was £3.75 million²⁹⁷ between January 2006 and June 2008²⁹⁸. The data showed that in terms of the value and volume of minutes, these have declined substantially since 2006, although we note that a number of operators made representations that the vast majority of scams go undetected by the AIT controls^{299, 300}.

A2.216 Therefore, scamming appears to be an issue with non-geographic numbers (even if it has been declining on the 070 number range), as the lack of price transparency enables scammers to take advantage of consumer confusion. Indeed, as concluded in The 070 Statement, “it is likely that the key drivers of current scams are the high prices of calls to personal numbers, a general lack of awareness of call prices and an instinctive reaction on the part of some consumers to call back missed calls”³⁰¹ and we do not see any reason to consider that this is no longer the case. In our view scams are a potential concern on any non-geographic number range due to the common issues around price awareness.

Reduced innovation by SPs

A2.217 As detailed above, high NGC prices deter innovation by SPs due to the vertical externality and the lack of certainty SPs have over the retail price charged. This is because ultimately, high prices (whether actual or perceived) reduce demand for the services provided by NGCs.

A2.218 Reducing the incentives of SPs to invest and innovate in their services causes consumer detriment as it results in a lower quality and variety of services available through NGCs than would otherwise be the case (as set out in more detail above).

Preliminary views of the consumer concerns

A2.219 In light of the above analysis, we consider that consumers currently suffer a loss in welfare due to the impact of three related market failures in the retail market:

- i) Lack of price awareness: This has direct impacts on consumer outcomes and behaviour as well as on the OCP incentives (that is the lack of price awareness means OCPs decisions are less exposed to competitive pressure on prices for non-geographic calls);
- ii) Coordination between different elements in the value chain particularly the SPs and OCPs (the “vertical externalities”). OCPs are not sufficiently motivated by the preferences of SPs of NGC services and thus generally do not take the impact of their call pricing decisions on SPs into account; and

²⁹⁷ However, whether this data was entirely reflective of all scams that take place on the 070 range depends on each originating operator’s policy on AIT and how proactive each operator is at identifying AIT.

²⁹⁸ Paragraph 3.10, The 070 Statement, 27th February 2009

<http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>

²⁹⁹ We also note that this data relates to AIT cases investigated where AIT was agreed, although some of the data relating to the number of cases and volume of minutes, includes traffic that was not necessarily agreed in full

³⁰⁰ Paragraph A6.69 to A6.72, The 070 Consultation,

<http://stakeholders.ofcom.org.uk/binaries/consultations/070options/summary/070options.pdf>

³⁰¹ Paragraph 4.16, The 070 Statement, 27th February 2009

<http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>

- iii) The impact of individual OCP (and potentially SP) behaviour on the reputation and consumer understanding of individual number ranges and on the market as a whole (the “horizontal externalities”). Neither SPs nor OCPs have sufficient incentives to take into account the impact of their retail pricing on the reputation of an individual number range or the non-geographic number system as a whole.

A2.220 We consider that there are five categories of outcomes of these failures. They consist of direct effects on callers and the consequences that consumer actions have on SPs which in turn undermines the quality of services the SPs can offer consumers:

- i) **Direct impact of poor consumer price awareness:** Callers limited awareness of non-geographic call prices, both at the time they make a call and when making their phone company subscription decision, leads to consumer anxiety, bill shock, poor decision making (under- or over-consumption), and avoidance activity sometimes incurring greater cost than the call being avoided. Further, it weakens competitive constraints on the price of NGCs;
- ii) **Level of non-geographic prices relative to other telephony services:** non-geographic call prices are likely to be higher than they should be (to promote the greatest benefits to consumers). Higher margins on non-geographic calls may be associated with lower margins on other telephony services such as geographic calls (the “tariff package effect”). As a result, the structure of prices may not reflect either callers’ or SPs’ preferences and consumption choices between NGCs and other telephony services may be distorted;
- iii) **Consumer exposure to fraud:** Poor consumer engagement with, and understanding of, non-geographic call services contributes to an environment in which consumers are ill-equipped to recognise, and/or minimise their exposure to, fraud;
- iv) **Diminished service availability and innovation for consumers:** Poor price awareness, reduced demand and the level of non-geographic call prices have negative impacts on SPs. Therefore, their incentives to invest and innovate are reduced and service availability is diminished. This issue is considered in greater detail in Section 6; and
- v) **Distributional concerns:** The high non-geographic call prices discussed above have particularly negative consequences for some vulnerable citizens, for whom non-geographic calls are an important gateway to essential services (e.g. utilities) or services with a particular social function (e.g. healthcare, social security). This concern is particularly acute when considering households that only have access to a mobile phone since these are disproportionately likely to have low income and limited alternative communications options.

Potential magnitude of current consumer detriment

A2.221 We have considered whether the magnitude of the detrimental effects described in this Annex is sufficient to warrant considering intervention. While it is not possible precisely to quantify all aspects of detriment, we have undertaken a number of estimates solely in order to form a broad view on its order of magnitude.

A2.222 Below we:

- briefly discuss the sources of potential consumer detriment;

- discuss how we approach estimation of consumer detriment; and
- provide and discuss the results of our estimation.

Sources of current consumer detriment

A2.223 The underlying sources of detriment that consumers currently experience in the consumption of non-geographic calls have been discussed in detail in this Annex and Annex 3. We have identified low price awareness of consumers, as well as vertical and horizontal externalities as causes of detriment for consumers. The implications of these three sources of market failure are closely inter-related and are likely to lead to different forms of detriment for consumers and citizens and as shown in Table A2.20. For the purpose of considering which of the sources of detriment would be most susceptible to reasonable quantification, it is helpful to set out a slightly more granular articulation of the adverse effects. The nature of the detriments and the assessment criteria to which each relates is also shown in Table A2.20.

Table A2.20: Summary of detriments

Type of detriment	Implication	Relevant assessment criterion
1. Consumers have an incorrect perception of prices and over- or under-estimate the actual prices of NGCs	Reduced volume of NGCs made by consumers	Price and transparency
2. The meaning of NG number ranges is undermined leading to uncertainty and a loss of consumer confidence in making NGCs. ³⁰²		
3. Consumers face high prices for NGCs relative to other charges. ³⁰³		
4. As a consequence of 1-3, the volume of NGCs received by SPs is reduced (or less common too high), which weakens their incentives to invest and innovate.	Reduced quality and variety of NGC services offered by SPs to callers	Service quality, variety and innovation
5. As a consequence of 1-3, vulnerable citizens face increased cost, uncertainty and difficulty in gaining access to socially important services.	Reduced access to socially important services by vulnerable consumers	Access to socially important services

Our approach to modelling the current consumer detriment

A2.224 Some of the detriments set out in Table A2.10 are more susceptible to accurate estimation than others, given the evidence that is available to us. The purpose of this analysis is, therefore, not to derive a precise figure for all elements of the detriment. Rather to get indicative figures for those elements of detriment that are most amenable to quantification in order to get an indication of the order of magnitude of total detriment.

A2.225 To the extent that we can not quantify all aspects of detriment, this is an underestimate of the full scale the consumer harm which does not take account of loss of service quality and innovation, or loss of access to important service or even the totality of loss of demand.

A2.226 For this limited purpose, we focus on the first type of detriment shown in Table A2.10, which is most amenable to quantification. In particular, we want to get a

³⁰² There may be an additional detriment from a tariff package effect, though it is difficult to estimate its size. For example, in presence of uninternalised negative horizontal externalities OCPs may overall be worse off and this may translate via the tariff package effect into higher prices for other services.

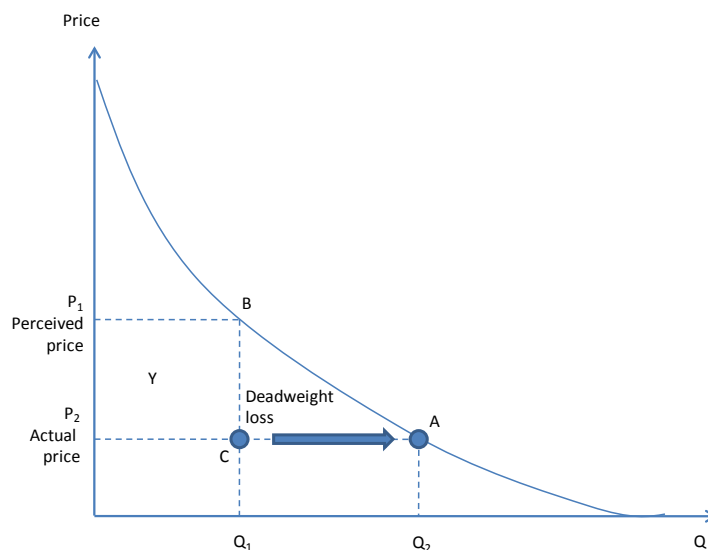
³⁰³ There may be an additional detriment from a tariff package effect, though it is difficult to estimate its size. For example if high non-geographic prices lead to OCPs increasing prices to exploit consumers' lack of awareness prices for other services would be lower than otherwise.

better understanding of the impact on consumers of their lack of awareness of prices and their consequence overestimation of prices. If consumers overestimate (underestimate) the price they will consume too little (much) of non-geographic calls.

A2.227 This type of analysis was undertaken in 2005, but restricted to 0845 and 0870 number ranges.³⁰⁴ It estimated the consumer detriment of fully eliminating consumers' price overestimation that existed at the time.³⁰⁵ The yearly central estimates of loss in consumer surplus on the lost volumes of calls between perfect price transparency and the situation at the time for 0845 and 0870 were £190 and £115 million, respectively. These were overall estimates which did not distinguish between fixed and mobile OCPs.

A2.228 The impact of the over-estimation of prices is illustrated by Figure A2.10. Currently for many number ranges the available evidence suggests that consumers overestimate call charges by a significant amount. This is the perceived price P_1 . If consumers' perceptions were aligned with the actual prices P_2 , consumption of non-geographic calls would increase from Q_1 to Q_2 . Consumers would be better off by the deadweight loss area.

Figure A2.10: Impact of price over-estimation on consumer welfare



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http://stakeholders.ofcom.org.uk/binaries/consultations/nts_forward/summary/nts_way_forward.pdf.

³⁰⁵ This was based on a number of assumptions. First, it assumed a (market level) price elasticity of demand of -0.3 (with some sensitivity undertaken with values of -0.2 and -0.4). Second it assumed that the actual retail price was set at marginal cost (hence there is no producer surplus). Third it assumed a non-linear demand curve of $Q=Ae^{-\lambda p}$. Fourth, estimates were based on the average actual and perceived price assuming that the size of the detriment was based on consumers' average overestimation being completely eliminated.

- A2.229 Consumers think they are at point B, paying price P_1 and so only consuming the reduced volume of calls of Q_1 . However, in fact they are at point C, because the actual price is lower at P_2 . Removing the misperception of price, so that consumers correctly perceive the price to be P_2 , they would move to point A, increasing the volume of calls they make. The detriment of misperception of price in terms of reduced demand is, therefore, given by the difference between the outcome at point C compared to point A.
- A2.230 We note that if we were to assess the welfare impact of a decline in actual prices from P_1 to P_2 the area Y in Figure A2.10 would represent a transfer from producers to consumers. However, it is unclear in this case whether this transfer would take place. The reason is that even if consumers overestimated the charges for non-geographic calls they still in the end paid P_2 . In essence, even if consumers thought they would benefit less from non-geographic calls they actually enjoyed the surplus consisting of area Y. This may take the form of higher disposable income available for consumption of other goods and services.
- A2.231 Below we have applied the same methodology as to the 2005 estimation to estimate what would be the yearly consumer detriment in aggregate, taking account of all non-geographic number ranges for which we had information on the average actual prices, the average prices perceived by consumers and the volumes of calls. Although this is built up from a quantification for each number range, we consider that the overall aggregate figure is the most meaningful. The nature of the market failures is that they are closely inter-related and we consider that the misperceptions of price on different number ranges are also likely to be inter-related. Similarly, in the assessment of broad policy options, we consider it most meaningful for the purpose of comparing quantified costs and benefits to consider the complete package of measures. Therefore, considering the quantification for an individual number range in isolation either for the purpose of understanding the scale of the detriment or the benefits of policy options is not in our view reliable.
- A2.232 As stated above this can only provide an illustration of the likely consumer detriment. For example, it is likely to be an underestimation because it implicitly assumes that the actual prices are optimal for consumers while because of the presence of externalities and the lack of consumers' price awareness they may be too high. As explained above our quantification only relates to one of the types of detriment arising from the market failures, given the limited purpose of this modelling exercise. This limitation needs to be taken into account in interpreting the results.
- A2.233 On the other hand, when assessing the benefits of policy options, we recognise that there is a difference between the maximum potential benefit and the likely benefit. The maximum potential benefit is the full extent of the consumer detriment. But it is unlikely that any type of intervention consumers will completely remove the detriment in its entirety, even if it substantially reduces it. For example, for the one type of detriment we have sought to model, some element of over-estimation of prices will remain even after implementing the new approach to improve consumers' price awareness.

Estimation of current consumer detriment

A2.234 In order to estimate the consumer detriment from over-estimating non-geographic call charges we have used available data on the average actual prices³⁰⁶ and volumes of calls and estimates of the average perceived price for each number range.

A2.235 These are summarised in Table A2.21 below.

Table A2.21: actual prices and quantities and perceived prices

Number range	Fixed OCPs				Mobile OCPs			
	actual volumes	actual prices	Average perceived price	Over-estimation	actual volumes	actual prices	Average perceived price	Over-estimation
	M min.	ppm			M min.	ppm		
03	110	2.9	11.1	8.2	113	1.0	22.8	21.8
080	10,659	0	6.1	6.1	529	14.1	28.6	14.4
0845	7,792	3.6	29.8	26.1	1,218	15.3	45.7	30.4
0870	2,090	6.1	38.7	32.7	387	14.3	51.0	36.7

Source: The average retail price in 2009 and the volume of calls in 2009 are from the data underlying the 2010 Flow of Funds study. The average perceived prices are from the 2009 Consumer research, questions 43 and 44.

We have focussed on the 03, 080, 0845, 0870 number ranges as we have a full set of data on perceived price versus actual prices.

We did not have information on the perceived price for the following number ranges: 0843/4, 0871/2/3 and 118. While we have some data on 09 we have decided not to include this as the sole representative of the revenue sharing ranges, as the data is more difficult to interpret given the wide ranges of possible prices, and also this would not in any respect give a complete picture of the revenue sharing consumer detriment loss.

We also have not included 070 because traffic on this number range is very limited compared to other number ranges.

A2.236 Using these data and the same assumptions as for the 2005 estimation, we have estimated the consumer detriment in aggregate using the number ranges for which we had complete data. Results are shown in Table A2.22 below.

³⁰⁶ The average actual prices were calculated by dividing the revenue by the volume for each number range.

Table A2.22: Estimate of annual consumer detriment for over-estimation

Number range	Consumer welfare gains					
	All OCPs		Fixed OCPs		Mobile OCPs	
	Total (£ m)	As a % of current consumer surplus	Total (£ m)	As a % of current consumer surplus	Total (£ m)	As a % of current consumer surplus
03	5	3.9%	1.1	2.6%	3.9	4.6%
080	115	4.3%	108.4	5.0%	6.1	1.2%
0845	333	3.5%	293.2	3.8%	39.6	2.1%
0870	111	3.3%	94.2	3.5%	16.5	2.5%
Aggregate	£563m	3.6%	£497m	3.7%	£66m	2.0%

Source: Ofcom's analysis.

A2.237 Table A2.22 shows the estimated annual consumer welfare gains both in millions of pounds and as a percentage of the current consumer surplus, separately for each of fixed and mobile OCPs. However, this is only for the purpose of deriving the estimates, as the most meaningful quantification is the aggregate figure across all OCPs. As explained earlier in this Annex, it is in the nature of the externalities that a higher price for a given number range by one set of OCPs may adversely affect consumer's perceptions of prices across all OCPs, e.g. the fact that mobile OCPs charge often high prices for 080 calls may be one of the explanations why many consumers are unsure about the prices of 080 calls from fixed OCPs, even though such calls are and have always been free.

A2.238 Results in absolute terms for each number range depend on the volume of calls in the number range and the extent to which consumers over—estimate the charges. In terms of percentage increase over the current estimate of consumer surplus the magnitude of the detriment depends on the extent of over-estimation.³⁰⁷ As noted above, we consider that the aggregate figure across all number ranges for which we have reliable data is the most meaningful.

A2.239 The derived detriment figure of £563M cannot be considered to be precise as it depends on a number of assumptions based on limited evidence. However, equally it is only based on a subset of the number ranges under investigation in this review and, importantly, the detriment figure is based on only one aspect of consumer harm, loss of demand, and does not take account of loss of access to services, loss of innovation and other consumer harms. We consider that this analysis, therefore, provides support for the view that the current consumer detriment is likely to be substantial.

³⁰⁷ This is because all other assumptions – i.e. industry price elasticity of demand and shape of the demand curve – are identical across number ranges.

How the retail market may look absent regulation

Introduction and overview

A2.240 In order to assess whether retail regulation is needed in the provision of NGCs, it is useful to assess how the market may look absent regulation. The aim of this is to remove the impact of existing regulation in order to identify what, if any, market failures exist whilst avoiding any distortions that may be caused by current regulations.

A2.241 This effectively means that we are assessing the options for regulatory change against a situation where ex-ante regulation specific to NGCSs is removed (i.e. the deregulation scenario as described in Annex 1).

A2.242 As discussed above, we consider that there are a number of consumer concerns under the current regulatory regime, and so this exercise is designed to assess whether these concerns would also exist in the market without regulation (or indeed, if new concerns could materialise) and, if so, whether regulatory intervention may be appropriate.

A2.243 We consider that absent regulation, the existing concerns for callers could be even worse. These concerns stem from a lack of consumer price awareness and the externality effects which are likely to persist and potentially be higher in the market without regulation relative to today.

A2.244 We consider that relative to today, a market absent regulation may show:

- i) A decrease in consumers' price transparency for NGCs. BT's regulated prices are often the only NGC prices that are visible to callers. This currently provides some information to BT customers, but may also provide some (though imprecise) information to non-BT customers. In addition, non-BT OCPs are largely unregulated at present anyway, meaning that the above problems around price transparency would continue in the market without regulation. However customers of these OCPs would be likely to receive slightly less price information than they do under the current regulations, for example due to the removal of PCAs on 080;
- ii) An increase in NGC charges from a BT line. Absent regulation, BT would not be constrained and so would have an increased ability and incentive to raise NGC prices. Therefore BT is likely to behave in a way similar to how other OCPs currently behave due to the lack of price awareness and the externalities; and
- iii) An increase in NGC charges by other OCPs. To the extent that retail regulation on BT currently exerts some degree of constraint on the NGC retail prices of other OCPs, the market without retail regulation on BT may lead to other OCPs increasing NGC charges further.

A2.245 We now consider each of these in turn, before assessing what this would mean for consumers.

Reduced price transparency

A2.246 As discussed above, we already have significant concerns around consumer awareness of NGC retail prices under the current regulatory regime (which is already largely a deregulated regime for many OCPs).

A2.247 However, the charges for NGCs that are often more visible are those to BT customers. This is because they are often mentioned in advertisements and are at a regulated level as determined in the NTNP, meaning price variation for BT customers is more limited. Therefore, it might be thought that BT's subscribers would have better information on NGC charges than those of other OCPs. Additionally, given the information provided in adverts, BT's retail charges may also provide some kind of (albeit potentially inaccurate) price information for non-BT consumers.

A2.248 In order to assess this, we have considered research asking fixed respondents how much they thought it cost to call a variety of non-geographic numbers. The results are presented in Table A2.20, distinguishing between BT and non-BT customers.

Table A2.20: How much do you think it costs to call the following telephone number from your landline phone at home during the daytime on a weekday?

Number		BT Customer	Non-BT Customer
0800	Do not know	30%	22%
	Free	59%	66%
0871	Do not know	63%	62%
	<10ppm	7%	
09x	Do not know	74%	69%
	It depends	1%	1%

Source: Tables 48, 51 and 52. The 2009 Consumer research

A2.249 This appears to show that under current regulations, BT customers are actually more likely to state that they do not know the retail price of 0800, 0871 and 09 numbers than non-BT customers, suggesting BT customers are not currently any more informed than those of other OCPs. In fact, fewer BT customers correctly identified 0800 as being free from a landline than non-BT customers. Therefore, it is not clear that BT customers have a greater awareness of NGC prices than non-BT customers as a result of the regulation of BT prices today (despite the slightly greater transparency of BT's prices). Overall these figures confirm that consumers are generally not aware of prices irrespective of whether they are customers of BT or non-BT OCPs (a view set out in more detail above).

A2.250 The figures also show that a significant proportion of customers of non-BT OCPs (for whom direct pricing regulation is not applicable) are uncertain about the retail prices for NGCs. This therefore suggests that concerns around price awareness for consumers are likely to be evident in a market without regulation as awareness of non-BT customers who are effectively in a deregulated scenario is already limited. As a result, the market absent regulation is also likely to cause price awareness concerns, both for BT customers (who no longer could rely on regulated price points) and for non-BT customers (as the limited pricing regulation – e.g. PCAs on 080 calls – would be removed).

A2.251 In fact, the removal of the regulations might reduce price transparency even further, due to the potential effect on BT's prices, as discussed below. Whether this would lead to a worsening of the concerns about price awareness is not clear, although this may only be because these concerns are already so serious today.

BT's NGC charges may increase

- A2.252 The current caps on BT's retail NGC charges appear to be binding for at least some non-geographic numbers. This is because our evidence (set out in Figure A2.3 above) indicates that for those specific number ranges considered, BT's charges for NGCs are often towards the top of the pence per minute price guidance for particular ranges, and are often lower than those of other fixed OCPs (and often significantly lower than mobile OCPs). This therefore suggests that the current caps are restricting at least some of BT's retail NGC prices to a level that is lower than they would be absent the caps.
- A2.253 Additionally, we note that the NTS Call Origination Condition currently imposed on BT on some (but not all) NGCs limits its origination retention to cost, meaning BT would not benefit from any price increases through increased retail margins, currently reducing its incentive to increase prices. However, in a market absent regulation (and so without this condition and the retail price regulation), BT would have both the incentive and ability to increase NGC retail prices, enabling it to generate greater margins at the origination end of NGCs (on a per minute basis, abstracting from any demand response to the price rise).
- A2.254 As a result of these two factors, at least some of BT's NGC charges may be higher relative to their current level in a market without regulation because of low price transparency. This is because of the vertical and horizontal externalities and consumers' lack of price awareness: competition is less prominent in NGCs, potentially allowing BT to behave in a similar way to how other OCPs do today and increase its margins on NGCs without triggering a significant loss of subscribers. This may vary by number range, as discussed in Annex 7.

NGC charges from all OCPs may increase

- A2.255 The NGC prices of other OCPs, particularly other fixed OCPs, may also increase relative to the position today in a market without regulation to the extent that BT regulated (and published) retail prices provided some constraint on their ability to set prices. . Although our analysis is that these constraints are relatively weak, they may exist to some extent. To the extent that this is the case, the removal of retail caps on BT may result in higher prices from other OCPs in response to the higher BT prices in a market without regulation (as discussed above).
- A2.256 Even if the NGC prices of other OCPs were not higher relative to the position today, we have not identified a reason for a market without regulation to be an improvement relative to the current position.

Preliminary views on the retail market absent regulation

- A2.257 We consider that the evidence available to us supports the view that significant concerns about consumer harm exists today (as detailed above). We consider that these concerns would also exist in a market without regulation, and believe that relative to the current situation, no regulation could actually mean existing concerns for consumers are even worse. This is because for non-BT OCPs, the price level of NGCs is largely already deregulated, and there are several consumer concerns that result from this position today. These concerns stem from a lack of consumer price awareness and the horizontal and vertical externalities, which are likely to be exacerbated in the market with no regulation as the underlying incentives for price setting persist. Therefore individual retail call providers are incentivised to maximise

individual call revenue through higher prices rather than promote call volume growth.

- A2.258 In particular, as discussed above, we would expect price awareness concerns to also exist in the market without regulation, and potentially be greater relative to today due to the potential for even less price transparency and further price increases (by BT and potentially other OCPs). Also, neither the horizontal nor vertical externality issues are likely to be addressed due to the continued disparity between the individual incentives of OCPs and those of SPs and the collective interest. Additionally, we would not expect competition around NGCs to be improved in the market absent regulation due to the continuing issue of price awareness.
- A2.259 Therefore it seems likely that higher prices on NGCs will continue, and so the structure of prices may not reflect the preferences of the caller or the SP³⁰⁸. This is likely to ultimately distort consumption.
- A2.260 We would also expect the other consumer concerns to be at least as large in a market without regulation, i.e. risk of fraud, reduced service availability and innovation by SPs, and distributional concerns.
- A2.261 While it is possible that the industry could self-organise, as per the short-code market (discussed in Section 2), the diversity of participants and interests weighs against such an outcome in the short to medium term and there is no guarantee the new situation would be better for consumers.

³⁰⁸ Or indeed, our own policy preferences for particular number ranges (although these are also being considered as part of this review).

Annex 3

How wholesale markets work: economic analysis

Summary and overview

Purpose of this annex

- A3.1 In this Annex we set out our detailed analysis of the wholesale level of the supply chain. In particular:
- This Annex explains how the wholesale level currently operates;
 - In response to the Call for Inputs, wholesale originating communications providers (“WOCPs”) generally argued that terminating communications providers (“TCPs”) were monopoly suppliers of termination and thus in a strong position.³⁰⁹ In contrast, TCPs generally argued that WOCPs were essential trading partners and consequentially in a strong position. In this Annex we analyse these different positions. Our view is that the balance of negotiating power depends on the particular WOCP and TCP involved. We are not confident that the termination rates that would arise commercially would be likely to lead to desirable outcomes for consumers; and
 - This Annex also explains why this consultation does not substantively consider some of the issues raised in response to the Call for Inputs, namely the windfall gains and losses that TCPs can experience on calls to ported numbers as a result of differentials in termination rates, obstacles to SPs porting non-geographic numbers between TCPs and the terms of BT’s Standard Interconnect Agreement (“SIA”).
- A3.2 The discussion of the second of these issues is somewhat lengthy and complicated. We thus provide an executive summary of our preliminary views immediately below. A summary of this part of our analysis is also set out in Section 5 of this consultation. The analysis of these issues in the remainder of this Annex is aimed at those stakeholders with a particular interest in the complexities of our analysis.
- A3.3 Although we analyse and comment in this Annex on the relative strength of different wholesale players, this review is not conducting a formal market review of the wholesale markets for non-geographic calls. For that reason, we do not formally define the relevant economic markets nor do we conduct a formal assessment of whether any of the wholesale players have significant market power. Such analysis is not necessary for the purposes of this review of calls to non-geographic numbers.

Summary of our analysis of wholesale negotiating power

- A3.4 In this Annex we assess how the wholesale level would operate in the absence of ex-ante regulation of the origination and termination rates. This responds to the

³⁰⁹ For precision, in this Annex we use slightly different terminology to the rest of this consultation document. This Annex distinguishes between the OCP that retails the call and the OCP that provides wholesale call origination. This distinction is explained in further detail below.

arguments raised in reply to the Call for Inputs about the balance of negotiating power at the wholesale level. It also allows us to reach a view on how the market would operate absent regulation and therefore to consider whether regulation would be required, and if it is, how that should be designed.

- A3.5 In the absence of ex-ante regulation, WOCPs and TCPs would negotiate over the level of termination rates. There are inherent tensions in the relationship between WOCPs and TCPs: WOCPs always prefer lower termination rates whereas TCPs generally prefer higher termination rates.
- A3.6 For this analysis we put aside the possibility of Ofcom involvement via the dispute resolution powers specified in Sections 185-191 of the Act. This is consistent with our approach to market reviews of termination for geographic calls and calls to mobile. Predicting the outcome of negotiations in these circumstances is complicated. There are large numbers of WOCPs and TCPs. Our analysis of the factors that influence their negotiating strength suggests that different WOCPs and TCPs are likely to be in different commercial positions. In other words, negotiations will depend upon the particular WOCP and TCP involved, rather than one side consistently being in a strong position. As a result, commercial negotiations are likely to produce a range of termination rates that depend on the parties involved. Termination rates that depend on the identity of the WOCP (“bespoke termination rates”) are likely to be commonplace.
- A3.7 We identify a number of factors influencing the negotiating strength of a WOCP or TCP, in particular:
- WOCPs accounting for a high share of wholesale call origination would likely be in a stronger position than WOCPs accounting for a low share of call origination.
 - Similarly, TCPs accounting for a high share of termination would likely be in a stronger position than TCPs accounting for a low share of termination.
 - Vertically integrated firms would likely be in a stronger position than vertically separate firms of comparable size.
- A3.8 We consider that BT is likely to be in a strong position, both in its role as a WOCP and its role as a TCP. We also consider that C&W, the second largest TCP, is likely to be in a strong position when negotiating with smaller WOCPs (albeit not when negotiating with BT). Similarly, TalkTalk and Virgin Media, the second and third largest WOCPs, are likely to be in a strong position when negotiating with smaller TCPs (albeit not when negotiating with BT). Mobile OCPs’ account for a smaller share of non-geographic call origination, compared to calls more generally. Nonetheless EE, Vodafone and O2 may be in a strong position when dealing the smaller TCPs.
- A3.9 We are not confident that the termination rates that would arise commercially (absent involvement by Ofcom) are likely to lead to desirable outcomes for consumers. In particular:
- Some WOCPs may be able to drive termination rates down to a particularly low level. In the long run this would result in detrimental effects for SPs, harming service provision and innovation, which are not offset by significant benefits for callers.

- Some TCPs may be able to set high termination rates that allow SPs to exploit features such as weak competitive constraints on the price of their service. This results in higher retail prices for non-geographic calls. If competition in hosting is effective, the proceeds are likely to be passed through to SPs. This is the opposite of the outcome described in the preceding bullet point – it results in the balance of prices between callers and SPs being tilted in the SPs' favour.
- Different TCPs are likely to negotiate different termination rates. Over the longer term, this asymmetry between TCPs is likely to lead to consolidation in hosting. This potentially harms competition at that level, which would have detrimental impacts for both SPs and callers.

Structure of Annex

A3.10 This Annex is structured as follows. In the first three sub-Sections of this annex, we set out background information. These sub-Sections relate to the first purpose of this Annex, namely explaining how the wholesale level operates. Specifically:

- We provide a general overview of the supply chain;
- We summarise the responses to the Call for Inputs that relate to the wholesale level; and
- We describe how the termination rates are currently determined.

A3.11 In the next four sub-Sections, we set out our substantive analysis of termination rates in the absence of ex-ante regulation. These sub-Sections relate to the second purpose of this Annex. Specifically:

- We provide an overview of our substantive analysis;
- We describe how the wholesale level would operate in the absence of ex-ante regulation;
- We make inferences about the pattern of termination rates that would arise in the absence of ex-ante regulation (and absent ex-post involvement by Ofcom) and the consequences for consumers; and

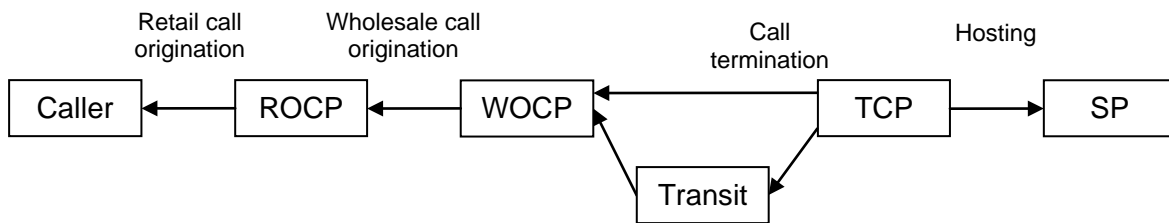
A3.12 In the final sub-Section we discuss why concerns about responsibility for paying for transit are relatively small. We also briefly explain why these three issues are outside the scope of our analysis. This sub-Section relates to the third purpose of this Annex.

Overview of the supply chain

A3.13 By way of background, we describe the parties involved in a non-geographic call and set out the implications of our preliminary view (as discussed in Section 5) that the market for the provision of hosting seem to be working well for SPs.

Parties involved in a non-geographic call

A3.14 When analysing the wholesale level it is useful to distinguish between retail and wholesale call origination. This Annex therefore uses slightly different terminology to the rest of this consultation when referring to the OCP. To illustrate Figure A3.1 below provides an overview of the supply chain.

Figure A3.1: Overview of the supply chain

- A3.15 The Retail Originating Communications Provider (“ROCP”) supplies retail call origination (as well as a bundle of other services) to callers. The WOCP supplies wholesale call origination to the ROCP. The WOCP may or may not be vertically integrated with the ROCP. For example, a virtual mobile operator such as Tesco Mobile is a ROCP that purchases wholesale call origination from O2 (the WOCP). O2 also directly retails call origination to callers and for these calls acts as both the ROCP and WOCP. Similarly, BT directly retails call origination using its fixed network (acting as both the ROCP and the WOCP) as well as supplying wholesale call origination to third party ROCPs, for example through carrier pre-selection.
- A3.16 The key focus of this Annex is the relationship between WOCPs and TCPs. TCPs supply termination of non-geographic calls to WOCPs.³¹⁰ We refer to this service as “call termination”, and the revenue earned by the TCP is referred to as the “termination rate”. Where the WOCP does not directly interconnect with the TCP, the call will be transited via a third party transit provider.
- A3.17 The TCP is supplying termination to the WOCP on behalf of SPs. The TCP supplies a bundle of services to SPs which we refer to as “hosting”. This may include the payment of any share of termination revenue as well as value added services such as recorded announcements or conditional call routing.³¹¹ The market for hosting is discussed in Section 5.
- A3.18 We provided figures on the volume and value of non-geographic calls in Section 3, based on the 2010 Flow of Funds study. Table A3.1 below summarises the volume of non-geographic calls. The total (retail) value of non-geographic calls was £1,865m in 2009 (excluding VAT).

³¹⁰ An equivalent way of thinking of this service is the supply of origination of non-geographic calls by WOCPs to TCPs (see *NTS call termination market review*, 22 October 2004 (the “2004 NTS Termination Consultation”), paragraph 3.20). These approaches are equivalent because, whenever a call is completed, it involves the WOCP supplying origination to the TCP and the TCP supplying termination to the WOCP i.e. the services are intrinsically linked and one has no value without the other. In this Annex we generally avoid referring to the supply of origination by WOCPs to TCPs in order to avoid confusion with the supply of wholesale call origination by WOCPs to ROCPs. The 2004 NTS Termination Consultation is available at:

http://www.ofcom.org.uk/consult/condocs/ntsctmr/nts_call_termination.pdf

³¹¹ NCCN 500, 22 July 2008 (the “NCCN 500 Decision”), paragraphs 2.12-2.13 available at:

http://www.of.gov.uk/shared_of/ca98_public_register/decisions/NCCN_500_FINAL_PUBLIC_310701.pdf

Table A3.1: Volume of non-geographic calls (2009)³¹²

	Volume (2009)	Notes
Total non-geographic calls	30.8bn minutes	
Total non-geographic calls where ROCP is the same as the WOCP	21.8bn minutes	71% of total non-geographic call minutes
Total non-geographic calls involving third party transit	4.7bn minutes	15% of total non-geographic call minutes
Total non-geographic calls where WOCP is vertically integrated with TCP	4.8bn minutes	15% of total non-geographic call minutes

Source: the 2010 Flow of funds study

A3.19 Table A3.2 shows the value of calls to the main number ranges and how that revenue is split between the parties in the supply chain. This shows that overall call revenues are split equally between originators (WOCPs and ROCPs) and terminators (TCPs and SPs). Note that the division of revenues varies significantly between number ranges (for example, on 09 calls the SP receives a much higher proportion of call revenues).³¹³

Table A3.2: Division of non-geographic call revenues

Party	ROCP+WOCP	Transit/ conveyance	TCP	SP
Share of call revenues	49%	1%	27%	23%

Source: 2010 Flow of Funds study, page 39. Figures are exclusive of VAT

Implications of strong competition in hosting

A3.20 This Annex does not directly consider the supply of hosting by TCPs to SPs. However the supply of hosting is interrelated with the operation of the wholesale level (i.e. the relationship between WOCPs and TCPs).

A3.21 The SP experience is discussed in Section 5. As described in that analysis, we consider that the provision of hosting to SPs is currently working well (based on the 2010 SPs survey). This implies that, if all TCPs set similar termination rates for calls to similar non-geographic services, then all TCPs are on a similar footing when providing hosting. As a result:

- Much of the resulting termination revenue will be passed onto the SP, less a deduction to cover the TCP's costs of providing termination and hosting. TCPs thus recover their costs (including an allowance for normal profits) but may not be able to persistently earn significant rents.

³¹² 2010 Flow of Funds study, Figure 1.4 on page 5.

³¹³ 2010 Flow of Funds study, pages 39 and 49.

- There will also be pressure on TCPs to act in the interests of SPs. A TCP that fails to do so is likely to find that its SPs switch their business elsewhere.

A3.22 Importantly, the conclusion in the preceding paragraph will break down if some TCPs are able to charge markedly higher termination rates than others. For example, a TCP that enjoys a unique ability to set high termination rates enjoys a uniquely strong position when providing hosting, since it can offer SPs a corresponding higher revenue share (or, equivalently, charge SPs less for hosting). Since other TCPs can not match this offer, the TCP only needs to pass on a fraction of its extra revenues.³¹⁴

Responses to the Call for Inputs

A3.23 Stakeholders held widely varying, and often conflicting, views on wholesale issues. For example, some respondents thought that WOCPs were in a strong position while others thought that the advantage lay with TCPs. Below we summarise the responses to the Call for Inputs that are relevant to the operation of the wholesale level.

- First, we set out the views of vertically integrated firms, which act as both WOCPs and TCPs.
- Second, we discuss the position of other parties that are primarily WOCPs.
- Third, we discuss the position of parties that are primarily TCPs.

Vertically integrated firms' responses

A3.24 Vertically integrated firms had differing views about the operation of the wholesale level. BT was concerned about the effect of current regulations on the wholesale level, whereas other vertically integrated firms were concerned about the strength of BT's position.

A3.25 BT argued that the NTS Call Origination Condition (which is described in further detail below) limits competition in the terminating market. BT also considered that it places BT at a disadvantage relative to other originators by limiting its retention whereas other ROCPs could use their higher retention on non-geographic calls to support lower prices on other products.³¹⁵ BT claimed that all parties in the value chain can only have the opportunity to recover their efficient costs and make an appropriate margin through commercial negotiation. BT was not concerned about the balance of negotiating power at the wholesale level. Rather BT stated that "The originator needs a vibrant termination market to stimulate calls and the terminator is reliant on the originator to provide origination and therefore access to its customers. With the support of a robust numbering plan, applied symmetrically to all players, normal commercial negotiation will provide an

³¹⁴ This can be illustrated with an example. Suppose that the cost of providing hosting for a particular service provider is 1ppm. If all TCPs were able to set a termination rate of 5ppm for calls to that SP then we would expect competition between TCPs over time to drive the amount of revenue they share with the SP towards 4ppm. As a result, TCPs recover their costs but do not persistently retain significant rents. However, suppose that one TCP is uniquely able to set a termination rate of 8ppm. That TCP could offer the SP a revenue share of 5ppm (more than any other TCP can offer) and retain the remaining 3ppm (allowing it to earn rents significantly in excess of its costs of 1ppm).

³¹⁵ BT response dated 2 June 2010 to the Call for Inputs, pages 4 and 8.

appropriate division of the revenue generated.”³¹⁶ Specifically, commercial negotiation would produce a termination rate that is “commensurate with the value of the service”.³¹⁷

- A3.26 C&W expressed a number of concerns about BT’s position, both as a buyer and a supplier of call termination. As a consequence, C&W did “not believe that the division of revenues can be left to commercial negotiation.”³¹⁸
- C&W was concerned about BT’s “dominance” in call origination, particularly as any increase in BT’s retention could be used to help it compete more strongly in the provision of other services. In particular, it stated that BT could use increased retention to strengthen its position in the provision of hosting.³¹⁹ C&W stated that, absent the NTS Call Origination Condition, BT would have a considerable advantage when negotiating termination rates for non-geographic traffic which originated on or transited BT’s network. C&W estimated that BT purchases 75-85% of termination minutes (once transit is included) and stated that “Faced with this level of overwhelming dominance and in the absence of regulation, any terminating provider of NTS minutes would be at the mercy of BT in order to sustain their business.”³²⁰ C&W also expressed concern about BT’s current influence over payments to TCPs, citing the 0845 number range where falls in BT’s retail price have created uncertainty for TCPs and SPs about the amount of termination revenue they would receive.³²¹
 - C&W also referred to “general industry frustration BT [sic] as a large wholesale supplier of termination without any ex-ante remedies on its termination prices...”³²² C&W referred to changes in termination rates for calls to 03 numbers and stated that “In practice operators were forced to accept BT proposed termination rates...”³²³
 - C&W also stated that BT’s SIA is very one sided allowing BT significant advantages when changing its own prices and seeking to impose a price change on a transit or operator service.”³²⁴

A3.27 TalkTalk stated that BT’s increases in termination rates were a major driver of disputes and argued that Ofcom should complete the review of NTS termination markets.³²⁵

WOCPs’ responses

A3.28 With the exception of BSkyB, WOCPs considered that TCPs possess a strong position.

A3.29 BSkyB believed that the current regime generally works well.³²⁶

³¹⁶ BT response dated 2 June 2010 to the Call for Inputs, page 9.

³¹⁷ BT response dated 2 June 2010 to the Call for Inputs, page 4.

³¹⁸ C&W response dated 25 May 2010 to the Call for Inputs, page 15.

³¹⁹ C&W response dated 25 May 2010 to the Call for Inputs, pages 11-12 and 14.

³²⁰ C&W response dated 25 May 2010 to the Call for Inputs, pages 17-18.

³²¹ C&W response dated 25 May 2010 to the Call for Inputs, pages 13 and 15.

³²² C&W response dated 25 May 2010 to the Call for Inputs, page 2.

³²³ C&W response dated 25 May 2010 to the Call for Inputs, page 16.

³²⁴ C&W response dated 25 May 2010 to the Call for Inputs, page 19.

³²⁵ TalkTalk response dated 29 May 2010 to the Call for Inputs.

³²⁶ BSkyB response to the Call for Inputs.

- A3.30 O2 argued that the provision of termination of calls to non-geographic numbers is not subject to sufficient competitive forces. O2 cited BT and C&W's recent increases in termination rates as evidence in support of this view. O2 also expressed concern that the largest DQ providers (namely TNUK, BT and Yell) had all significantly increased their termination charges over time. O2 considered this is evidence of market failure.³²⁷ O2 argued that increases in termination rates have an adverse impact on callers, as operators will seek to recover the additional cost by increasing retail prices.³²⁸
- A3.31 Everything Everywhere ("EE") discussed market definition. It considered that analysing the provision of termination (to OCPs) and hosting (to SPs) simultaneously (as was done in the NCCN 500 Decision) was "flawed". EE stated that "once a customer has chosen a particular number to call, the originating operator has no control over the network on which that call will terminate ... If a particular terminating operator implements higher charges, the originating operator cannot route the call elsewhere and for commercial reasons the originating operator will be incentivised to want to connect the call."³²⁹ It considered that, if a separate call termination market were defined, then suppliers of termination would have significant market power.³³⁰ In particular, it expressed concern about the termination rates for 03 calls.³³¹ EE stated that there seems "no logical basis or similar precedent" for termination rates to depend on retail prices.³³²
- A3.32 Vodafone stated that "for most NTS number ranges ... the OCP is a price taker at [the] wholesale level who faces a similar bottleneck as with any other termination service ..." Whether SPs compete away the resulting revenues "is a separate question".³³³ Vodafone described BT as "a dominant player in the NTS hosting market" and possessing "a uniquely powerful operator in NTS call origination as a result of its substantial retail market share" that allowed it to influence the termination rate received by other TCPs by varying its own retail price.³³⁴

TCPs' responses

- A3.33 TCPs' responses were mixed. Some expressed a particular concern about the strength of BT's position. TCPs disagreed about whether WOCPs or TCPs possess a strong position.
- A3.34 Verizon referred to an "imbalance of power".³³⁵ Verizon stated that there are no market constraints on BT's non-geographic termination business and argued that BT is currently able to charge higher termination rates than other TCPs.³³⁶ Verizon appeared to consider that it is unable to influence the termination payment it receives from calls originated or transited by BT.³³⁷
- A3.35 One TCP stated that all CPs are "dominant" in the termination of non-geographic calls on their networks where they are the assigned number range holders. It was

³²⁷ O2 response dated 28 May 2010 to the Call for Inputs, pages 5-6.

³²⁸ O2 response dated 28 May 2010 to the Call for Inputs, page 4.

³²⁹ Everything Everywhere response dated 2 June 2010 to the Call for Inputs, page 3.

³³⁰ Everything Everywhere response dated 2 June 2010 to the Call for Inputs, page 4.

³³¹ Everything Everywhere response dated 2 June 2010 to the Call for Inputs, page 5.

³³² Everything Everywhere response dated 2 June 2010 to the Call for Inputs, page 4.

³³³ Vodafone response dated May 2010 to the Call for Inputs, paragraph 32.

³³⁴ Vodafone response dated May 2010 to the Call for Inputs, paragraph 27.

³³⁵ Verizon response dated 28 May 2010 to the Call for Inputs, page 3.

³³⁶ Verizon response dated 28 May 2010 to the Call for Inputs, page 1.

³³⁷ Verizon response dated 28 May 2010 to the Call for Inputs, page 2.

also concerned about the complexity of termination rates. The TCP stated that problems had arisen as a result of BT's ability to determine the termination rates for calls originating on or transiting its network and specifically cited changes resulting from increased retail discounts on 0845 calls. They were also concerned with asymmetries in its contractual relationship with BT such as notice periods and rights to reject price changes. Alternative Networks plc referred to a "lack of regulation, or a costing model, surrounding wholesale charging..." and advocated controls on the distribution of revenue between parties in the supply chain (such as minimum percentage shares for each party).³³⁸ It stated that BT's changes to 0845 pricing created harmful uncertainty for SPs and claimed that it is costly if SPs choose to switch to another number range as a result of changes in the revenue that they receive from non-geographic calls.³³⁹

- A3.36 FleXtel referred to smaller TCPs being "bullied" by larger OCPs, which have previously refused to originate calls to numbers terminated by certain TCPs.³⁴⁰
- A3.37 The Number UK Ltd ("TNUK") terminates calls to its DQ service. TNUK considered that DQ providers must purchase call origination from "each and every" WOCP and cannot substitute between them.³⁴¹ It considered that the provision of call origination to TCPs has the same characteristics as mobile call termination services i.e. each network is a monopolist.³⁴² Further, callers do not decide which mobile network to use based on the access charges levied on DQ providers and thus have an insufficient incentive to switch networks if these charges change.³⁴³

How termination rates are currently determined

- A3.38 Next we discuss how termination rates are currently determined. Note that BT sometimes refers to the termination rate that it pays to third party TCPs as the POLO ("Payment to Other Licensed Operator").
- A3.39 Currently, termination rates for non-geographic calls differ by number range and by time of day. For some 09 calls, the termination rate may comprise of a fixed (per call) element and a pence per minute charge. As discussed below, recently TCPs have sought to introduce termination rates that depend on the retail price of calls. Termination rates also depend on the point at which the call is handed over to the terminating network.³⁴⁴
- A3.40 Termination rates for some 080 calls are negative i.e. the TCP makes a payment to the WOCP to covers its costs of call origination.³⁴⁵ In these circumstances a higher termination rate corresponds to a reduced payment to the OCP. However this does

³³⁸ Alternative Networks response dated 27 May 2010 to the Call for Inputs, pages 2 and 3.

³³⁹ Alternative Networks response dated 27 May 2010 to the Call for Inputs, page 2.

³⁴⁰ FleXtel response to the Call for Inputs, page 4.

³⁴¹ TNUK used the term "wholesale DQ connection services" i.e. the provision of call origination to SPs/TCPs by WOCPs.

³⁴² TNUK response dated 16 June 2010 to the Call for Inputs, paragraph 13.

³⁴³ TNUK response dated 16 June 2010 to the Call for Inputs, paragraphs 17-18.

³⁴⁴ For example, for an 0871 call originated by BT with a retail price of 10ppm (plus call set up fee) the daytime termination rate is 9.8659ppm if the call is handed to the TCP at the local exchange, 9.7503ppm if it involves single tandem conveyance and between 9.5004ppm and 9.0869ppm if double tandem conveyance is involved. Source: NTS calculator October 2010 v9 for price point g7.

³⁴⁵ For example, BT (when acting as a TCP) will pay the WOCP between 0.2336ppm and 0.6481ppm (depending on the time of day) whenever it terminates a call to a 080 number (provided the retail price of that call is free). Source: NCCN 1007 issued 3 March 2010.

not affect the substance of this annex, which applies regardless of the direction of termination payments.

A3.41 As explained in Section 2, only BT currently has its retail call prices controlled under the NTNP and is subject to the NTS Call Origination Condition. As a consequence of these differences in regulation, the manner in which termination rates are generally determined depends on whether or not BT is involved in a particular call. Below we discuss three possible configurations:

- Calls that originate on BT's network (i.e. BT is the WOCP) and terminate on the network of a TCP other than BT;
- Calls that originate on a non-BT network and terminate on BT's network; and
- Calls that originate on a non-BT network and terminate on the network of another TCP that is not BT.

A3.42 The analysis in the following paragraphs is summarised in Table A3.3.

Table A3.3: Current regulation of termination rates

OCP	TCP	Termination rate
BT	Non-BT	Numbers covered by NTS Call Origination Condition:* termination rate heavily influenced by regulation (termination rate is BT's retail price minus regulated retail margin) 03, 055/6, 070, 076, 0870: termination rate is unregulated**
Non-BT	BT	Termination rate is unregulated** Historically BT has generally charged the same termination rate as if it originated the call (and, for most number ranges, that rate is heavily influenced by regulation – see above). Since OCPs have the option of transiting traffic via BT, this also constrained the termination rate OCPs pay for calls not involving BT. For some number ranges, BT is choosing to set higher graduated termination rates linked to retail pricing
Non-BT	Non-BT	Termination rate is unregulated** Historically, for calls that transited BT's network, the termination rate was the same as if BT originated the call (i.e. heavily influenced by regulation on most number ranges – see above). This reflected the way in which BT's billing system operated. Recently BT has introduced processes to charge WOCPs the termination rate set by the TCP

* 0500, 080, 082, 0843/4/5, 0871/2/3 and 09 are covered by NTS Call Origination Condition.

** "Unregulated" in this table refers to the absence of ex ante obligations regulating the termination rate, but as discussed below regulation may influence or set prices in dispute resolution, e.g. for calls to 0870 numbers.

Calls from BT's network to another network

A3.43 Termination rates for non-geographic calls are not directly regulated. However, currently non-BT TCPs' termination rates for the majority of non-geographic calls that originate on BT's network are heavily influenced by regulation.

- A3.44 Consider first the case of a non-geographic call retailed by BT (i.e. where BT is both the ROCP and the WOCP). The NTS Call Origination Condition applies to calls to 0500, 080, 082, 0843, 0844, 0845, 0871, 0872, 0873, 090, 091 and 098 numbers.³⁴⁶ Condition AAA11.3 of the SMP conditions placed on BT in the Wholesale Narrowband Statement state that BT “shall pass the Net Retail Call Revenue to the Third Party that is purchasing the NTS Call Origination, less the charges referred to in Condition AAA11.4 below.” The Net Retail Call Revenue is “the retail revenue for calls, excluding VAT and after any applicable discounts”. Condition AAA11.4 states that BT “shall make no charges for providing NTS Call Origination covered ... except for: (a) a charge for the Call Origination Service used to originate the NTS Call; (b) a charge for the NTS Retail Uplift; and (c) a charge for bad debt relating to the retailing by the Dominant Provider of Premium Rate Services calls.”³⁴⁷ The levels of all of these permissible charges are regulated.³⁴⁸
- A3.45 As a result, the termination rate when these calls are retailed by BT is the residual left after the regulated charges permissible under the NTS Call Origination Condition are deducted from the retail price. In other words, given the retail price of a call, the termination rate can be determined automatically.³⁴⁹
- A3.46 Moreover the retail price specified by BT when it acts as a ROCP is subject to the limits set out in the designations in the NTNP (see the Annex 2). Note that BT does have discretion to reduce prices below this level. For example, in 2006 BT effectively reduced the price of 0845 calls (by increasing the level of retail discounts offered on such calls) which had the effect of reducing the termination rate received by other TCPs.³⁵⁰ BT has also varied its call set up fees. An increase in these will raise the termination rate that BT pays for calls originating on its network.
- A3.47 Calls to the 03, 055, 056, 070, 0870 and 118 number ranges are not covered by the NTS Call Origination Condition. Termination rates for calls to these numbers are essentially determined by commercial negotiations, there is the possibility of

³⁴⁶ Condition AAA11 (“Requirement to provide NTS Call Origination”). The NTS Call Origination Condition does not apply to calls to 0844 04 and 0808 99 numbers, which are used for Surftime Internet access and fixed rate internet access call origination (“FRIACO”) respectively. See the definition of “NTS Calls” set out in *Review of the fixed narrowband wholesale services markets*, 15 September 2009 (the “Wholesale Narrowband Statement”), Annex 8, Schedule 1 available at: http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/summary/main.pdf.

³⁴⁷ Wholesale Narrowband Statement, Annex 8, Schedule 1.

³⁴⁸ “Call Origination Services” are defined in 2(d) of Part 1 of the Wholesale Narrowband Statement, Annex 8, schedule 1. This definition states that these services are covered by condition AAA1(a) and, pursuant to condition AAA3.1, the charge for all such services is derived from the costs of provision. In September 2005, we published a statement setting the level of the NTS Retail Uplift and the bad debt surcharge. *Charges between Communications Providers: Number Translation Services Retail Uplift charge control and Premium Rate Services bad debt surcharge*, 28 September 2005 available at http://stakeholders.ofcom.org.uk/binaries/consultations/NTSfin/statement/statement_nts_uplift.pdf

³⁴⁹ An effect of the regulation on BT is that it is possible to mechanically calculate the termination rate. In order to assist TCPs, BT has made available an online tool called the NTS Calculator. This is a spreadsheet which enables TCPs to input their own call routing parameters and to calculate how much they can expect to receive for terminating any 08 or 09 call.

http://www.btwholesale.com/pages/static/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/number_translation_services.html

³⁵⁰ This ultimately led to a dispute between BT and some TCPs. See *Determination to resolve a dispute between BT and various communications providers about NTS outpayments*, 4 June 2007, available at http://stakeholders.ofcom.org.uk/binaries/consultations/deter_nts/bt_nts.pdf

bringing a dispute to Ofcom if negotiations fail. We have determined some of these rates through the Act disputes.³⁵¹

- A3.48 From the perspective of the TCP, calls that originate on BT's network but which are retailed by a third party (i.e. a third party is the ROCP and BT is the WOCP), are indistinguishable from calls retailed by BT. They thus attract the same termination rates as if BT retailed the call.

Calls from another network to BT's network

- A3.49 Currently the termination rate for non-geographic calls that terminate on BT's network is determined commercially: these termination rates are not directly regulated. Historically, BT behaved as if the termination rates it charges were regulated by charging the same amount as if the call had originated on its network. This historic position is increasingly breaking down as shown by the NCCN 500 Decision and the recent disputes concerning 0800, 0845 and 0870 calls (see Section 2).

Calls from one non-BT network to another non-BT network

- A3.50 We understand that, in principle, the termination rate is determined commercially for non-geographic calls that terminate on networks other than BT's.

- A3.51 Few communications providers other than BT interconnect directly with each other.³⁵² Traffic that is originated by an OCP other than BT and terminated by a TCP other than BT is therefore generally passed by the OCP to BT, which then passes it to the TCP. Such traffic is said to 'transit' BT's network.³⁵³

- A3.52 Historically, where non-geographic calls transit BT's network, BT has paid the TCP the same termination rate that it (BT) would have paid if the call originated on its network and charged that termination rate to the third party WOCP that originated the call. As explained above, for most non-geographic calls this termination rate is determined by regulation. This arrangement was a consequence of the way in which BT's billing system operated. As a result, for calls that transited BT's network, TCPs were unable to charge a different termination rate to that charged to BT. Moreover, because the OCP had the option of routing calls via BT's network (and thereby obtaining the BT termination rate), this constrained the ability of TCPs to significantly diverge from the termination rate paid by BT, even if they directly interconnected with the OCP. The asymmetry between BT's position (being able to vary termination rates, subject to commercial constraints) and other TCPs (being unable to vary termination rates) played a major part in our past statements and consultations.

- A3.53 However, we understand that the situation is changing. BT has informed us that it has introduced a cascade billing capability which allows TCPs to charge WOCPs different termination rates to those charged to BT.³⁵⁴

- A3.54 BT described the problem and its potential solution as follows:

³⁵¹ See the 0870 Dispute Determination.

³⁵² There is a fixed cost associated with interconnecting at each interconnection point, which means it is generally uneconomic for competing network operators to establish direct interconnection unless large volumes of traffic are involved.

³⁵³ Transit is discussed in further details at the end of this section.

³⁵⁴ 0845/0870 Dispute Determination, paragraph 5.212 of Annex 3.

“BT’s interconnect billing system is capable of setting specific charges to an OCP sending a call for transit over the BT network. The charge is aligned with the dialled digits number range and the dialled digits number range holder. This enables BT to charge a specific termination rate to that OCP and then reconcile that with the bill produced by the TCP which will contain a range of termination rates specific to individual OCPs.

Some TCPs’ billing systems may not have the ability to recognise the individual OCP that has originated the call. BT can provide a billing report enabling the TCP to modify their bills to include specific OCP termination rates. BT’s billing system can generate a report identifying call volumes by individual OCPs and by terminating number ranges. The TCP is then able to use this information to accurately bill BT according to which individual OCP has originated the call. BT does intend to charge for producing this report. Negotiations are continuing with a view towards setting a fair and reasonable price.”³⁵⁵

A3.55 In addition, BT stated that a development is planned for its billing system which will reduce the operational overheads of entering rates against each number range allocated to individual TCPs. As well as being suitable for use with all TCPs, this can be used for BT terminated and CP terminated traffic sent to BT via a third party.³⁵⁶

A3.56 BT described the process as follows:³⁵⁷

- The TCP decides on its pricing and methodology.
- The TCP issues BT with an OCCN giving a minimum of 56 days notice, with the new charges to come into effect on the 1st day of a month (no mid-month billing changes).
- BT updates the Carrier Price List (CPL) and informs industry of its new transit charges for calls to the TCP’s number range(s) giving 28 days notice.
- On the commencement of the new charges BT will bill the OCP accordingly. For the TCP to be able to bill BT correctly they need to know the network the traffic has originated on. Previously, this information has not been required as all traffic is charged at the same rate irrespective of the originator. BT supplies the TCP with a file showing the origination profile of the traffic.
- In agreeing to these charges, BT will only pass through revenue to the TCP that has been collected from the OCP, i.e. if the OCP refuses to pay the charges BT will not pay out to the TCP.

A3.57 When BT changed its termination rates for 0845 and 0870 calls in 2010, two other TCPs introduced similar charges (IV Response and Gamma) and others expressed an interest in doing likewise.³⁵⁸

³⁵⁵ 0845/0870 Dispute Determination, paragraph 5.213 of Annex 3.

³⁵⁶ 0845/0870 Dispute Determination, paragraph 5.214 of Annex 3.

³⁵⁷ 0845/0870 Dispute Determination, paragraph 5.215 of Annex 3.

³⁵⁸ 0845/0870 Dispute Determination, paragraphs 5.30-5.31.

A3.58 In the light of these developments, including, importantly, BT's changes to its transit billing, our understanding is that TCPs are increasingly free to set termination rates for calls originating on networks other than BT's on a commercial basis.

Overview of the substantive analysis

A3.59 In the paragraphs above, we have set out the background on how the wholesale level operates and stakeholders' views on its current operation. We now turn to our substantive analysis.

A3.60 Below we assess how the wholesale level would operate in the absence of ex-ante regulation. As explained in Section 2, this allows us to consider the underlying relationships and the requirement for and appropriate scope of any intervention, with the distortion of current regulation.

A3.61 In the absence of ex-ante regulation, WOCPs and TCPs would negotiate over the level of termination rates.

A3.62 We consider what pattern of termination rates would arise if Ofcom had no involvement at all. This involves analysing how the wholesale level would operate absent our dispute resolution powers (i.e. hypothetically assuming that these powers did not exist). We disregard our dispute resolution powers for this purpose (which is consistent with our approach in market reviews of termination for geographic calls and calls to mobile). Our key preliminary views are that:

- Predicting the outcome of negotiations in these circumstances is complicated. The balance of negotiating power will depend upon the particular WOCP and TCP involved. As a result, commercial negotiations are likely to produce a range of different termination rates.
- We consider that BT is likely to be in a strong position, both in its role as a WOCP and its role as a TCP.
- We are not confident that the termination rates that would arise commercially (absent involvement by Ofcom) would be likely to lead to desirable outcomes for consumers.

A3.63 The following sub-Sections are structured as follows:

- First, we describe how the wholesale level would operate in the absence of ex-ante regulation; and
- Second, we make inferences about the pattern of termination rates that would arise in the absence of ex-ante regulation (absent involvement by Ofcom) and the consequences for consumers.

Operation of the wholesale level in the absence of ex-ante regulation

A3.64 We now explain, in practical terms, how we think the wholesale level would be likely to operate in the absence of ex-ante regulation. This analysis is structured as follows:

- First, we briefly recap on the implications of the absence of ex-ante regulation for the retail level;
- Second, we describe how we think termination rates would be determined in this scenario;
- Third, we discuss bespoke termination rates (which depend on the identity of the WOCP); and
- Fourth, we describe the range of WOCPs and TCPs that would be involved.

Recap on the operation of the retail level

A3.65 In the absence of ex-ante regulation there are no maximum prices for BT's non-geographic calls. How the retail level of the supply chain would operate in these circumstances is separately discussed in Annex 2 but some of the key features of the retail level are briefly reiterated below:

- There would be no caps on the retail price charged by ROCPs. The regulatory position for other ROCPs is unaltered, although they are likely to respond to the changes in BT's behaviour. While ROCPs would have considerable pricing freedom, we nonetheless expect that there would be some structure to non-geographic call prices (such as a general ladder of prices, ranging from 080 calls the bottom to 09 calls at the upper end).
- Consumer awareness of prices would be poor.
- Non-geographic call prices would be higher than at present, particularly from BT. However, since retail competition for the supply of telephony bundles is fairly strong, a material proportion of the higher margins on non-geographic calls would be passed on to callers through lower prices for other services (e.g. geographic calls, mobile handsets).
- SPs would find it very difficult to directly set the retail price of calls to their service.

Approach to determining termination rates

A3.66 The termination rate for most calls originating on BT's network is currently shaped by regulation, namely the NTS Call Origination Condition and the price guidance specified in the NTNP.³⁵⁹ In the absence of ex-ante regulation, both of these regulatory requirements are assumed to be removed. As a result, termination rates for all non-geographic calls originating on BT's network would be determined commercially. In other words, TCPs would need to negotiate, in a normal commercial manner, what termination rate they would charge BT for calls originating on its network. In particular:

- BT could attempt to lower the termination rate that it pays TCPs.
- If BT increases the retail price of these non-geographic calls then this would no longer automatically increase the termination rate that it pays third parties by a commensurate amount.

³⁵⁹ Specifically, calls to the 0500, 080, 082, 0843/4/5, 0871/2/3 and 09 number ranges.

- A3.67 The second of these points is particularly relevant given our analysis of the retail level. As explained in Annex 2, in the absence of ex-ante regulation BT is likely to increase the retail price of non-geographic calls. However TCPs (and ultimately SPs) would not necessarily receive a share of these higher margins. TCPs would only do so if they had a strong enough negotiating position to agree a higher termination rate with BT (and, as explained below, this is unlikely to be the case).
- A3.68 For calls to other non-geographic numbers that originate on BT's network, the situation would not change.³⁶⁰ Similarly there is no change for calls to all non-geographic numbers that originate on networks other than BT's. For these calls, the termination rates would continue to be determined through commercial negotiation.

Bespoke termination rates

- A3.69 For the reasons given below, in the absence of ex-ante regulation, it would be feasible for TCPs to charge different termination rates to different WOCPs for calls to the same number (we refer to this as "bespoke termination rates"). As a result, the termination rate paid by a WOCP will depend on that particular WOCP's negotiating strength.
- A3.70 We consider that bespoke termination rates are feasible since TCPs have introduced such pricing on a number of occasions:
- In NCCN 911, which came into effect on 1 November 2008, BT specified that it would no longer make a payment to mobile operators that originate 080 calls. BT continued to make a small payment (i.e. a negative termination charge) to fixed operators that originate these calls;
 - In NCCN 956, which came into effect on 1 July 2009, BT specified a variable structure of termination rates for 080 calls. Under this structure, the termination rate depended on the retail price charged for calls originated on the WOCP's network. Networks associated with higher retail prices were charged a higher termination rate. Note that in the 080 Dispute Determination we required the parties to revert to the previous charging structure;
 - Similarly in NCCN 985 and 986, which came into effect on 1 November 2009, BT specified a variable structure of termination rates for calls to 0845 and 0870 numbers. Note that in the 0845/0870 Dispute Determination we required the parties to revert to previous charging structure; and
 - A number of other TCPs have also introduced termination rates that depend on the retail price charged by the OCP, including Gamma Telecom, IV Response and C&W.³⁶¹
- A3.71 We understand that there are a number of practical complications that arise if TCPs specify bespoke termination rates³⁶². As explained below, in some situations there may be difficulties in accurately billing calls. They also increase the complexity of wholesale billing arrangements. However, the existence of these complications in certain circumstances does not alter our conclusion about the feasibility of bespoke

³⁶⁰ Specifically, calls to the 03, 055/6, 070, 076 and 0870 number ranges.

³⁶¹ Gamma Telecom and IV Response's position was explained in 0845/0870 Dispute Determination, paragraphs 3.48(iv)-3.49.

³⁶² See for example Ofcom's 080 and 0845/0870 dispute resolution referred to in section 3 at paragraph 3.22, which form one subset of bespoke termination rates.

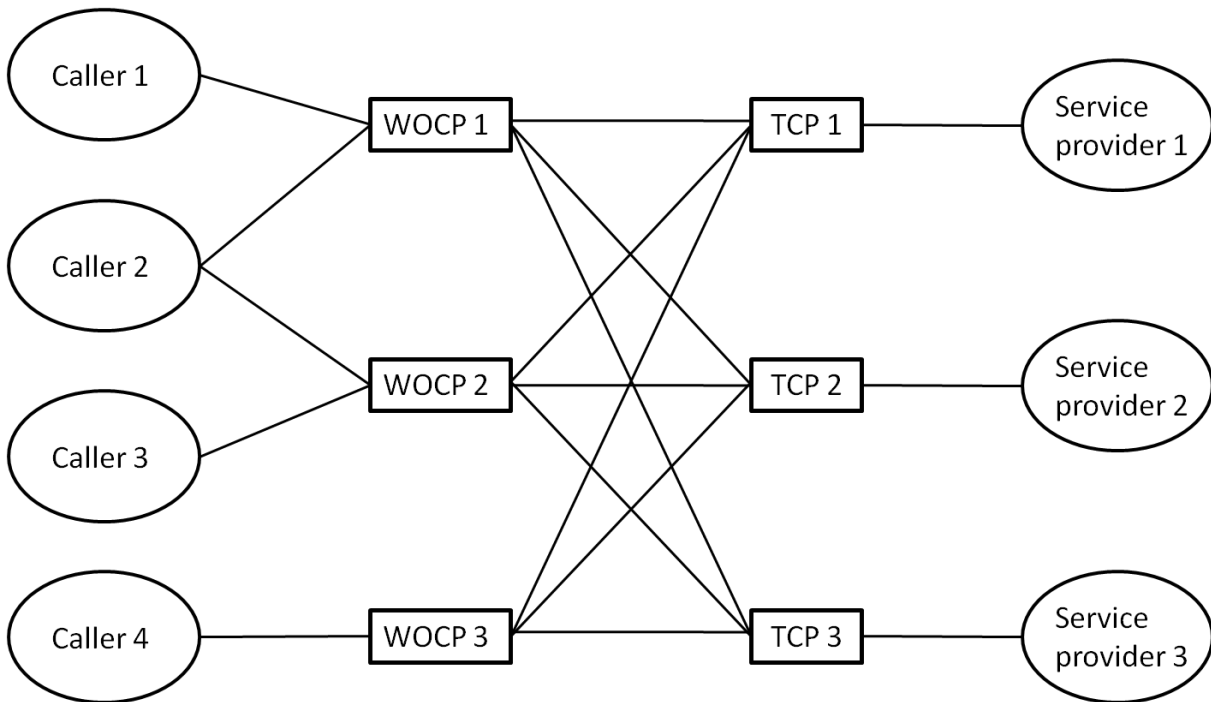
termination rates. TCPs have introduced bespoke termination rates, notwithstanding WOCPs' concerns about their accuracy. This supports the view that bespoke termination rates are a plausible outcome in the absence of ex-ante regulation.

A3.72 Bespoke termination rates might arise for two reasons:

- First, WOCPs with a stronger position in call origination (or, equivalently, more buyer power when purchasing termination) may be able to obtain a better deal for themselves compared to other WOCPs.
- Second, TCPs may wish to price discriminate between WOCPs based on their ability to pay higher termination rates. In particular, different ROCPs generally charge different retail prices. As a result, a TCP may seek to charge a higher termination rate to WOCPs that originate relatively more expensive non-geographic calls.

The range of WOCPs and TCPs

A3.73 On the one hand, WOCPs want to obtain access to SPs via TCPs to offer calls to their customers, i.e. those callers they serve via their own ROCP and via third party ROCPs. We understand that each SP is typically connected to one TCP. On the other hand, TCPs want access to callers via WOCPs (and ROCPs) so that their customers, the SPs, can receive calls from the callers who originate calls using that WOCP. Callers are typically connected to one or two ROCPs (the majority of consumers have both a fixed network and a mobile network ROCP/WOCP, but typically only one of each type). Each WOCP wants to have access to all TCPs, so that its customers can call all non-geographic services regardless of the SP and the TCP it is connected to (sometimes this access may occur using transit operators between the WOCP and the TCP). Similarly, each TCP wants to access all WOCPs so that its SPs can be called by all callers regardless of the ROCP/WOCP they are connected to. This structure is illustrated in Figure A3.2. For simplicity this diagram shows four callers, one of which (caller 2) uses two WOCPs (e.g. a fixed network and a mobile network). Similarly this diagram shows only shows three WOCPs, TCPs and SPs (and does not show ROCPs or transit operators).

Figure A3.2: Illustration of connections between callers, WOCPs, TCPs and SPs

A3.74 The balance of bargaining power between a specific pair of WOCP and TCP depends on the relative importance to each other. For example, a large WOCP, i.e. connected to a large number of callers, is likely to be in a relatively strong bargaining position compared to a small TCP, i.e. connected to only a small number of SPs (or relatively small scale SPs). Similarly, a small WOCP is likely to be in a relatively weak bargaining position compared to a large TCP, i.e. connected to a large number of SPs (or to large scale SPs). However, the relative bargaining positions between a large WOCP and a large TCP may be more balanced.

Overall categorisation of WOCPs and TCPs

A3.75 We have considered WOCPs' and TCPs' shares of call origination and termination. In summary, the aggregate shares of supply suggest that BT is the largest WOCP (see Table A3.4). TalkTalk and Virgin Media also account for a fairly large proportion of call origination. Other WOCPs, such as C&W and the larger mobile WOCPs (EE, O2, Vodafone) each account for a moderate proportion of call origination. In addition, there are likely to be a number of small WOCPs, for example H3G and KCOM. Termination appears to be more fragmented, although both BT and C&W account for a fairly large proportion of termination while TalkTalk and Virgin Media account for a moderate proportion.

A3.76 This aggregate position is summarised in Table A3.4. This classifies WOCPs and TCPs as "small", "medium", "large" or "very large" based on the proportion of non-geographic calls that they originate or terminate. This figure is not intended to be comprehensive: it excludes TCPs for which the 2010 Flow of Funds study did not have separate data (e.g. Connect Telecom). Rather it is intended to give a broad overview of the wholesale level. Moreover this aggregate categorisation obscures the possibility (discussed below) that there may be some differences in the relative importance of TCPs from the perspective of different WOCPs.

Table A3.4: Taxonomy of firms active at the wholesale level

	Very large TCPs	Large TCPs	Medium TCPs	Small TCPs/not active in termination
Very large WOCPs	[n/a]	BT	[n/a]	[n/a]
Large WOCPs	[n/a]	[n/a]	TalkTalk, Virgin Media	[n/a]
Medium WOCPs	[n/a]	C&W	[n/a]	EE, O2, Vodafone
Small WOCPs/not active in origination	[n/a]	[n/a]	[n/a]	H3G, Magrathea

Source: Ofcom analysis based on 2010 Flow of Funds study

A3.77 Among WOCPs only BT is considered to be “very large”. No TCP is considered to be “very large” – given the structure of market shares in termination, the largest TCPs are considered to be of “large” size.

A3.78 The following paragraphs provide further details, first of WOCPs’ shares of supply and then of TCPs’ shares of supply.

Shares of wholesale call origination

A3.79 Table A3.5 below shows an estimate of the proportion of total wholesale call origination accounted for by the four largest fixed largest WOCPs and the three largest mobile WOCPs using the data underlying the 2010 Flow of Funds study.³⁶³ This shows that BT is the largest WOCP and its network originates the majority of non-geographic calls (by volume). TalkTalk and Virgin Media are the second largest WOCPs. Mobile networks account for a smaller proportion of wholesale non-geographic call origination, compared to calls more generally, reflecting the relatively small proportion of non-geographic calls that are currently made from mobiles (despite the large customer base of each of EE, O2 and Vodafone).³⁶⁴

Table A3.5: shares of non-geographic call origination minutes (2009)

BT	TalkTalk	Virgin Media	C&W	EE	O2	Vodafone
[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

³⁶³ The data underlying this study suggests that H3G and KCOM accounted for around [✂] of non-geographic call origination.

³⁶⁴ See 2010 Flow of Funds study, Figure 5.15 on page 37. Given their large number of customers, there is potential for mobile WOCPs to become significantly more important in non-geographic call origination.

Source: data underlying 2010 Flow of Funds study

A3.80 Rather than sending traffic directly to the TCP, some WOCPs may send traffic via third party transit providers. Table A3.6 below shows different networks' shares of the traffic that is delivered to TCPs. Once transit is taken into account, BT accounts for a greater proportion of the traffic that TCPs' receive, while other WOCPs (other than C&W, which is also a transit operator) generally send traffic to TCPs via transit operators rather than directly.

Table A3.6: shares of non-geographic call minutes delivered to TCPs (2009)

BT	TalkTalk	Virgin Media	C&W	EE	O2	Vodafone
[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: data underlying 2010 Flow of Funds study

Shares of termination

A3.81 There are a large number of TCPs. Table A3.7 shows the number of TCPs that BT interconnected with on each number range in June 2007, 2008 and 2009.³⁶⁵

Table A3.7: number of TCPs that terminate calls originating on BT's network

	2007	2008	2009
Number of TCPs	119	132	158

Source: Number of operators receiving a POLO. BT response dated 23 June 2010 to question A8 of information request dated 2 June 2010

A3.82 We have used the 2010 Flow of Funds study to estimate TCPs' shares of termination, based on call volumes. As shown in Table A3.8, the largest TCPs are BT and C&W. Behind them, TalkTalk and Virgin Media also account for a reasonable share of termination. However as shown above there are well over 100 other TCPs and in aggregate this 'tail' of smaller operators accounted for around 40% of terminated minutes in 2009.

Table A3.8: TCPs share of non-geographic call volumes (2009)

BT	C&W	TalkTalk		Others
[✂]	[✂]	[✂]	[✂]	[✂]

Source: data underlying Figure 5.3 in 2010 Flow of Funds study

A3.83 These aggregate figures conceal some differences between number ranges and from the perspective of different WOCPs. For example:

³⁶⁵ Given BT's obligations regarding end-to-end connectivity and its historic position as the incumbent fixed operator, this is likely to be an accurate reflection of the number of TCPs.

- For calls from [X] network to most 08 number ranges, the largest TCPs are [X],[X] and [X]. The exception is calls to 0871/2/3 numbers, which generally involve different TCPs.
- In contrast, for calls originated by Gamma, [X] appears to be much less important. Table A3.9 shows the share of calls accounted for by the larger TCPs on each number range (only TCPs accounting for more than [X] of termination are shown).

Table A3.9: largest TCPs terminating calls originated by Gamma

No. range	080	0843/4	0845	0870	0871/2/3
Vol. of minutes	[X]	[X]	[X]	[X]	[X]
TCPs terminating over 15% of Gamma's call volumes	BT [X], Virgin Media [X]	Connect Telecom [X], TalkTalk [X], BT [X]	BT [X]	BT [X]	TalkTalk [X], Connect [X]

Source: s135 Information requests

Pattern of termination rates without Ofcom involvement

- A3.84 Clearly given the large number of TCPs and WOCPs, we would not expect each OCP to negotiate with each and every TCP in the absence of ex-ante regulations. While bespoke termination rates are feasible (see above), in practice it seems likely that there would be a degree of standardisation between WOCPs and TCPs in similar positions. For example, a TCP might have a standard set of termination rates that it charges to the majority of WOCPs plus a different set of termination rates that it charges to a few large WOCPs. Similarly, a large WOCP may generally pay TCPs a standard termination rate (that depends on the number range but does not vary between TCPs) but negotiate bespoke deals with a few of the larger TCPs.
- A3.85 Below we consider what pattern of termination rates would arise if Ofcom was not involved at all at the wholesale level. This involves analysing how the wholesale level would operate absent our dispute resolution powers. The analysis below is structured as follows.
- A3.86 We explain why we disregard our dispute resolution powers for this stage of our analysis. In brief, this is consistent with our approach in market reviews of termination for geographic calls and calls to mobile.
- A3.87 The pattern of termination rates would depend on the relative negotiating strengths of WOCPs and TCPs. Our analysis of this issue is structured as follows:
- We briefly summarise relevant past projects and decisions;
 - We set out stakeholders' views on this issue;
 - We explain the economic framework that we have adopted i.e. what determines the strength of a WOCP or TCP's position;

- We discuss the fallback position, if wholesale negotiations are not successful;
- We discuss callers' reactions to higher termination rates;
- We discuss the implications of vertical integration; and
- Finally, we set out our preliminary views.

A3.88 For the first part of our analysis we put aside the possibility of Ofcom involvement via the dispute resolution powers specified in the Act Sections 185-191. Predicting the outcome of negotiations in these circumstances is complicated. There are large numbers of WOCPs and TCPs. Our analysis of the factors that influence their negotiating strength suggests that different WOCPs and TCPs are likely to be in different commercial positions. In other words, negotiations will depend upon the particular WOCP and TCP involved, rather than one side consistently being in a strong position. As a result, commercial negotiations are likely to produce a range of termination rates that depend on the parties involved. Termination rates that depend on the identity of the WOCP ("bespoke termination rates") are not likely to be unusual.

A3.89 We identify a number of factors influencing the negotiating strength of a WOCP or TCP, in particular:

- WOCPs accounting for a high share of wholesale call origination are likely to be in a stronger position than WOCPs accounting for a low share of call origination.
- Similarly, TCPs accounting for a high share of termination are likely to be a stronger position than TCPs accounting for a low share of termination.
- Vertically integrated firms are likely to be in a stronger position than vertically separate firms of comparable size.

A3.90 We consider that BT is likely to be in a strong position, both in its role as a WOCP and its role as a TCP. We also consider that C&W, the second largest TCP, is likely to be in a strong position when negotiating with smaller WOCPs (albeit not when negotiating with BT). Similarly, TalkTalk and Virgin Media, the second and third largest WOCPs, are likely to be in a strong position when negotiating with smaller TCPs (albeit not when negotiating with BT). Mobile OCPs' account for a smaller share of non-geographic call origination, compared to calls more generally. Nonetheless EE, Vodafone and O2 may be in a strong position when dealing with the smaller TCPs.

A3.91 Finally, we discuss the implications for consumers. In summary, we are not confident that the termination rates that would arise commercially (absent involvement by Ofcom) would be likely to lead to desirable outcomes for consumers.

Legal framework: modified Greenfield approach

A3.92 Throughout this sub-Section we are examining the pattern of termination rates that would arise absent the possibility of ex-post involvement via our dispute resolution powers. Below we explain why we adopt this approach.

- A3.93 While the pricing guidance in the NTNP and the NTS Call Origination Condition are assumed to be absent, a number of other factors would still need to be taken into account, in particular BT's end-to-end connectivity obligation (the "E2E Obligation") and our dispute resolution powers. A preliminary question is whether or not our analysis should take the impact of these other regulations into account.
- A3.94 We first describe the two factors that are potentially relevant to WOCPs' and TCPs' wholesale negotiating position.
- First, our dispute resolution powers. These are set out in the Act Sections 185-191. In the case of a dispute relating to the provision of network access between different communications providers, any of the parties to such a dispute may refer it to us (Section 185). Where we have decided that it is appropriate for us to handle a dispute, we must make a determination resolving that dispute (Section 188). Our powers when making a dispute determination include (i) declaring the rights and obligations of the parties to the dispute; (ii) fixing the terms or conditions of transactions between the parties to the dispute; (iii) imposing an obligation on the parties to enter into a transaction between themselves on the terms and conditions fixed by us; and (iv) requiring payment to adjust for any underpayment or overpayment between the parties (Section 190). Our determination binds all the parties to that dispute (Section 190(8)).³⁶⁶
 - Second, the E2E Obligation. BT has an obligation to purchase on reasonable terms wholesale narrowband call termination services (fixed and mobile voice and narrowband data) from any provider of a public electronic communications network.³⁶⁷ The E2E Obligation currently only applies to BT.
- A3.95 Clearly if WOCPs and TCPs negotiated over termination rates then these factors would be expected to influence the outcome. For example, if one party was unhappy with the termination rate proposed by the other then it could refer a dispute to us and rely on regulatory processes, rather than the strength (or otherwise) of its commercial position to determine the outcome.³⁶⁸ Similarly, the E2E Obligation may affect BT's ability to refuse to connect calls to a particular TCP and may thus affect its fallback position in any negotiations.
- A3.96 Whether these factors should be taken into account has been considered at length when assessing whether or not suppliers of mobile call termination possess SMP (specifically whether purchasers of mobile call termination possess countervailing buyer power).³⁶⁹ When assessing SMP, the concern is that parties with market power whose behaviour is currently constrained by existing regulation might not be detected. Accordingly we assume the absence of any regulatory intervention in the proposed market that arises or would arise from a finding of SMP (the "modified Greenfield" approach). This issue has been considered by the Court of Appeal

³⁶⁶ Note that these provisions may change in the future due to changes to Article 20 of the Framework Directive.

³⁶⁷ The purpose of the E2E Obligation is to achieve end-to-end connectivity in the UK. End-to-end connectivity describes the ability of consumers to make calls to other customers or services on the same network or other providers' networks.

³⁶⁸ As noted in Section 2 we have determined a number of disputes concerning termination rates for non-geographic calls in recent years.

³⁶⁹ *Wholesale mobile voice call termination*, 1 April 2010 (the "2010 Mobile Termination Consultation") available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/summary/wmvct_consultation.pdf

which endorsed Ofcom's approach and provided clear guidance that Ofcom's dispute resolution powers should be disregarded when assessing SMP.³⁷⁰

- A3.97 In the 2010 Mobile Termination Consultation, we did not disregard the E2E Obligation. Rather we took the view that the E2E Obligation means that from a regulatory point of view BT, all else being equal, might find it more difficult than other buyers of termination to refuse to connect calls in order to force terminators to set lower termination rates.³⁷¹
- A3.98 In this review of non-geographic calls we are not assessing whether any party should be designated as having SMP. However, from an economic perspective, assessing the relative negotiating strength of buyers and sellers of non-geographic call termination has some similarities with the assessment of whether countervailing buyer power outweighs sellers' power in the case of mobile call termination. This suggests that, in the interests of consistency, we should apply the modified Greenfield approach when analysing non-geographic call termination.
- A3.99 Further, suppose that it was the case that negotiating power is skewed in favour of one party but that this is constrained by our dispute resolution powers. In this current review, we would not want to preclude the possibility that a more cost effective remedy exists than relying upon our dispute resolution powers. If we did not adopt the modified Greenfield approach, and instead took our dispute resolution powers into account, then this could lead to the conclusion that there were no wholesale concerns (as a result of our dispute resolution powers) and this could preclude us from considering alternative wholesale remedies. We consider this to be circular.
- A3.100 Thus, in conclusion, in the analysis below we analyse the relative bargaining power of WOCs and TCPs. When carrying out that assessment we have disregarded our dispute resolution powers but have taken the E2E Obligation on BT into account.³⁷²

Past cases

- A3.101 A number of previous Ofcom documents have touched upon issues that are relevant to the balance of wholesale negotiations between OCPs and TCPs.
- In the 2004 NTS Termination Consultation we provisionally concluded that the relevant market was NTS call termination in the UK.³⁷³ We consulted on the view that BT had SMP in this market but that other TCPs did not.³⁷⁴ Note that the interaction of retail charge controls on BT and the NTS Call Origination Condition was important to this analysis.³⁷⁵ As explained above, such factors are not present when looking at how the wholesale level would operate absent ex-ante regulation. The analysis in the 2004 NTS Termination Consultation also

³⁷⁰ *Hutchison 3G UK Limited v Office of Communications (Mobile Call Termination)*, Court of Appeal, Case No. C1 2008/1932, EWCA Civ 683, 16 July 2009, at

http://www.catribunal.org.uk/files/CofA_Judgment_1083_H36_16.07.09.pdf

³⁷¹ 2010 Mobile Termination Consultation, paragraph 4.86; see also paragraph 4.88.

³⁷² The E2E Obligation only requires BT to purchase call termination on reasonable terms. If our dispute resolution powers were disregarded, we have adopted the same approach that we applied in the case of mobile call termination, namely that the E2E Obligation means BT might find it more difficult than other buyers of non-geographic call termination to refuse to connect calls. In other words, the E2E Obligation makes the fallback position of not connecting calls less attractive to BT.

³⁷³ 2004 NTS Termination Consultation, paragraph 3.68.

³⁷⁴ 2004 NTS Termination Consultation, paragraph 4.73

³⁷⁵ See for example 2004 NTS Termination Consultation, paragraphs 4.26-4.29, 4.65 and 4.73.

relied on the historic position that the termination rate for calls which transit BT's network was the same as if BT had originated that call.³⁷⁶ As explained above, this is no longer the case.

- In the NCCN 500 Decision, which was published in August 2008, we concluded that BT was dominant in the market for NTS call termination/hosting in the UK between 1 May 2004 and 31 December 2005. The relevant market included termination/hosting (which were looked at jointly) by all TCPs on all number ranges.³⁷⁷ Despite BT's market share being below 40%, it was held to be dominant. This was for similar reasons to those given in the 2004 NTS Termination Consultation.
- In the Wholesale Narrowband Statement, which was published in September 2009, we concluded that a relevant market was wholesale call origination on fixed narrowband networks in the UK excluding the Hull area. BT possesses SMP in this market.³⁷⁸ Note that this analysis focused on BT's position as a WOCP when supplying ROCP (and, indirectly, retail callers). For example, there was no discussion of the position of TCPs.

A3.102 In carrying out the analysis of the balance of negotiating power below we have looked at these matters afresh, rather than simply relying on the past projects listed above. This is for a number of reasons.

- First, in the previous projects set out above we were assessing whether particular firms on one 'side' of the market had SMP. In this review we are not assessing SMP. Moreover we are assessing the relative position of both sides of the market (i.e. of WOCPs and TCPs) simultaneously.
- Second, we are assessing how the wholesale level would operate in the absence of ex-ante regulation. In that scenario, various regulatory requirements which were important to the analysis in the NCCN 500 Decision and the 2004 NTS Termination Consultation are not present.
- Third, the factual position has changed. Previously, for calls that transit BT's network, the TCP always received the same amount as if the call originated on BT's network (see above). This prevented other TCPs from increasing termination rates in the same way that BT could. However, as explained above, this is no longer the case.
- Fourth, the Wholesale Narrowband Statement only looked at fixed operators. Wholesale call origination on mobile networks was outside of the relevant market and it thus did not include mobile OCPs. Moreover, the Wholesale Narrowband Statement did not consider the position of TCPs; rather it focused on the supply of wholesale call origination to ROCPs and callers.

Stakeholders' responses to informal questions

A3.103 We asked WOCPs and TCPs what would happen if they negotiated over termination rates without regulatory constraints, including no ability to submit a

³⁷⁶ See for example 2004 NTS Termination Consultation, paragraphs 4.30-4.33 and 4.73.

³⁷⁷ NCCN 500 Decision, paragraph 4.151 sets out our view of the relevant market. Paragraph 4.75 et seq of that document explains why termination and hosting were looked at simultaneously and paragraph 4.92 et seq explains why all TCPs lie within this relevant market.

³⁷⁸ Wholesale Narrowband Statement, paragraphs 6.2-6.3.

dispute to Ofcom. In particular we asked what would happen if parties failed to agree and what the commercial consequences would be.

A3.104 The responses are summarised below. Except where noted, respondents did not provide any evidence in support of their position. In general, WOCPs considered that they would be significantly disadvantaged if they failed to deal with TCPs (which would imply that WOCPs are in a weak bargaining position). In contrast, TCPs considered that it was essential to deal with major WOCPs (which would imply that TCPs are in a weak bargaining position). TCPs were also concerned about vertically integrated firms leveraging their position in origination to strengthen their position in hosting. The only vertically integrated firm that responded was C&W.³⁷⁹ It considered that failing to connect non-geographic calls would be detrimental for both the WOCP and TCP, that BT would be in a very strong position as a WOCP and that vertically integrated firms might use their position in origination to strengthen their position in hosting. Vertically integrated firms

A3.105 C&W stated that it makes business decisions considering its position as both a WOCP and a TCP.

- From the perspective of a WOCP, C&W considered that it would be “difficult” to justify to callers the blocking of calls to a “major TCP” such as BT. It also considered that there would be difficulties in explaining to major consumers (business callers) why calls to smaller TCPs were unavailable. C&W said that the magnitude of the effect would depend on the particular non-geographic numbers which were unavailable. It would be easier to sustain the barring of certain number ranges to residential callers than to business callers. Where business to business transactions are carried out using a particular number range, the effect could be “severe” and could result in C&W breaching its agreements with its business customers.³⁸⁰
- From the perspective of a TCP, C&W considered that SPs would be “extremely dissatisfied” if their number was not reachable from any WOCP, particular “major” WOCPs such as BT, Virgin Media and the MNOs. C&W was particularly concerned that vertically integrated firms such as BT might refuse to originate calls (particularly to smaller TCPs) in order to drive SPs towards their own hosting businesses.³⁸¹ C&W considered that BT would be in a strong position when it acts as a WOCP and pointed to BT’s ability to block the bulk of traffic received by C&W. C&W argued that BT’s position is strengthened because it transits traffic from other WOCPs and that the “bulk” of this traffic is not “contestable”.³⁸²

WOCPs

A3.106 O2 said that BT, C&W’s and DQ providers’ conduct was evidence that TCPs could increase termination rates above competitive levels. O2 said that callers expect to

³⁷⁹ BT considered that it would be “premature” to answer these questions. BT response to origination question 1 and termination question 1 attached to email dated 12 July 2010.

³⁸⁰ C&W response to origination question 1 dated 12 July 2010.

³⁸¹ C&W response to termination question 1 dated 12 July 2010.

³⁸² C&W response to origination question 1 and termination question 1 dated 12 July 2010.

be able to call non-geographic numbers and that it “cannot envisage” the circumstances in which it would block access.³⁸³

- A3.107 EE said that the balance of negotiating power lies with the TCP. EE considered that it would be “unacceptable” to callers to block access to numbers that had previously been available. In the case of a new number range, it would depend on the types of SP located on that range. EE would have no choice but to provide access to services such as banks, utility companies, TV shows and government departments which are highly valued by callers. TCPs would thus not regard a threat by the OCP of refusing access as credible. EE considered that each TCP was a monopoly provider of termination to its numbers.³⁸⁴ EE said that increasing retail prices for existing customers (in response to higher termination rates) was undesirable given the potential for bill shock, a poor customer experience, increased churn and damage to their brand.³⁸⁵
- A3.108 Vodafone stated that it has no real option for negotiations with TCPs since it does not have a direct relationship with them. Vodafone stated that, due to the number of TCPs and number ranges involved, monitoring termination rates would be burdensome and there is the possibility that changes to termination rates might go unnoticed. Whether it would block a number range depends on the particular services affected. It considered that it would be unattractive to block 08 numbers unless other MNOs did likewise.³⁸⁶ The possible exception might be where a single TCP’s termination rate is higher than the associated retail price, thereby exposing Vodafone to the risk of arbitrage. Vodafone added that blocking a particular TCP would be difficult to implement, in terms of identifying which number ranges that TCP holds and the strain that it would put on switches’ processing. It would also lead to caller confusion. Overall, Vodafone doubted that it would block numbers that a “significant proportion” of customers would value calling unless its competitors did likewise.³⁸⁷
- A3.109 Sky stated that, if negotiations failed, it would need to carefully consider its options. It added that blocking calls is likely to be administratively onerous and that it would be “extremely hard” to communicate to callers which non-geographic numbers they would be unable to access.³⁸⁸

TCPs

- A3.110 Gamma stated that a TCP would probably need to agree a termination rate with the “dominant” providers if it were to continue operating in this sector. Gamma considered that BT and C&W would be “dominant” providers given their strong positions in origination, transit and termination. If other WOCPs failed to reach a satisfactory agreement with the TCP then they could transit calls via these “dominant” firms, thereby reinforcing their position. Gamma said that a similar effect had occurred in international termination, where termination rates depend on the volume of traffic that a CP is able to aggregate. Moreover driving down the

³⁸³ O2 response to origination question 1 dated 30 June 2010. Note that O2 does block access to the 0871 955 sub-range (position correct as of 15 October 2010)

<http://www.o2.co.uk/mobilestariffs/tariffs/specialnumbers>

³⁸⁴ EE response to origination questions 1(a) and 1(b) attached to email dated 16 July 2010.

³⁸⁵ EE response to origination questions 1(a) and 1(b) attached to email dated 16 July 2010.

³⁸⁶ Vodafone stated that certain premium rate numbers are currently barred. This has little effect on an average consumer (they represent around 1% of customer minutes) and can be lifted by individual callers that wish to access these services.

³⁸⁷ Vodafone response to originator question 1 attached to email dated 5 July 2010.

³⁸⁸ Sky response to origination question 1 dated 5 July 2010.

termination rates paid to third party TCPs in this way would give these firms an advantage in the hosting market, since they could make relatively more attractive offers to SPs. Gamma stated that firms with a high proportion of on-net traffic (i.e. traffic which both originates and terminates on their networks) are able to offer more attractive revenue shares to SPs. Gamma also stated that there would be “excessive” costs to maintaining a large number of bilateral agreements.³⁸⁹

A3.111 Gamma stated that the impact also depends on the identity of the WOCP and TCP in question. In particular, blocking access to “discretionary” premium rate services is likely to have limited effect on an ROCP that primarily deals with business customers. Indeed Gamma stated that, in 2008/09, it made a loss on terminating premium rate calls from Tiscali. In contrast, blocking access to government organisations, charities or popular TV shows would damage the ROCP’s brand and place it at a competitive disadvantage.³⁹⁰

A3.112 Magrathea considered that it would be “commercial suicide” for a TCP to refuse to terminate calls from a “major” WOCP since SPs would refuse to select that TCP. It considered that larger OCPs would have considerable market power when dealing with smaller TCPs such as Magrathea. It also considered that vertically integrated WOCPs could attempt to drive out rival TCPs, in order to encourage SPs to select their own hosting business.³⁹¹

Theoretical framework

A3.113 In this current review we are not assessing whether or not any party has significant market power. Rather we are looking at the relative position of both sides in the wholesale negotiations i.e. the relative position of both the WOCP and the TCP. The way we have presented our analysis reflects this (for example we have not set out a formal market definition). However many of the analytical issues that we discuss below have been considered in our previous work on non-geographic calls. Moreover, looking beyond non-geographic calls, there is nothing unusual about an assessment of termination markets centring upon an assessment of relative negotiating power (i.e. the extent of buyer power relative to seller power).³⁹²

A3.114 Higher termination rates will generally reduce the WOCP’s profits and increase the TCP’s profits. The converse is true of lower termination rates. Thus, the two parties involved in wholesale negotiations will generally have starkly opposing interests.

A3.115 Economic theory suggests that there are two underlying determinants of the WOCP’s and TCP’s relative strength in these negotiations:

- First, how unattractive is the ‘fallback option’ if no agreement is reached? The worse the fallback option is for a party, the weaker its negotiating position. We would expect that where the consequences for one party are very serious should the WOCP and TCP fail to agree on termination rates, that the other party knows that it can drive a harder bargain.

³⁸⁹ Email from Gamma dated 23 July 2010.

³⁹⁰ Email from Gamma dated 23 July 2010.

³⁹¹ Magrathea response to termination questions 1(a) and 1(b), attached to email dated 5 July 2010.

³⁹² For example, our 2007 statement on mobile call termination included a detailed assessment of countervailing buyer power and this topic was a key ground in the subsequent appeal. *Mobile call termination*, 27 March 2007, chapter 5 available at: http://stakeholders.ofcom.org.uk/binaries/consultations/mobile_call_term/statement/statement.pdf and *Hutchison 3G UK Ltd v Office of Communications*, 20 May 2008, [2008] CAT 11 paragraph 47.

- Second, how would callers and SPs react to higher termination rates? We would expect, if consumers would respond to increases in termination rates by ceasing to make calls to non-geographic numbers hosted by the TCP in question then this makes it harder for the TCP to successfully negotiate high termination rates. This effect would be magnified if, in response to receiving fewer calls, SPs switch away from the TCP in question and instead use another TCP to terminate calls to their service.

A3.116 These two factors are discussed in turn below.

Fallback position: not connecting calls between the parties

A3.117 As explained above, under the modified Greenfield approach we disregard our dispute resolution powers. As a result, if the WOCP and the TCP fail to agree on a mutually acceptable termination rate then non-geographic calls will not be connected between them. For example, outbound callers that dialled numbers hosted by that TCP would receive a tone or verbal message indicating that the number was unobtainable and the call could not be completed.³⁹³ Below we first describe the consequences of this for the WOCP and the TCP.

A3.118 It is important to recognise that this analysis is looking at callers' reaction to certain non-geographic calls ceasing to be available. It is thus distinct from the discussion in Annex 2 about consumers' awareness of prices.

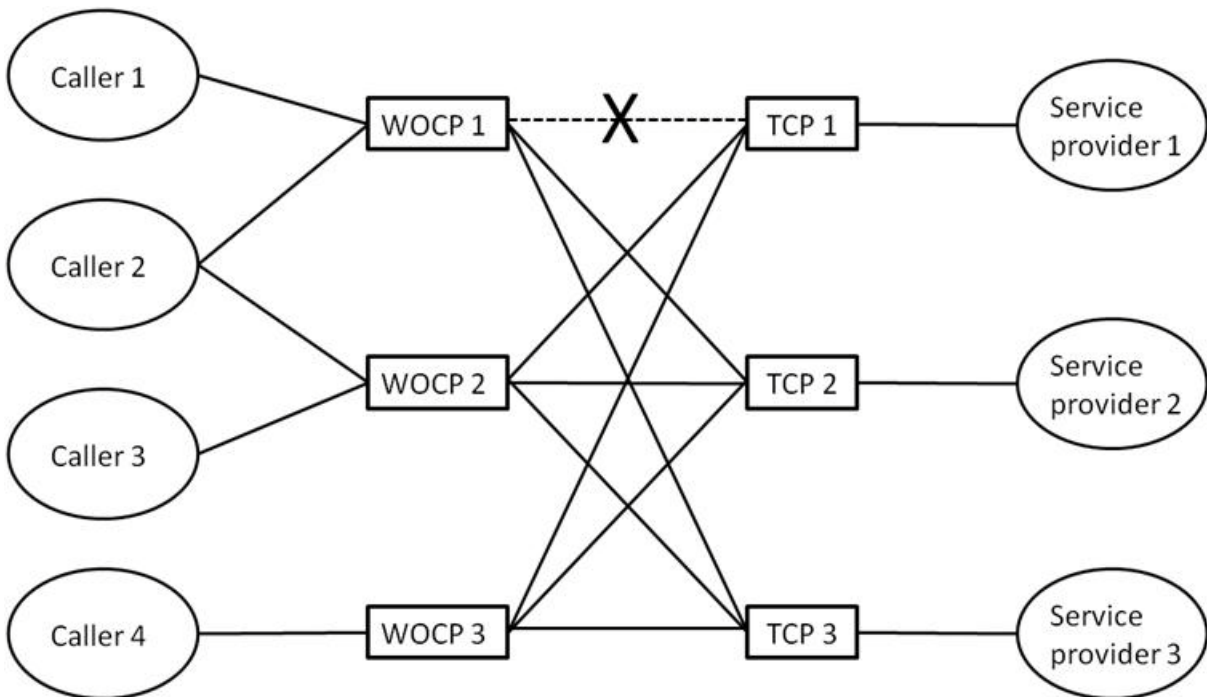
A3.119 Note that we are assessing the relative negotiating position of individual WOCPs and TCPs, rather than a group of WOCPs (say) acting collectively. Therefore the assumption in this Section is that even if one WOCP fails to reach an agreement with a particular TCP, it is still possible to make calls to that TCP from other WOCPs' networks. Similarly, it is still possible to call other TCPs from the WOCP in question.

A3.120 This is illustrated in Figure A3.3 below. This shows a failure to reach agreement between "WOCP1" and "TCP1".

- "Caller 1" only uses "WOCP1" to originate calls and is thus unable to phone "Service provider 1" (whom "TCP1" provides termination for). "Caller 1" can still contact other service providers that use other TCPs, such as "Service provider 2".
- "Caller 2" uses both "WOCP1" and "WOCP2". For example the former is a fixed network and the latter is a mobile network. "Caller 2" thus cannot contact "Service provider 1" using his landline (i.e. via "WOCP1") but can continue to do so via his mobile (i.e. via "WOCP2").

³⁹³ In the case of numbers that have been ported between TCPs, if the WOCP was no longer originating calls to the original holder of that number then calls would be blocked even if that number had been ported to another TCP.

Figure A3.3: Illustration of connections between callers, WOCPs, TCPs and SPs



A3.121 If the WOCP does not connect non-geographic calls to a particular TCP then the consequences depend on how callers using that WOCP react to the unavailability of these calls. Callers may react in one of four ways:

- Reaction 1: They may choose not to make the call at all;
- Reaction 2: They may choose to make the call via another communications provider that they already subscribe to (e.g. calling using their mobile instead of their landline or vice versa);
- Reaction 3: They may become annoyed and instead switch their subscription to a rival ROCP;³⁹⁴ or
- Reaction 4: They may instead call a different SP that is hosted with another TCP.

A3.122 Reactions 1 and 2 mean that the WOCP simply loses the profits associated with the call. Reaction 3 means that the original ROCP not only loses any profits associated with non-geographic calls, but it also loses other profits associated with that caller e.g. profits from monthly subscription charges, profits from geographic calls and data services etc. This may have significant negative effects on the WOCP. Reaction 4 means that the call is still made using the WOCP's network, so there is not much effect on its profitability.

A3.123 Reactions 1 and 4 mean that the TCP loses the profits associated with the call. Reactions 2 and 3 mean that the TCP still receives the call and thus there is not much effect on its profitability.

³⁹⁴ The 2004 NTS Termination Consultation considered this factor at paragraph 4.57.

A3.124 The consequences of the different ways that callers may react are summarised in Table A3.9 below.

Table A3.9: Implications of callers' reactions to a non-geographic call not being available

	Caller reaction	WOCP	TCP
1	Do not make call	Lose revenue from call	Lose revenue from call
2	Call via another CP they already subscribe to	Lose revenue from call	Still receive termination revenue
3	Switch subscription to another ROCP	Lose all revenue associated with that consumer	Still receive termination revenue
4	Call a different SP	Still receive origination revenue	Lose revenue from call

A3.125 Below we discuss the consequences of the fallback position for the WOCP and then for the TCP.

Consequences of the fallback position for the WOCP

A3.126 As explained above, the detrimental effect for the WOCP is particularly serious if callers would respond by switching to another ROCP (Reaction 3). We discuss the extent of this impact first. The detrimental effect for the WOCP is diminished if callers would instead make calls to a different SP hosted on another TCP (Reaction 4). We discuss this impact second.

Switching subscription between ROCPs in response to unavailability of non-geographic calls

A3.127 We first consider the case where the caller switches their subscription to another ROCP in response to non-geographic calls to one TCP no longer being available (Reaction 3). Where callers respond by switching to another ROCP then the original ROCP loses all profits associated with that caller e.g. including profits from monthly subscription charges. Overall this effect worsens the fallback position for the WOCP and thereby weakens its negotiating position.³⁹⁵

A3.128 As explained above, the three largest mobile WOCP all expressed concern about the commercial consequences of failing to connect non-geographic calls, particularly to major TCPs.

A3.129 In 2009, non-geographic calls accounted for 20% of fixed voice minutes and 23% of fixed operators' retail revenues.³⁹⁶ In contrast, they accounted for 3% of mobile

³⁹⁵ Where the ROCP and the WOCP are vertically integrated then this increases the losses suffered by that firm. Where the ROCP is a third party that buys wholesale call origination from the WOCP, it makes it more likely that the ROCP will seek an alternative provider of wholesale call origination.

³⁹⁶ 2010 Flow of Funds study, page 3.

voice minutes and around 4% of mobile retail revenues.³⁹⁷ We draw two implications from these figures:

- They emphasise the way in which Reaction 3 multiplies the negative effects for the ROCP. By refusing to connect non-geographic calls to one TCP (which will only account for a small fraction of total calls, especially for mobile ROCPs) the ROCP is putting at risk the entirety of the revenue that it earns from that caller (a proportionately much larger amount).³⁹⁸
- They are also relevant to the likelihood that consumers switch between ROCPs. The fewer non-geographic calls that a consumer makes, the less disruptive it is for some non-geographic numbers to be unavailable (and indeed the less likely that the consumer is aware of that unavailability). In particular, patterns of usage also suggest that Reaction 3 may be less likely from mobile subscribers. The very low proportion of mobile voice minutes accounted for by non-geographic calls highlights the tendency of callers to use their landlines rather than their mobile phones to call non-geographic numbers.³⁹⁹ This suggests that it would not be particularly disruptive for the majority of callers if they were unable to access non-geographic numbers from their mobile phone. They are already accustomed to substituting mobile non-geographic calls with fixed non-geographic calls – Reaction 2 is thus more plausible.⁴⁰⁰

A3.130 A number of other factors influence the extent to which consumers would switch between ROCPs.

A3.131 One important aspect of this is how many calls are inaccessible. Being unable to contact a larger number of SPs will tend to be more disruptive for callers. All other things being equal, being unable to access SPs hosted by a TCP that accounts for a high share of termination, such as BT or C&W, is more likely to prompt callers to switch elsewhere. In other words, the greater the proportion of calls that a particular TCP accounts for, the stronger that TCP's position.

A3.132 We asked callers "what effect would it have on your choice of operator if you could access some [services from 08 and 09 numbers] but were unable to access all of them?" 33% said that it would make them less likely to select that operator.⁴⁰¹ When asked how would they "feel" if "an operator is not able to offer you access to all numbers in a certain range", 50% said that they would not like it because they want

³⁹⁷ Share of mobile voice minutes take from the 2010 Flow of Funds study, page 4. Page 4 of that study indicates retail revenue from non-geographic calls was £640m in 2009. This was 4% of overall mobile retail revenues, which were £14.9bn in 2009. *Communications Market Report (2010)*, Figure 5.1.

³⁹⁸ To illustrate, suppose that non-geographic calls account for 20% of a WOCPs revenue and that the TCP it is negotiating with accounts for 20% of non-geographic calls. Those negotiations thus affect 4% of the WOCPs revenue from a caller. If a caller switches to another WOCP then the original WOCP loses an amount that is 25-times larger.

³⁹⁹ 73% of respondents to the 2010 Consumer research use their landline "exclusively" or "mainly" to make calls to 08 and 09 numbers (a further 18% said that they don't make these calls from any of their own phones). Question 29. Base: all respondents who use both a landline and a mobile phone (827).

⁴⁰⁰ The exception the 14% of adults that live in a household that has a mobile phone but no landline. Figure relates to Q1 2010. Source: <http://media.ofcom.org.uk/facts/>

⁴⁰¹ 40% said it would make no difference. The 2010 Consumer research: question 32. Base: all respondents (1,189).

to be able to access any number they like.⁴⁰² These results suggest that the impact on a ROCP's number of subscribers if it refuses to connect non-geographic calls could be significant. However, it is important to treat these results with a degree of caution. The proportion of "don't know" responses was high (27% and 31% respectively) and the qualitative responses suggested that callers struggled with the question.⁴⁰³ On the other hand, consumer research from 2005, which we relied on in the NCCN 500 Decision, found similar results. 37% of respondents stated that they thought they would change their landline company if they were no longer able to make calls to some 0845 and 0870 numbers.⁴⁰⁴

A3.133 Switching between ROCPs is likely to be relatively easy, which makes it more likely that callers would change ROCP in response to being unable to make non-geographic calls from their chosen ROCP. The proportion of consumers that have previously switched supplier that consider that it is "very easy" or "fairly easy" to switch landline supplier was 90%; the equivalent figure for switching mobile supplier is 94%. Even for consumers that have never switched, 62% perceived that it would be "very easy" or "fairly easy" to switch landline supplier; the equivalent figure for switching mobile supplier is 76%.⁴⁰⁵

Consumers switching between SPs in response to unavailability of non-geographic calls

A3.134 Where callers would react to being unable to call their favoured SP (because the WOCP that originates the call has failed to agree a termination rate with the relevant TCP) by instead calling a different SP hosted by another TCP, the impact on the WOCP from failing to agree a termination rate is diminished. The consumer still makes a call but the original TCP loses the termination revenue associated with the call. This effect means the fallback position is less bad for the WOCP and thereby strengthens its negotiating position.⁴⁰⁶

A3.135 We discuss whether there are alternatives to calling SPs in Annex 5. In summary, calling another SP is unlikely to be a viable alternative for a significant proportion of calls. For example, in 2005 we estimated that 45-55% of 0870 calls and 30-40% of 0871 calls were locked in i.e. the caller is unable to switch to another SP.⁴⁰⁷

Preliminary views on WOCPs' fallback position

A3.136 Overall, we consider that it is clearly unattractive for WOCPs not to originate calls to TCPs. The evidence is not clear cut as to how unattractive this fallback option is – it

⁴⁰² 20% said it would be "fine" even if they can't call some numbers that they want. The 2010 Consumer research, question 31. Base: all respondents (1,189).

⁴⁰³ Some participants continued to believe that they could connect to the numbers they wanted to call (for example, commenting that it would be "stupid" if they were unable to connect to their bank). Participants also found the notion of being unable to call certain numbers to be peculiar. 2010 Consumer research, Sections 4.17-4.18 on pages

⁴⁰⁴ NCCN 500 Decision, paragraph 5.88 and footnote 179.

⁴⁰⁵ Figure relates to Q3 2009. *The Consumer Experience (2009)*, Figures 145 and 146 on pages 112 and 113.

⁴⁰⁶ We considered this factor in the 2004 NTS Termination Consultation as part of a discussion whether an OCP could constrain BT from raising its termination rate by refusing to connect calls (see paragraph 4.54 of that document).

⁴⁰⁷ As explained in Annex 5, we consider the estimate of the proportion of locked in 0845 calls to be unreliable due to the decline in dial-up internet access. As a result, both the 0845 estimate and the overall average that we calculated in 2005 are likely to understate the current proportion of locked in calls. *Number Translation Services: A way forward*, 28 September 2005 (the "2005 NTS Consultation"), paragraph 5.74. Available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/nts_forward/summary/nts_way_forward.pdf

depends on a number of complicated factors which may vary between WOCPs and TCPs. That said, we draw two main inferences from the evidence presented above:

- The larger the TCP, the more detrimental the consequences of refusing to originate calls to that TCP. The greater the proportion of non-geographic numbers that are unavailable to a caller, the less likely that the caller is able to reach an alternative SP and the greater their annoyance.
- The risk that callers would become unhappy with their current ROCP and switch their subscription elsewhere makes it much more risky for WOCPs to refuse to originate non-geographic calls. While the extent of caller switching is uncertain, the proportionate effect of it on the WOCP (compared to the alternative of acceding to the TCP's position on non-geographic calls) is relatively large because the WOCP would lose all of that consumer's purchases, not just non-geographic calls.

Consequences of the fallback position for the TCP

Consumers' switching between SPs in response to unavailability of non-geographic calls

A3.137 As explained earlier, where callers are unable to call their favoured SP using their favoured ROCP, they may instead originate the call to the SP using a different network (Reactions 2 and 3). This does not affect the TCP's termination revenue. In contrast, if they either do not make the call at all or call a different SP (hosted on another TCP) then the TCP loses the termination revenue associated with the call (Reactions 1 and 4).

A3.138 Whether the caller would still call the SP depends on the particular service offered by that SP. As explained above, in 2005 we estimated that a significant proportion of 08 calls were locked in to a particular SP. Nonetheless, the majority of calls were not locked in.

A3.139 The majority of households have access to both a mobile phone and a landline.⁴⁰⁸ For these households it is relatively easy to make a non-geographic call via another WOCP (Reaction 2), although if they substitute from a landline to a mobile they are likely to pay a significantly higher retail price.⁴⁰⁹

Impact of WOCPs refusing to originate calls on the provision of hosting

A3.140 In addition, if a TCP fails to reach agreement with one WOCP, then the SPs to which it provides termination receive fewer calls. Those SPs may respond by switching to another TCP. As a result, the TCP will not only lose any termination revenue associated with calls originated by the WOCP in question, but it would also lose revenue associated with calls to that SP by other WOCPs. This worsens the fallback position for the TCP and thus strengthens the WOCP's position. As explained above, a number of TCPs (Gamma, C&W and Magrathea) expressed concerns that failing to reach an agreement with a major WOCP would place a TCP at a considerable disadvantage at the hosting level.

⁴⁰⁸ In 2009, 87% of adults had a landline in their home and 93% had a mobile in their household. Source: *The Consumer Experience (2009)*, Figure 7 on page 13 and Figure 14 on page 18. In Q1 2010, 14% of adults lived in a household that had a mobile phone but no landline. Source:

<http://media.ofcom.org.uk/facts/>

⁴⁰⁹ As illustrated by the statistics on mobile retention in Section 5.

- A3.141 Clearly the likelihood that SPs will switch to another hosting provider is greater when the WOCP in question originates a high proportion of calls to their service.
- A3.142 In addition, where non-geographic calls are more valuable to the SP then the stronger the negative effects on the SP of a breakdown in the relationship between its TCP and a WOCP. As a result, the SP is more likely to switch to another TCP. Clearly, the fact that an SP has chosen to operate a non-geographic number indicates that the SP obtains at least some value from non-geographic calls. Companies providing value added services (e.g. astrology, DQ services) are likely to be dependent on revenue received from non-geographic calls. Similarly, SPs that operate sales lines (e.g. a bank's enquiry line for potential new customers) are potentially foregoing significant profits (lost sales) if they receive fewer non-geographic calls. Such SPs are particularly likely to switch and thus the fallback position for TCPs serving them is likely to be worse.
- A3.143 The SP Survey suggests that barriers to SPs switching between TCPs are low.⁴¹⁰ This makes it more likely that SPs will switch away from a TCP that is no longer receiving calls from a WOCP.

Preliminary views on TCPs' fallback position

- A3.144 Overall, we consider that it is clearly unattractive for if WOCPs do not originate calls to them. However, as in the case of the WOCP's fallback position, the evidence is not clear cut as to how unattractive this fallback option is for TCPs. The larger the WOCP, the more detrimental the consequences for the TCP of a refusal to originate calls. In particular, as noted by a number of TCPs, failing to reach agreement with large WOCPs is likely to weaken the TCP's position at the hosting level and encourage SPs to switch elsewhere. The proportionate effect of such switching would be relatively large on the TCP (compared to the alternative of acceding to the WOCP's position on non-geographic calls), because the TCP would lose incoming calls to that SP from all WOCPs, not just the specific WOCP in question.

Callers' reaction to higher termination rates

- A3.145 If a TCP were to secure higher termination rates then, in general, this is likely to increase retail prices. This, in turn, may reduce the volume of calls to that SP, either because consumers avoid making calls, shorten the calls they make or substitute to calling another SP. The stronger this effect, the weaker the bargaining position of the TCP.
- A3.146 Below we discuss the following factors:
- Why higher termination rates increase retail prices.
 - Whether the effects of a TCP increasing termination rates are likely to be spread across entire number ranges.
 - How callers react to higher retail prices.
 - How SPs react to higher retail prices.

⁴¹⁰ The 2010 SPs survey, pages 17 and 26.

Higher termination rates increase retail prices

A3.147 Higher termination rates for non-geographic calls increase the marginal cost to a WOCP of providing such calls. Economic theory suggests that higher marginal costs create an incentive to raise the associated retail price. Thus, in the long term, we would generally expect increases in termination rates for non-geographic calls to raise the retail price of non-geographic calls.⁴¹¹

A3.148 Where the ROCP is separate from the WOCP, the ROCP will only have an incentive to pass on an increase in termination rates if it affects the price that the ROCP pays for wholesale call origination (i.e. if the WOCP passes the higher termination rates onto the ROCP through higher charges). We considered this matter in the context of the 0845/0870 dispute. Our understanding is that different MNOs currently have different contractual arrangements with their wholesale customers (MVNOs).⁴¹²

- MNO1 and MNO2 do not appear to have a contractual provision that grants them the ability to pass on changes in termination rates, although this is something that they could seek to pass on to their wholesale customers when the wholesale agreement is next negotiated.
- MNO3 and MNO4 ordinarily have the ability to pass on higher termination rates to their wholesale customers and generally did so in response in BT's higher termination rates for 0845 and 0870 calls. MNO5 also has the ability to pass on higher termination rates but did not do so during the course of the 0845/0870 dispute.

A3.149 Given the greater potential for changes in termination rates for calls to non-geographic numbers that exists in the absence of ex-ante regulation, we consider that, in that scenario, WOCPs would generally structure their wholesale contracts in a way that allows them to pass on any changes in termination rates (similar to 3 MNOs current agreements). We thus consider that the WOCP will generally pass on higher termination rates to the ROCP.

The impact of higher termination rates on retail prices may be diluted

A3.150 Where one TCP charges a relatively high termination rate this may not result in a change in relative retail prices (with the possible exception of calls to 09 numbers). Rather than just increasing the retail price of calls to numbers hosted by that TCP, ROCPs may 'spread' the effects by increasing the retail price of all non-geographic calls within a particular number range. This would mean that the impact on the TCP of increasing termination rates is diluted. Since relative prices do not change, the extent of substitution away from services hosted by that TCP is diminished. We have considered whether ROCPs would 'spread' the effects of higher termination rates in this way.

A3.151 We asked ROCPs whether they would respond to TCPs charging different termination rates in the same number range by setting different retail call prices,

⁴¹¹ The structure of termination rates will affect the incentives to pass increases on to callers. In particular, BT's recent charges for 080, 0845 and 0870 termination are linked to the retail price of these calls and BT has argued that these price schedules actually create an incentive for ROCPs to reduce call prices. Whether such structures of termination rates are an appropriate remedy for the retail concerns that we identify is discussed separately in Annex 4.

⁴¹² 0845/0870 Dispute Determination, paragraphs 5.324-5.329 of Annex 3.

depending on which TCP terminated the call. The responses were provided in confidence and have been redacted. Below we consider the implications of those responses for our analysis in the light of ROCPs' current pricing behaviour.

- A3.152 ROCPs consistently expressed a preference for simple pricing structures, particularly for 08 calls. For 09 calls ROCPs set multiple retail price bands and thus there is some scope to move calls to a higher retail price band based on the termination rate.⁴¹³

Table A3.10 ROCPs responses

[✂]

- A3.153 In general, mobile ROCPs currently set a single retail price for all calls to numbers within the same non-geographic number range, even where there are differences in the termination rate. For example, within the 0844 and 0871 number ranges termination rates vary.⁴¹⁴ However Vodafone sets the same retail price for calls to all 0844 numbers and all 0871 numbers.⁴¹⁵ Given the pricing behaviour we observe and in the light of the responses above, we consider that mobile ROCPs are likely to 'spread' any increase in termination rates by increasing the retail price of all non-geographic calls within a particular number range. The possible exception is 09 calls. Given the wide range of termination rates within the 09 number range, mobile ROCPs set a series of retail price bands for 09 calls. If one TCP increased its termination rate then it would be possible to shift calls to numbers hosted by that TCP into a higher price band.
- A3.154 In contrast, fixed ROCPs generally set a range of retail prices within non-geographic number ranges (with the exception of 080, 0845 and 0870 calls). For example, within the 0844 and 0871 number ranges TalkTalk and Virgin Media set a range of price points.⁴¹⁶ Given the pricing behaviour we observe and in the light of the responses above, we consider that fixed ROCPs are less likely to 'spread' any increase in termination rates than mobile OCPs, with the possible exception of the 080, 0845 and 0870 number ranges.
- A3.155 Overall, if a TCP were to set higher termination rates, this is likely to partially feed into higher prices for non-geographic calls terminated by that TCP. Mobile ROCPs

⁴¹³ For calls to non-geographic numbers other than 0845, differences in termination rates currently do correspond to differences in BT's retail prices (source: BT response to origination question 5 attached to email dated 12 July 2010). However this is interrelated with the NTS Call Origination Condition, which effectively means that the termination rate paid by BT is the residual after BT's regulated origination retention is deducted from the retail price. This relationship no longer exists if ex-ante regulation is absent.⁴¹⁴ The NTS calculator shows that the termination rates paid by BT vary within these number ranges. As explained above, these termination rates have historically also applied to call originated by other WOCPs.

⁴¹⁴ The NTS calculator shows that the termination rates paid by BT vary within these number ranges. As explained above, these termination rates have historically also applied to call originated by other WOCPs.

⁴¹⁵ Namely 25ppm for 0844 and 0871 calls under its pre-pay tariffs and 20ppm for 0844 and 35ppm for 0871 calls under its post-pay tariffs. Source: <http://www.vodafone.co.uk/personal/price-plans/pay-as-you-go/call-charges/index.htm> and <http://www.vodafone.co.uk/personal/price-plans/pay-monthly/call-charges/index.htm> viewed on 25 November 2010.

⁴¹⁶ <http://m1.ttxm.co.uk/sites/mobile/images/pdf/Non-Geographic-Price.pdf> (for TalkTalk) and http://shop.virginmedia.com/content/dam/all yours/pdf/004498%20Non-geo_phonebook_1st%20July_V1.pdf in conjunction with http://shop.virginmedia.com/content/dam/all yours/pdf/004827%20Residential%20Cable%20November_v1.pdf (for Virgin Media). Price lists viewed on 25 November 2010.

are generally likely to 'spread' the impact of higher termination across whole number ranges.⁴¹⁷ However, only 11% of non-geographic calls were originated by mobile ROCPs in 2009.⁴¹⁸

Callers' reaction to higher retail prices

Implications of callers' reactions for WOCPs'/TCPs' negotiating position

A3.156 In principle, callers could react to higher non-geographic call prices in one of four ways:

- Reaction 5: They could not make the call at all;
- Reaction 6: They could make the call anyway;
- Reaction 7: They could make the call via another ROCP; or
- Reaction 8: They could instead call a different SP.

A3.157 If callers make the call anyway (Reaction 6) then raising termination rates does not diminish the total retail revenue generated i.e. the size of the amount that the WOCP and TCP negotiate over is not diminished as the TCP's share increases. Of all the plausible possible caller reactions, this is the most advantageous one for the TCP (it makes it easier for TCPs to negotiate a large share of call revenues). In contrast, if callers would not make the call (or would shorten the call duration) (Reaction 5) then higher termination rates diminish the total retail revenue generated. This will tend to weaken the TCP's negotiating position.

A3.158 If callers instead use a different ROCP (whose WOCP presumably pays a lower termination rate to the TCP, allowing that ROCP to offer lower call prices) (Reaction 7) then the TCP still receives some revenue from that call, but does not enjoy the benefits of its increase in termination rates. Similarly, if callers switch to another SP (Reaction 8) then the WOCP still receives some revenue from the call. In both cases, the impact on the total amount of revenue received by suppliers is smaller than if the caller does not make the call at all. This will tend to mitigate the effect of higher termination rates, so that the TCP's position is stronger than in the case of Reaction 5 (but still weaker than Reaction 6).

A3.159 The consequences of the different ways that callers may react are summarised in Table A3.11 below.

⁴¹⁷ The exception may be calls to 09 numbers. However 09 calls account for around 1% of non-geographic call volumes. 2010 Flow of Funds study, page 34.

⁴¹⁸ Ofcom calculations based on 2010 Flow of Funds study, page 5.

Table A3.11: Implications of callers' reactions to a higher price for calling a non-geographic number

	Caller reaction	Consequence of higher termination rate	Impact on relative negotiating position
5	Not make the call	Raising termination rates diminishes total retail revenue	Significantly weakens TCP/ significantly strengthens WOCP
6	Make the call anyway	Raising termination rates does not affect total retail revenue	TCP relatively stronger/ WOCP relatively weaker
7	Make the call via another (cheaper) ROCP	Raising termination rates somewhat diminishes total retail revenue (TCP but not WOCP loses revenue)	Somewhat weakens TCP/ somewhat strengthens WOCP
8	Call a different SP	Raising termination rates somewhat diminishes total retail revenue (WOCP but not TCP loses revenue)	Somewhat weakens TCP/ somewhat strengthens WOCP

A3.160 Below we consider how consumers would respond to the retail price changes resulting from higher termination rates.

Assessment of callers' reaction to higher termination rates

A3.161 The evidence on how callers would react to higher termination rates is complex. However we observe the following key points.

A3.162 In the 2004 NTS Termination Consultation we explained that callers' reaction to higher call prices depended on the nature of the SP's service.⁴¹⁹ However technical billing constraints meant that in practice TCPs were obliged to charge the same amount for terminating calls to all numbers within a block of numbers i.e. TCPs were unable to differentiate between calls to individual numbers. Hence TCPs faced competitive pressures on the basis of the "average" call type.⁴²⁰ Services for which there are no immediate substitutes are likely to be intermingled with other, substitutable, services. In the 2004 NTS Termination Consultation we considered that calls originated with no immediate substitutes were in a minority and thus the competitive conditions associated with the availability of immediate substitutes are likely to be dominant.⁴²¹ As explained above, in the 2005 we estimated that 45-55% of 0870 calls and 30-40% of 0871 calls were locked in i.e. the caller is unable to

⁴¹⁹ 2004 NTS Termination Consultation, paragraphs 3.43-3.47.

⁴²⁰ 2004 NTS Termination Consultation, paragraphs 3.48-3.49.

⁴²¹ In 2004 the most important examples of call types where a wide range of substitutes were available was services supplied by electronic communications services providers such as ISPs. 2004 NTS Termination Consultation, paragraphs 3.53 and 3.57. Note that the decline of dial-up internet access since 2004 is likely to have lowered the proportion of calls which are substitutable, since ISPs now account for a much lower share of 08 traffic.

switch to another SP.⁴²² Insofar as there are effective substitutes for the majority of SPs, this implies that Reaction 8 (calling another SP) is more likely.

A3.163 As explained in Section 4, callers' price awareness is poor. This creates two conflicting effects. On the one hand, because callers are less likely to recognise that retail prices have increased, callers are more likely to make the call anyway (Reaction 6). On the other hand, as a result of poor price awareness, retail prices are likely to be high regardless of the level of termination rates. Higher retail prices may make demand more elastic.⁴²³ In other words, any increase in retail prices as a result of increased termination rates will be adding to prices that are already high. This means that callers are more likely to react to those higher prices i.e. Reaction 6 (making the call anyway) is less likely.

A3.164 As explained above, if a TCP were to set higher termination rates, this is likely to partially feed into higher prices for non-geographic calls terminated by that TCP. This effect is not complete, particularly as mobile ROCPs are likely to 'spread' the effects of any increase in termination rates. Rather than just increasing the retail price of calls to numbers hosted by the TCP in question, mobile ROCPs are likely to raise the price of non-geographic calls more generally. This somewhat dilutes the impact of an individual TCP raising termination rates: retail prices only change by a small amount, thereby making callers slightly less likely to respond.

SPs' reaction to higher retail prices

A3.165 As explained above, services for which there are no immediate substitutes are likely to be intermingled with other, substitutable, services. If a TCP increases the termination rate (and ultimately the retail price) for calls to a particular number block, then those SPs for which there are no immediate substitutes are unlikely to experience much of a change in call volumes while those SPs supplying substitutable services are likely to face a much larger fall in call volumes. In response, the latter category of SPs (i.e. those supplying substitutable services) might switch away from that TCP.⁴²⁴

A3.166 If some (substitutable) SPs were to switch away from TCPs in this way, it worsens the consequences for the TCP of seeking to raise termination rates. It thus weakens the TCP's negotiating position, relative to the WOCP.

Preliminary views

A3.167 In conclusion, we consider that higher termination rates are likely to result in higher retail prices. If the volume of calls received by some SPs falls then those SPs may respond by switching to another TCP, which weakens the TCP's position. However the evidence on how callers would react is mixed. Evidence from previous reviews suggests that, while a significant proportion of callers are locked in to a particular SP, such calls are nonetheless in the minority. However this evidence is not complete, for example we do not have reliable evidence in relation to the 0845 number range. Similarly, the impact of poor caller price awareness is ambiguous.

⁴²² As explained in Annex 5, we consider the estimate of the proportion of locked in 0845 calls to be unreliable due to the decline in dial-up internet access. 2005 NTS Consultation, paragraph 5.74.

⁴²³ This effect does not necessarily mean that, at prevailing prices, demand is elastic. We consider this issue in the 0845/0870 Dispute Determination (paragraphs 5.133-5.137) and, on the evidence available, could not reconcile BT and the mobile OCPs' conflicting positions.

⁴²⁴ As explained above, as part of our analysis of the fallback position for TCPs, barriers to SPs switching between TCPs appear to be low. This makes it more likely that SPs will switch away from a TCP that is setting a termination rate that is inappropriate to their situation.

The effect of vertical integration

- A3.168 As shown above, BT has a significant presence, both as a WOCP and a TCP. It accounts for [X] of call origination and [X] of call termination. The second and third largest WOCPs, TalkTalk and Virgin Media, are also TCPs, although they account for a much smaller share of termination ([X] and [X] respectively). Similarly the second largest TCP, C&W, is also a WOCP, although its share of call origination is moderate ([X]).
- A3.169 Where a firm is vertically integrated (i.e. it operates both as an TCP and a WOCP/ROCP) then the effects discussed above can be intensified in a way which strengthens the bargaining position of the vertically integrated firm for two reasons.
- A3.170 First, consider a WOCP that is negotiating with the vertically integrated firm's TCP business. As explained above, callers may switch away from their current ROCP, either in response to that ROCP no longer originating calls to the vertically integrated firm's TCP business (Reaction 3) or in response to the vertically integrated firm raising its termination rates (Reaction 7). Where callers switch to the vertically integrated firm's ROCP business then it earns additional retail revenue as a result. This will tend to strengthen the vertically integrated firm's position.
- A3.171 The revenue affected if callers switch their subscription between ROCPs is an order of magnitude larger than the amount that ROCPs earn from non-geographic calls (see the discussion of Reaction 3 above). For a vertically integrated TCP, the unattractiveness of the fallback position is diminished by the potential additional revenue for its ROCP business as a result of callers switching their subscription. As a result, a vertically integrated TCP is likely to be in an even stronger position.⁴²⁵
- A3.172 Second, consider a TCP that is negotiating with the vertically integrated firm's WOCP business:
- As explained above, callers may instead phone another SP hosted by the vertically integrated firm in response to the WOCP refusing to originate calls (Reaction 4). In addition, if the WOCP refuses to originate calls to the TCP in question then SPs may switch away from that TCP to the vertically integrated firm's hosting business.
 - If the WOCP were to agree to a higher termination rate for the TCP then this is likely to strengthen that TCP's position at the hosting level (since it can pay a larger revenue share to SPs). The TCP would thus impose a stronger constraint on the vertically integrated firm's hosting business. This makes it less attractive for the WOCP to agree to higher termination rates and strengthens its negotiating position.

Preliminary views

The balance of wholesale negotiating power

- A3.173 There are inherent tensions in the relationship between WOCPs and TCPs: WOCPs always prefer lower termination rates whereas TCPs generally prefer higher termination rates. Predicting the outcome of negotiations absent ex-ante regulation and excluding the possibility of ex-post involvement via our dispute resolution powers is complicated. There are lots of WOCPs and TCPs. Our analysis

⁴²⁵ The 2004 NTS Termination Consultation considered this effect at paragraphs 4.61-4.63.

of the factors that influence their negotiating strength suggests that different WOCPs and TCPs are likely to be in different commercial positions. In other words, negotiations will depend upon the particular WOCP and TCP involved, rather than one side consistently being in a strong position. As a result, commercial negotiations are likely to produce a range of termination rates that depend on the parties involved.

A3.174 In the above discussion we identified a number of factors influencing the negotiating strength of a WOCP or TCP. In particular:

- WOCPs accounting for a high share of wholesale call origination are likely to be in a stronger position than WOCPs accounting for a low share of call origination.
- Similarly, TCPs accounting for a high share of termination are likely to be in a stronger position than TCPs accounting for a low share of termination.
- Vertically integrated firms are likely to be in a stronger position than vertically separate firms of comparable size.

A3.175 We consider that BT may be in a strong position, both in its role as a WOCP and its role as a TCP. BT accounts for by far the largest share of wholesale call origination to non-geographic numbers (and this position is reinforced if transit volumes are taken into account). BT is also the largest TCP. We thus consider that BT is likely to have the upper hand when negotiating with other WOCPs and TCPs at the wholesale level. Our view that BT might have the upper hand when acting as a WOCP is consistent with our conclusion in the Wholesale Narrowband Statement in which we found that BT possessed SMP in the market for call origination on a fixed narrowband network in the UK excluding the Hull Area. As a result of that SMP finding, we imposed the NTS Call Origination Condition on BT.⁴²⁶

A3.176 We also consider that C&W, the second largest TCP, might be in a strong position when negotiating with smaller WOCPs (albeit not when negotiating with BT). Similarly, TalkTalk and Virgin Media, the second and third largest WOCPs, are likely to be in a strong position when negotiating with smaller TCPs (albeit not when negotiating with BT). The balance of negotiating power of C&W (the TCP) when dealing with either TalkTalk or Virgin Media (the WOCP) is not entirely clear. Mobile OCPs' account for a smaller share of non-geographic call origination, compared to calls more generally. Nonetheless EE, Vodafone and O2 may be in a strong position when dealing with the smaller TCPs.

A3.177 We also consider that bespoke termination rates are likely to arise between many pairs of WOCPs and TCPs in the absence of ex-ante regulation.⁴²⁷ First, given that different WOCPs are likely to enjoy differing degrees of bargaining power, the termination rates that they are able to negotiate are likely to differ. Second, where TCPs have the freedom to charge bespoke termination rates at present, they have begun doing so (specifically, for calls to 080, 0845 and 0870 numbers, TCPs have begun charging termination rates that depend on the retail price of calls from a particular WOCP). There seems to be no reason why TCPs would not continue to try and price in this manner.

⁴²⁶ Wholesale Narrowband Statement, paragraph 6.42 and Section 15 (particularly paragraph 15.6).

⁴²⁷ As explained above, bespoke termination rates are feasible because there are technical means by which the TCP can generally identify which WOCP originated a call. As a result, a WOCP cannot avoid a bespoke termination rate that it regards as unacceptable by transiting calls via a third party.

Consistency with our approach to mobile voice call termination

- A3.178 A number of responses to the Call for Inputs drew a parallel to other termination markets, in which we have generally considered that the terminator possesses SMP.⁴²⁸ This contrasts with the discussion above, where the balance of negotiating power depends on the WOCP and TCP involved, rather than consistently being in the TCP's favour.
- A3.179 We are currently reviewing the provision of mobile voice call termination. In the most recent consultation we proposed finding that each mobile communications provider ("MCP") possessed significant market power. We discussed whether some OCPs might possess countervailing buyer power when dealing with new entrant MCPs. In particular we observed that new entrant MCTs routinely secure high termination rates.⁴²⁹ We set out evidence that the termination rates charged by unregulated mobile communications providers were, in almost all cases, greater than the regulated rates that we had specified for the largest MCPs.⁴³⁰ This actual price evidence supported our position in the 2010 Mobile Termination Consultation. We do not have equivalent pricing evidence in the case of non-geographic calls. Indeed, with regards to non-geographic calls, the only SMP finding is in relation to a WOCP (namely BT) rather than a TCP.
- A3.180 We also note that our previous analysis of non-geographic termination has distinguished it from the analysis of mobile termination (or fixed geographic termination). As noted above, in both the (uncompleted) 2004 NTS Termination Consultation and in the NCCN 500 Decision we defined a single market across all TCPs for termination (or termination/hosting) of non-geographic calls. In contrast, we have consistently found that each mobile communications provider (or fixed terminating operator) is in a separate market for mobile (or fixed) termination.

Implications for consumers

- A3.181 As explained above, sometimes the balance of negotiating power is heavily in favour of the WOCP (for example, when a large firm such as BT, TalkTalk or Virgin Media deals with a small TCP). In other circumstances, it is heavily in favour of the TCP (for example, when BT or C&W deals with a small WOCP). We are not interested in the division of revenues within the supply chain for its own sake. Rather, in this review, we are interested insofar as it affects callers and SPs (lower returns for SPs affects service availability and innovation).⁴³¹ In particular, we would be concerned if WOCPs were able to earn high margins on these calls (rather than low termination rates ultimately being passed on to callers through lower non-geographic call prices) and if TCPs' retention exceeded their costs (rather than passing on any additional margins to SPs).
- A3.182 Below we explain why
- It is harmful to consumers if the balance of negotiating power is heavily in favour of the WOCP;

⁴²⁸ For example page 5 of O2 response dated 28 May 2010 to the Call for Inputs and page 2 of Everything Everywhere response dated 2 June 2010 to the Call for Inputs.

⁴²⁹ See in particular 2010 Mobile Termination Consultation, paragraphs 4.86-4.87.

⁴³⁰ 2010 Mobile Termination Consultation, paragraphs 4.56-4.59 and Table 3.

⁴³¹ SPs also fall within the definition of "consumer" for the purposes of the Act. However SPs are not consumers for the purposes of the Framework Directive.

- It may be harmful to consumers if the balance of negotiating power is heavily in favour of the TCP;
- It might be harmful to consumers if there are significant asymmetries between TCPs;
- It is unclear whether significant asymmetries between WOCPs are harmful to consumers;
- It is harmful to consumers if vertically integrated firms pursue a strategy of degrading the attractiveness of rivals when competing at the retail or hosting levels; and
- The consequences of bespoke termination rates for the accuracy of wholesale bills are unclear.

Significant imbalances in the WOCP's favour

A3.183 Where negotiating power is significantly skewed in favour of the WOCP, this is likely to result in significantly lower termination rates.⁴³² This is likely to reduce the amount of revenue received by SPs or increase the TCPs' charges to SPs for services such as hosting.⁴³³ Reduced revenue and/or higher costs for SPs have an impact on the long run health of the SP sector. It is likely to diminish service availability and may also reduce the SPs' incentives to introduce innovative new services (because the returns from doing so are lower). This diminished service availability is likely to harm callers.

A3.184 We recognise that lower termination rates may be passed on through lower prices for geographic calls, larger subsidies for mobile handsets etc. This is related to the discussion of the tariff package effect in Section 4 and Annex 2. In addition to the points noted there, we observe that the SP is paying (through lower termination rates and consequentially higher charges at the hosting level) for 'subsidies' of products they have little or no interest in, such as geographic calls.

Significant imbalances in the TCP's favour

A3.185 Where negotiating power is significantly skewed in favour of the TCP, this potentially allows TCPs to set significantly higher termination rates.⁴³⁴

A3.186 However, if the following four conditions are all met⁴³⁵, it might not be detrimental for consumers if TCPs are able to dictate the level of termination rates to WOCPs:

⁴³² The qualifier of negotiating power being "significantly" or "heavily" in the WOCP's favour is important. Any detrimental effects on consumers are likely to be small if the wholesale negotiating power is only slightly in the WOCP's favour.

⁴³³ This motivation lies behind the current NTS Call Origination Condition. We previously stated that its "purpose ... is to prevent BT exploiting its SMP in call origination by unduly raising the charge for NTS call origination whilst allowing BT to recover the costs it incurs on behalf of TCPs." Wholesale Narrowband Statement, paragraph 15.27.

⁴³⁴ Once again, the qualifier of negotiating power being "significantly" or "heavily" in the TCP's favour is important. Any detrimental effects on consumers are likely to be immaterial if the wholesale negotiating power is only slightly in the TCP's favour.

⁴³⁵ These conditions are inter-related. For example, where competitive constraints on an SP are limited and it is able to set a high retail price, the magnitude of the horizontal externality is likely to be larger.

- Consumers are aware of the retail price of non-geographic calls;
- The SP is subject to effective competitive constraints;
- Changes in the termination rate for a particular number are reflected in the retail price of calls to that number; and
- The horizontal externality is not material.

A3.187 If all of these conditions are met then any rise in the termination rate for calls to a particular non-geographic service would result in a corresponding increase in the retail price of calls to that service. Consumers would be aware of that price increase and would have a choice of alternative SPs that they could switch to. SPs' choice of termination rate, and ultimately the retail price of calls to their services, would thus be constrained by effective competition. In other words, the termination rate that TCPs could impose on WOCPs would ultimately be tempered by the competitive constraints facing SPs. Moreover, if the horizontal externality were not material then each SP's retail pricing does not affect other non-geographic numbers.

A3.188 However, as discussed in Annex 2, consumers' awareness of prices is poor. As discussed above, whether effective competitive constraints exist depends on the particular service supplied by the SP. There may be substitutes for a significant proportion of SPs' services, but there is also a significant minority of calls where the caller is locked in. As discussed above, changes in termination rates are likely to partially feed into higher prices for non-geographic calls. However this effect is not complete, particularly as mobile ROCPs are likely to 'spread' the effects of any increase in termination rates. Finally, the horizontal externality is likely to be material.

A3.189 If any of the first three conditions are not met, the negative consequences for SPs of high termination rates diminish. As a result, if wholesale negotiating power is significantly skewed in favour of the TCP, this is likely to result in high termination rates. This results in higher retail prices for non-geographic calls. It should be noted that if competition in hosting is effective, the proceeds are likely to be passed through to SPs. As a result the balance of prices between callers and SPs becomes tilted in the SPs' favour. If the fourth condition is not met, individual SPs may set retail prices (and associated termination rates) which damage the reputation of non-geographic numbers.

Significant asymmetries between TCPs

A3.190 Where there are significant differences in the relative negotiating strength of different TCPs then this is likely to lead to significant differences in the termination rates that those TCPs are able to charge. This is likely to have two consequences:

- First, a TCP that earns a relatively high termination rate can offer SPs a larger revenue share (or charge the SP a lower fee for hosting), thereby giving it an advantage in the hosting market. This will make it more attractive to SPs and weaken the position of rival TCPs in the hosting market. If those rival TCPs are unable to match the revenue share offered by the 'strong' TCP then this potentially affects the long run competitiveness of the hosting market. If competition in hosting were to be diminished then it is likely to harm the interests of both SPs and callers. SPs are likely to receive a smaller share of termination revenues and pay higher charges for hosting. This, in turn, is likely to affect service availability and innovation, to the detriment of callers.

- Second, if other TCPs cannot match the termination rate charged by one TCP then they exert less pressure to ensure that the entirety of the additional termination revenue is passed on to SPs. As a result, a TCP that earns a relatively high termination rate may be able to retain a significant proportion of the resulting revenues. This is unlikely to be in consumers interests. The TCP is effectively extracting additional revenue from callers and, rather than passing it on to SPs to promote service availability and innovation, is instead retaining those monies for itself.

Significant asymmetries between WOCPs

A3.191 Where there are significant differences in the relative negotiating strength of different WOCPs, this is likely to lead to significant differences in the termination rates for calls originated by different WOCPs. Where one WOCP is able to secure a relatively low termination rate:

- That WOCP would be able to support lower retail prices for non-geographic calls originated on its network. ROCPs originating calls on that network would have a competitive advantage over other ROCPs. However this particular competitive advantage may be limited – as explained in Annex 5, the majority of callers place little emphasis on the price of non-geographic calls when selecting an ROCP.
- The profitability of non-geographic calls originated on that network would be increased. This is likely to support lower prices for other services (the tariff package effect). Given that ROCPs are likely to lower the retail prices of those services that are most prominent and important to consumers, this may grant those ROCPs a material competitive advantage.

A3.192 However it is unclear whether asymmetries between WOCPs cause additional consumer detriment (over and above the effects of a WOCP being in a strong position – namely low termination rates – already discussed above). In particular, it is not clear whether the competitive advantages for some ROCPs discussed in the preceding paragraph would lead to a long run reduction in retail competition. Such a reduction in retail competition would harm consumers but would require any distortionary effect on competition to be sufficiently material.

Vertically integrated firms leveraging their position

A3.193 There are a number of ways in which vertically integrated firms could attempt to leverage their strength at the wholesale level so as to give them an advantage in the hosting market. We note that some stakeholders expressed this concern.

A3.194 First, where a major TCP is vertically integrated with an OCP, that TCP may charge a higher termination rate to rival WOCPs than the implicit amount that it receives from its own WOCP business. This gives rise to an asymmetry between TCPs which, as explained earlier, can diminish competition in the hosting market and, if it gives rise to a margin squeeze, may be detrimental to consumers.

A3.195 Second, a vertically integrated firm with a strong position as a WOCP could refuse to originate calls to certain TCPs. As explained earlier, this would make those TCPs much less attractive in the hosting market. As a result, SPs would switch away from those TCPs and the vertically integrated firm would be expected to capture some of that additional business.

A3.196 Assessing the likelihood of future foreclosure is inherently uncertain and speculative. We thus put less weight on this source of detriment. There are currently a large number of firms active in the hosting market (over 100) and the shares of supply suggest that this level of the supply chain is relatively fragmented. We thus consider that this concern is more likely to arise over the longer term. The most plausible concerns relate to BT, given its strong position as a WOCP and the fact that it is the largest TCP.

Consequences of bespoke termination rates for billing accuracy

A3.197 As explained above, we consider that bespoke termination rates would be commonplace in the absence of ex-ante regulation. Accurately charging bespoke termination rates relies on accurately identifying the WOCP (and sometimes even the ROCP) that originated a particular call. As explained below, there may be some technical obstacles to identifying the WOCP in this way. As a result, WOCPs may receive inaccurate bills for termination. Moreover, WOCPs may route calls in such a way as to conceal the identity of the network that originated the call. In principle, this may distort the provision of transit and unnecessarily inflate the end to end costs of providing a call. However the magnitude of these effects is unclear.

A3.198 Calling Line Identification (“CLI”) is information attached to a telephone number which links it to the original number range holder. When billing an OCP for the termination of a call, a TCP can use CLI to identify the volume of calls which originated from each OCP. However, when a number has been ported, the CLI still relates to the original range holder so, for example, calls from a number ported from Orange to O2 would be viewed as Orange-originated minutes if CLI is used to identify the call originator. Therefore, with variable retail-related termination charges, billing by CLI could have implications for billing accuracy.

A3.199 In the 0845/0870 dispute, BT told us that it is able see the route by which the call entered the BT network. This means that it is possible for BT to identify the source of the call without recourse to the CLI. This is because it assumes that the WOCP passing it the call is the entity originating the call rather than the number range owner. However, where the call is sent to BT via a third party transit provider, BT is reliant on CLI where the transit provider is unable to provide information identifying the WOCP of the call. As a result, where the transit provider is unable to identify the WOCP (for example, when the call arrives via another transit operator and that transit operator does not provide the identity of the WOCP), CLI information may fail to accurately identify which WOCP originated the call. This could lead to a concern about billing accuracy for such calls.

A3.200 In principle, this could affect the transit market as WOCPs that pay a relatively high bespoke termination rate may choose to transit calls via third parties in order to conceal which network originated the call. This would be inefficient since call routing would be shaped by a desire to avoid termination charges, rather than minimising conveyance costs. It could also create a distortion in the transit market although it is unclear how material these concerns are.⁴³⁶

Overall provision conclusion

A3.201 For the reasons set out above, we are not confident that the termination rates that would arise commercially (absent involvement by Ofcom) are likely to lead to desirable outcomes for consumers.

⁴³⁶ We made similar points in the 0845/0870 Dispute Determination at paragraph 9.37.

Remainder of this annex: miscellaneous issues

A3.202 We have now reached the end of our substantive analysis of the wholesale level. Below we briefly discuss two miscellaneous issues. First, the issue of transit, which is not a significant consumer concern. Second, a couple of issues that are outside the scope of our analysis.

Transit is not a significant concern

A3.203 Below we briefly discuss transit. For the reasons given below, our current view is that transit arrangements do not raise significant consumer concerns that it is necessary to address in this review.

Factual background

A3.204 Transit is a service offered by networks with both a national reach and spare capacity to convey calls between WOCPs and TCPs that do not interconnect directly with one another (see Section 2 for a description). The transit network also passes termination payments from WOCPs to TCPs where no contractual charging arrangements exist between them.

A3.205 As discussed in Section 4 one of the key benefits of transit is that it obviates the need for small interconnection routes between WOCPs and TCPs by aggregating traffic destined for any one TCP onto single larger, and thus more efficient, interconnection routes.⁴³⁷ WOCPs need only to know that traffic destined for any TCP is being transited by network X and therefore to send all calls to that network.

A3.206 Transit charges are extremely small relative to the end-to-end costs of a call, with BT charging a maximum of 0.02ppm in the daytime. The 2010 Flow of Funds study suggests that 4.7bn minutes of calls to non-geographic numbers were transited via third parties in 2009.⁴³⁸ These third party transit providers retained a total of £4m.⁴³⁹

A3.207 Whilst the concept of transit is simple, responsibility for payment of transit charges is not. Prior to the late 1990s responsibility for transit always lay with the OCP because, by and large, OCPs retained the retail profit from calls and they decided how calls should be routed to each TCP. It was generally the OCP that chose whether to send traffic via a transit network rather than directly to TCPs on dedicated routes.

A3.208 Following the introduction of NTS in 1996 this convention was challenged on the grounds that TCPs now received the retail profit from NTS calls and OCPs had insufficient revenue to cover the costs of transit. In the light of Of tel guidance, a convention that TCPs should bear the cost of transit for 08 and 09 calls arose.⁴⁴⁰

⁴³⁷ There is a fixed cost associated with each interconnection point, which means it is generally uneconomic for different network operators to establish direct interconnection on a large scale where small volumes of traffic are involved.

⁴³⁸ 2010 Flow of Funds study, Figure 1.4 on page 5.

⁴³⁹ 2010 Flow of Funds study, Figure 1.7 on page 7.

⁴⁴⁰ In July 1997, Of tel determined BT's charges for "standard services". Accompanying that (binding) determination was a non-binding "explanatory document", paragraph 6 of which stated "Where an originating ONO is required to transit NTS calls across another ONO's network to terminate on a TO's network the transit costs should be borne by the TO. This ensures that the principle, that the originating ONO recovers its costs of offering the service, is maintained." *Interim Charges for BT's Standard Services for Year Ending 31 March 1998*, Of tel, July 1997 available at:

http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/pricing/interim.htm

OCPs continued to pay for transit for other call types. Slightly later an exception was created with the establishment of the 0844 and 0871 number ranges. The Oftel statement establishing these number ranges said that, where BT provides transit, BT could charge the WOCP for the cost of transit. The rationale for this was that OCPs were given freedom to set their own retail prices for these calls on condition they delivered whatever termination payment the TCP had set. The OCP's retail price thus had to take account of the TCP's termination charge, the OCP's own costs plus any margin and any transit payment.⁴⁴¹

A3.209 This remains the present situation: OCPs pay transit charges for geographic, 0843/4 and 0871/2/3 calls and TCPs pay for all other non-geographic calls.

A3.210 Note that these Oftel decisions were made under the historic legal regime. There is no legal impediment to the industry agreeing alternative arrangements, if it were able to reach a consensus.

BT's SMP in transit

A3.211 In February 2010 we published a statement relating to wholesale transit services (the "Transit Statement").⁴⁴² This identified a number of different types of transit service (see Figures 4.1a-4.1c of the Transit Statement for further details):

- Inter-tandem conveyance ("ITC") is the service that a CP provides to carry traffic between two or more tandem exchanges in its network.
- Inter-tandem transit ("ITT") is the service that a CP provides to carry traffic between its tandem exchanges in order to connect calls between two other CPs' networks.
- Single transit ("ST") is the service that a CP provides to connect calls between two other CPs' networks, using only one of its tandem exchanges.

A3.212 In the Transit Statement we identified two separate product markets, namely ST and ITT/ITC. We concluded that the ITT/ITC market was effectively competitive and that the ST market was not effectively competitive and that BT held a position of SMP within that market.⁴⁴³

A3.213 One reason why WOCPs were unlikely to re-route traffic in response to an increase in the price of ST was the arrangements applying to non-geographic calls (which account for 25% of ST traffic). Since the WOCP controls call routing but the TCP pays the transit fee for most of these calls, there is no incentive on the WOCP to send the traffic directly to the TCP. These incentives are thus one factor (of several) supporting BT's SMP in the ST market.⁴⁴⁴

⁴⁴¹ *Oftel's Statement on the Relationship between Interconnection Charges and Retail Prices for Number Translation Services*, Oftel, December 1999, paragraphs 2.6-2.7 available at:

<http://www.ofcom.org.uk/static/archive/oftel/publications/1999/consumer/nts1299.htm>

⁴⁴² *Review of the fixed narrowband services wholesale markets: Further statement on wholesale transit markets and remedies in the wholesale call termination market*, 5 February 2010, available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/statement/statement.pdf

⁴⁴³ Transit Statement, paragraphs 4.4-4.6.

⁴⁴⁴ Transit Statement, paragraphs 4.31(a), 4.66(b) and 4.77.

Responses to the Call for Inputs

A3.214 One respondent stated that, where the TCP bears the costs of transit, there is no incentive on the WOCP to route that call efficiently. They considered that this leads to inefficiency and that the WOCP should be responsible for paying for transit.

Implications for consumers

A3.215 There are some indications that TCPs' responsibility for paying for transit for most non-geographic calls may have some detrimental effects, since WOCPs do not have an incentive to route calls efficiently. However the detrimental impacts are likely to be relatively small compared to the detrimental effects we identify at the retail level (these are likely to be significantly in excess of £100m per annum – see Section 5). This is because the value of transit is low (£4m in 2009 – see above).

Issues outside the scope of this review

A3.216 Respondents to the Call for Inputs expressed concerns about the porting differential (defined below), the availability of porting between some TCPs and the terms of BT's SIA. Below we explain why we are not proposing to analyse these issues in detail in this review.

The porting differential

A3.217 Where TCPs charge different termination rates, this can lead to windfall gains and losses if the number that is being called has been ported between TCPs. For example, suppose that a particular number was originally assigned to operator X (the donor network operator or "DNO") that charges a termination rate of 12ppm. However the number has subsequently been ported to operator Y (the recipient network operator or "RNO") that charges a termination rate of 10ppm. Under the onward routing system currently used for calls to ported numbers, a call to that number will be routed to operator X (the original holder of that number) who will charge the WOCP 12ppm. Operator X will then route that call to operator Y who will charge X 10ppm less a small amount to cover the cost of onward routing. This has two consequences:

- First, it creates windfall gains and/or losses for the DNO. In the above example, operator X receives a windfall gain of 2ppm. Conversely, if operator Y's termination rate were higher than that of operator X then operator X would suffer a windfall loss. We refer these windfall gains and losses as the "porting differential".
- Second, the termination rate faced by the OCP is always that of the DNO. Where an SP ports its number, this does not affect the termination rate paid by the WOCP. The retail price of calls to that number is thus unlikely to be affected.

A3.218 We only received one response to the Call for Inputs on this issue. One TCP considered that such windfall gains or losses were "anomalous".

A3.219 The magnitude of the porting differential for a particular TCP depends on the volume of calls made to numbers that have been ported away from that firm. We estimate that around 6% of calls to 08 and 09 numbers originally hosted by BT

have been ported to another TCP.⁴⁴⁵ Estimates, broken down by number range, for a variety of other TCPs are set out in Table A3.11 below.

Table A3.11: Proportion of non-geographic calls to ported out numbers

	C&W	Virgin Media	4D	BSkyB	Magrathea
080	11%	5%	19%	1%	Negligible
0843/4	1%	1%	8%	0%	Negligible
0845	27%	6%	53%	0%	Negligible
0870	23%	15%	6%	0%	Negligible
0871/2/3	9%	7%	5%	0%	Negligible
09	10%	1%	0%	0%	Negligible

Source: Responses to information request dated 2 June 2010. Response to question C3 divided by response to C1.

A3.220 As shown in this table, the proportion of call minutes that are to ported out numbers varies very significantly between TCPs and between number ranges. This is not surprising. TCPs and number ranges that have been active for a longer period of time are likely to have accumulated a greater amount of ported out numbers.⁴⁴⁶ Further, some TCPs have made a commercial decision not to put in place the necessary arrangements to port numbers between them.

A3.221 We recognise that the porting differential has a number of detrimental effects.

- It can result in unavoidable losses for the DNO. We have previously recognised that this can be problematic. In June 2010 we determined a dispute between C&W and BT about the windfall losses C&W suffered due to a differential between BT and C&W's termination rate for non-geographic calls.⁴⁴⁷ We determined that BT's pricing was unfair between the parties with respect to C&W's calls where C&W is the DNO and BT is the RNO (with the exception of calls that originated on C&W's network). On these calls C&W failed to recover its efficiently incurred costs as a result of the windfall loss described above.
- In theory it may affect TCPs' incentives, although there is a question about whether this impact is actually material in practice.

⁴⁴⁵ Summing BT's calls to 08 and 09 numbers gives [X] minutes (in 2009). BT response dated 25 June 2010 to question C1 of the information request dated 2 June 2010. BT stated that [X] minutes of non-geographic calls were to non-geographic numbers that have been ported away from BT. BT response dated 6 July 2009 to question C3 of the information request dated 2 June 2010

⁴⁴⁶ For example, on the relatively new 03 number range there were very few calls to ported out numbers. : Responses to question C1 of the information request dated 2 June 2010.

⁴⁴⁷ *Dispute between Cable & Wireless and BT about BT's NTS call termination charges for ported numbers*, 2 June 2010, available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/draft_deter_cw_bt_nccn500/Final_determinati_on.pdf

- Windfall gains or losses for the DNO might affect TCPs' incentives to attract new SPs or retain existing SPs. For example, a TCP which charges a relatively low termination rate (and therefore suffers a windfall loss if it loses a SP which then ports their number to another TCP) has an added incentive not to lose customers.
- The porting differential may affect TCPs' incentives to establish the necessary systems and processes to port numbers to and from another TCP. For example, a TCP that charges relatively high termination rates (and therefore receives a windfall whenever it is the DNO) might be more willing to establish porting arrangements with other TCPs.

A3.222 Our approach to this issue is as follows. As noted in the 0845/0870 Dispute Determination, the effects of the indirect routing regime for calls to ported numbers, including the existence of a porting differential, are not specific to non-geographic calls.⁴⁴⁸ It is a general feature of the indirect routing regime.⁴⁴⁹ It is outside the scope of this current review to consider whether it is desirable to move away from the current indirect routing regime, particularly since we issued a statement on this issue very recently. In April 2010 we published a statement in which we concluded that regulatory intervention to move to direct routing for calls to ported numbers (which would provide a technical remedy) would not be appropriate in the prevailing circumstances.⁴⁵⁰

Porting between TCPs

A3.223 Two respondents to the Call for Inputs expressed concern at SPs inability to port their non-geographic number between some TCPs.⁴⁵¹ IPV6 considered that TCPs should be required to allow non-geographic numbers to be ported. It considered that this would facilitate competition and switching at the hosting level.⁴⁵² Similarly Alternative Networks was concerned that SPs are currently only able to port numbers between major TCPs. It considered that facilitating porting would also help conserve non-geographic numbers. Alternative Networks stated that a central database would address its concerns.⁴⁵³

A3.224 Currently there is a fixed cost to putting in place porting arrangements between a pair of TCPs. As a result it is not commercially viable to establish porting arrangements if they are likely to be used infrequently. Two major TCPs might find it profitable to arrange the ability for SPs to port between them but two small TCPs may not.

A3.225 We are not proposing to consider this issue in this review for a number of reasons.

⁴⁴⁸ 0845/0870 Dispute Determination, paragraph 8.23.

⁴⁴⁹ If instead the DNO charged the OCP its termination rate and passed those monies on to the RNO (so the RNO effectively receives the DNO termination rate) then this simply shifts the identity of the party suffering windfall gains or losses to the RNO. We also made this observation in the Porting Dispute, paragraph 5.119.

⁴⁵⁰ *Routing calls to ported telephone numbers*, 1 April 2010 available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/gc18_routing/statement/statement.pdf

⁴⁵¹ Strictly speaking this is a concern about the operation of the hosting level, rather than the wholesale level. However it is convenient to discuss it here as it follows on from the analysis of the porting differential.

⁴⁵² IPV6 Limited response to the Call for Inputs, page 4.

⁴⁵³ Alternative Networks response dated 27 May 2010 to the Call for Inputs, Sections 1-3 on pages 1-2.

- A3.226 First, as noted by Alternative Networks, if the UK established a central database of which TCP currently holds each number then it would be possible to move to a system of direct routing. This avoids the need for the DNO to route calls to ported numbers on to the RNO. Direct routing would simplify porting by removing the need to put such indirect routing arrangements in place. However as explained above in the context of the porting differential, it is outside the scope of this review to assess the desirability of moving away from the indirect routing regime for calls to ported numbers.
- A3.227 Second, while one respondent to the 2010 SPs survey highlighted difficulties in porting numbers between TCPs, the majority of respondents considered that there were little or no barriers to switching supplier.⁴⁵⁴ Moreover General Condition 10 requires hosting providers to make clear to potential customers (SPs) whether or not they have porting arrangements established.⁴⁵⁵ This allows SPs to make an informed decision about which TCP to select. It is thus unclear how much detriment consumers (including SPs) are currently suffering as a result of porting arrangements.
- A3.228 Third, as set out in Annex 2 we have identified serious problems with the operation of the retail level. In contrast, as explained in Section 4, the hosting level generally appears to be operating well. In this review we are thus focusing our resources on addressing those significant retail concerns, rather than investigating what appear to be less serious issues about the hosting level.

BT's SIA

- A3.229 BT publishes a Standard Interconnect Agreement ("SIA").⁴⁵⁶ Clause 12 of the SIA provides that BT may from time to time vary the charge for a BT service or facility (including termination of non-geographic calls) by publication of the new charge in the Carrier Price List on 28 days' notice. In practice, BT does this by issuing a network charge change notice ("NCCN"). There is no contractual mechanism which allows the counterparty to object to or reject the charge changes introduced by BT for such services. However, it is possible for the parties to bring a dispute to Ofcom.
- A3.230 Clause 13 of the SIA concerns "Operator Services" which include termination charges for calls terminating on the network of the counterparty to the SIA with BT. The charges payable for such services are contained in BT's Carrier Price List. If the counterparty wishes to change the amount BT pays it in respect of an Operator Service it must serve an Operator Charge Change Notice ("OCCN") on BT. Under the terms of the SIA, BT can accept or reject that OCCN. If it rejects the OCCN, the charge change does not take effect until any dispute is resolved.
- A3.231 Thus under the SIA there is an asymmetry between BT and other CPs (the "Contractual Asymmetry"). Where BT issues a NCCN, third parties do not have a contractual opportunity to accept or reject that change (although they can bring a dispute). In contrast, BT has the opportunity to reject any OCCN issued by another CP (although rejection could also prompt a dispute).
- A3.232 As explained above, three respondents to the Call for Inputs expressed concern about this aspect of the SIA (namely, C&W and two other CPs).

⁴⁵⁴ 2010 SPs survey, page 26.

⁴⁵⁵ Letter from Ofcom, 28 October 2009 available at:

http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/Porting_Letter.pdf

⁴⁵⁶ http://www.btwholesale.com/pages/static/Pricing_and_Contracts/Reference_Offers/Telephony.html

A3.233 This contractual asymmetry is not specific to non-geographic calls. As a result, we consider that it lies outside the scope of this review and have not investigated its effects.

Annex 4

Assessing our broad regulatory options

Introduction

- A4.1 In Annexes 4, 5 and 6 we discuss our broad options for intervention and identify our preferred alternatives by carrying out a general (i.e. not number range specific) assessment of them in the light of the proposed assessment criteria set out in Annex 1.
- A4.2 In order to help the reader and provide clarity, we have split our assessment of the regulatory options as follows:
- a) In Annex 8 we analyse three potential approaches at the retail level (maintaining the status quo, deregulation and information remedies) and two potential wholesale approaches which stakeholders have suggested would address our retail level concerns (variable termination rates and regulation of the level of termination rates). Our preliminary view is that none of these approaches is likely to be appropriate.
 - b) In Annexes 5 and 6 we assess two options which we consider would be more appropriate interventions, namely unbundling retail prices and specifying maximum retail prices.
 - c) Having carried out these assessments in Annexes 4, 5 and 6 we then go on to consider the circumstances applying to individual number ranges and which remedies may be most appropriate for each number range in Annex 7.

Identifying the options for intervention

- A4.3 Our main concerns relate to the consumer detriment on non-geographic calls at the retail level. Our powers to intervene have recently been clarified in the revised EU Framework.⁴⁵⁷ This allows for:

“Designation of service for which the number shall be used, including any requirements linked to the provision of that service and, for the avoidance of doubt, tariff principles and maximum prices that can apply in the specific number range for the purposes of ensuring consumer protection in accordance with Article 8(4)(b) of Directive 2002/21/EC (Framework Directive).”

- A4.4 BIS has recently issued a consultation on its proposals for implementing the revised Framework which confirms that these powers will be made explicit in the Act⁴⁵⁸. Implementation of any options deriving from these provisions is subject to transposition into UK legislation and the manner in which our powers are framed.

⁴⁵⁷ Authorisation Directive, paragraph 1, Annex C *Conditions which may be attached to rights of use for numbers*. “Designation of service for which the number shall be used, including any requirements linked to the provision of that service.”

⁴⁵⁸ <http://www.bis.gov.uk/assets/biscore/business-sectors/docs/i/10-1132-implementing-revised-electronic-communications-framework-consultation.pdf>

A4.5 It is important to recognise that Ofcom has attempted to remedy the problems that consumers experience in this sector before. In the 2006 NTS Statement we identified a lack of price transparency and consumer price awareness as a major source of consumer concerns. We thus proposed requirements on OCPs to give greater prominence to non-geographic call prices.⁴⁵⁹ We also proposed various retail measures to try and restore the link between 0870 call prices and geographic call pricing (ultimately these were not implemented because of technical difficulties).⁴⁶⁰ However, as explained in the two previous annexes, our preliminary view is that significant problems remain in this sector. It is thus appropriate to consider more interventionist approaches.

A4.6 In this Annex we discuss the following potential retail-level interventions:

- **Status quo:** i.e. no intervention (the “First option” below)
- **Deregulation:** Removing both the current (limited) restrictions on retail prices specified in the NTNP and the NTS Call Origination Condition (the “Second option” below).
- **Information remedies alone:** For example pre-call announcements or other means of providing callers with greater information on prices (the “Third option” below).

A4.7 Two other retail level interventions which we currently believe would be more appropriate to achieve our objectives are discussed in greater detail. For clarity, these are considered separately in Annexes 8 and 9. These are:

- **Unbundled tariff:** Using the powers in the revised EU Framework to specify a tariff principle and maximum retail prices, this separates (unbundles) the retail price of a non-geographic call into two elements, reflecting the provision of access to non-geographic numbers and the provision of services via non-geographic numbers; and
- **Maximum prices:** Using the powers in the revised EU Framework to specify maximum retail prices that apply to all OCPs.

A4.8 Some stakeholders have suggested that the appropriate point for us to intervene is at the wholesale level, without the need for further intervention at the retail level. In this Annex we consider two wholesale-level approaches that some stakeholders have advocated:

- **Variable termination rates:** Introduction of termination rates that are linked with retail prices (the “Fourth option” below); and
- **Regulating termination:** Regulation of the level of termination rates (the “Fifth option” below).

A4.9 Our current view is that the five options discussed in this Annex are likely to be partial solutions and would not address all our concerns. We currently consider that the unbundled tariff (discussed in Annex 5) would be the most promising option, with maximum prices as the second most appropriate option (discussed in Annex

⁴⁵⁹ 2006 NTS Statement, paragraph 1.15.

⁴⁶⁰ 2006 NTS Statement, paragraphs 1.3-1.5.

6). Note that, as discussed in Annex 7, on some number ranges our preferences between these two options are reversed.

First option: Status quo

A4.10 We now assess the option of maintaining the status quo. First, we describe this option. Second, we set out stakeholders' views. Third, we present our assessment of this option.

Definition

A4.11 As set out in our *Better Policy Making* guidelines we have considered the option of maintaining the status quo and not changing current regulation in relation to non-geographic calls.⁴⁶¹ This option involves maintaining the current limits on BT's retail pricing as specified in the NTNP. Other OCPs would remain largely unregulated (subject to some exceptions, such as the requirements for 03, 080 and 0870 calls specified in the NTNP). The NTS Call Origination Condition on BT would be maintained.

Stakeholder views

Responses to the Call for Inputs

A4.12 Several respondents to the Call for Inputs explicitly advocated the status quo. In particular:

- BSkyB considered that the current structures and commercial arrangements around the allocation, cost, price and use of non-geographic calls generally work well. It considered that these arrangements largely meet the needs of the industry at all levels, all users of non-geographic numbers, and the majority of callers.⁴⁶²
- The PRA considered that commercial arrangements between SPs and networks should remain largely unregulated, with Ofcom only becoming involved if there are SMP issues. The PRA also raised the potential for applying guidelines to ensure that anti-competitive activity such as price fixing is not allowed.⁴⁶³

A4.13 However, some respondents were against maintaining the status quo (either implicitly or explicitly) and raised particular issues with the current system, with some suggesting potential remedies. Where respondents advocated particular remedies this is covered as part of our discussion of those remedies below. See also Annexes 2 and 3 which set out respondents' views about the current operation of the retail and wholesale levels.

SPs' views

A4.14 Only 36% of respondents to the 2010 SPs survey considered there to be problems with the current regulatory regime.⁴⁶⁴ A significant number of respondents thus

⁴⁶¹ *Better Policy Making*, 21 July 2005, paragraph 5.13 available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/better-policy-making/Better_Policy_Making.pdf

⁴⁶² BSkyB response to Call for Inputs, paragraph 8

⁴⁶³ PRA response to Call for Inputs.

⁴⁶⁴ 2010 SPs survey, page 22.

claim to have no issues with the current regime for non-geographic numbers and that they are happy with the level of choice and competition. Nonetheless a significant minority of respondents to the 2010 SPs survey considered there to be problems. Similarly all the SPs that responded to the Call for Inputs expressed at least some concerns about the current operation of the non-geographic calls market.

Preliminary assessment

- A4.15 As discussed in Sections 4 and 5 we consider that the current situation is leading to consumers (including SPs) and citizens experiencing a substantial degree of harm. Price transparency and awareness are poor and it is likely that non-geographic call charges are too high relative to other telephony charges. SPs are unable to exert much control on the retail prices for their services which reduces both service availability and incentives to invest and innovate.
- A4.16 Furthermore, there are questions as to whether the status quo is sustainable going forward. The majority of the restrictions on retail prices specified in the NTNP just apply to BT. This was appropriate historically, given BT's dominant position at the retail level. However it is questionable whether it is appropriate to continue to asymmetrically impose regulation on BT in this way. In particular, in 2009 we concluded that most of the UK retail markets (with the exception of Hull) are now effectively competitive.⁴⁶⁵ Just looking at non-geographic calls in isolation, we estimate that in 2009 BT retailed approximately [3%] of non-geographic calls.⁴⁶⁶
- A4.17 Putting aside the appropriateness of asymmetric regulation in the absence of market power, our assessment is also that the current regime is not delivering for consumers. As set out in Section 5 and Annex 2, the consumer experience of non-geographic call services is poor and consumers are disengaging. In this context a regulatory structure which offers relatively low consumer benefits would appear inappropriate.

Second option: Deregulation

- A4.18 We now assess the option of deregulation. First, we describe this option. Second, we set out stakeholders' views. Third, we present our assessment of this option.

Definition

- A4.19 Ofcom has a general preference against intervention if the market is likely to deliver a good outcome for consumers.⁴⁶⁷ It is thus appropriate to consider the potential effect of removing regulation altogether.⁴⁶⁸
- A4.20 What we mean by deregulation is set out in Section 2.

⁴⁶⁵ More specifically, we concluded that BT no longer has significant market power ("SMP") in the provision of retail fixed narrowband analogue access and retail calls markets in either the residential or business sectors. *Fixed Narrowband Retail Services Markets*, 15 September 2009, paragraph 1.2., http://www.ofcom.org.uk/consult/condocs/retail_markets/statement/statement.pdf

⁴⁶⁶ 2010 Flow of Funds study. Underlying spreadsheet, "Aggregated volumes" sheet, "Retail originated traffic" for BT divided by "Total traffic volume leaving OCPs".

⁴⁶⁷ As set out in our duties in the Act, S.3(3) (Ofcom's regulatory principles) and S.6(1) (duty to reduce regulatory burdens).

⁴⁶⁸ *Better Policy Making*, 21 July 2005, paragraphs 1.1 and 5.14 available at: http://stakeholders.ofcom.org.uk/binaries/consultations/better-policy-making/Better_Policy_Making.pdf

Stakeholder views

- A4.21 No respondents to the Call for Inputs explicitly advocated complete deregulation, although some commented on the need to remove particular aspects of regulation.⁴⁶⁹

Preliminary assessment

- A4.22 Annex 2 has described our assessment of the retail market in the absence of ex ante regulation.
- A4.23 It is difficult to see the problems for consumers being rectified without regulatory involvement. We recognise that, in the case of mobile shortcodes, mobile OCPs have introduced a similar system to the unbundled approach (Option 4 discussed below), without the need for regulation. Mobile providers introduced mobile short codes (4, 5 or 6 digit telephone numbers) for their own services and services provided by SPs in 2003 for the delivery of both voice and SMS. Short codes are widely used for value-added services such as television program voting, ordering ringtones, charity donations and mobile services. Messages sent to a short code can be billed at a higher rate than a standard SMS. Each short code will have a single price point applying to all mobile OCPs, meaning the presentation of the price message used for most mobile short codes is as follows:
- “This call/text will cost you X pence per minute plus your network access charge.”
- A4.24 Short codes are regulated by PhonepayPlus as premium rate, and are managed and allocated by the Short Code Management Group which is made up of representatives of all mobile network operators.
- A4.25 However there are no indications that similar industry initiatives are likely to arise in the event of deregulation. Indeed given the sharply differing views and interests expressed in stakeholders’ responses to the Call for Inputs, it is not obvious how consensus for voluntary action would be reached. In addition, there are many stakeholders that would need to be involved (including TCPs, SPs as well as OCPs) which may complicate any initiative, as may any potential sensitivities around sharing NGC (and, in the case of TCPs, hosting) pricing information with competitors.
- A4.26 Moreover, voluntary action by a single OCP or uncoordinated actions by multiple OCPs are unlikely to address our concerns due to the nature of these issues, which relate to the whole of the retail level. For example:
- In terms of consumers’ poor price awareness, the mobile OCPs generally set very simple price structures for non-geographic calls, such as a single pence per minute price for all calls to a particular 08 number range or a limited number of price bands for 09 calls. However, despite this simplicity, consumer awareness of the price of mobile calls remains very low.⁴⁷⁰ The difficulty for a SP that wishes to advertise the retail price of calling its service is the variation

⁴⁶⁹ For example, BT considered that the NTS Call Origination Condition should be removed since it limits competition at the wholesale level and places BT at a material disadvantage at the retail level (since its competitors’ retail retention is not restricted). BT response dated 2 June 2010 to the Call for Inputs, page 4.

⁴⁷⁰ For example, as explained in Annex 2 the majority of consumers say that they are “not confident” that they know the cost of calling different non-geographic numbers from their mobile. 2010 Consumer research, Q36.

in retail prices between different OCPs (and potentially by the same OCP across different tariffs). Unilateral or unco-ordinated action by OCPs is unlikely to address this.

- It is not in an individual firm's interests to address the vertical and horizontal externalities. For example, an OCP that unilaterally chose to reduce its margin on non-geographic calls is likely to have to increase the price of other, more prominent retail services (the tariff package effect). This is likely to place it at a commercial disadvantage, particularly as most consumers are unlikely to recognise that that OCP has reduced its non-geographic call prices (as a result of poor price awareness and the horizontal externality).

A4.27 In terms of our proposed assessment criteria:

- **Transparency/consumer price awareness:** Currently limited price awareness and the lack of easily assimilated consumer information leads to substantial concerns. Deregulation may result in even less information which is likely to worsen matters.
- **Price:** Deregulation is likely to result in even higher non-geographic call prices than at present. BT would be free to raise its non-geographic call charges. Any constraint that BT imposes on the level of other OCPs' non-geographic call prices would also weaken. Therefore, there is a risk that the balance of overall prices would be worse than today.
- **Service quality, variety and innovation:** Deregulation would be likely to exacerbate the lack of price transparency and the vertical externality since SPs would lose the ability to control the retail price of their services from BT. This would reduce service availability and the incentives for SPs to invest and innovate in services.
- **Access to socially important services:** Access to socially important services would be potentially more expensive than today if OCPs increase their non-geographic call prices.
- **Regulatory burden:** We accept that this option may reduce the regulatory burden by giving OCPs greater freedom at the retail level.

A4.28 Therefore, we consider that deregulation is very unlikely to improve on the status quo and indeed is likely to lead to worse outcomes for consumers and citizens.

Third option: Information remedies

Introduction

A4.29 Given that our main concern is the lack of price transparency and poor consumer awareness of prices it is natural to consider whether providing more information could alleviate our concern. Therefore, we believe that it is important to consider whether possible options to increase price awareness are likely to be effective, both for the consumers' choice of OCPs and when consumers have to make decisions on whether to make a NGC call or not, and the implementation feasibility of such options.

A4.30 A number of requirements for the provision of price information are already in place. General Condition 10 sets out information that must be published by

Communication Providers in the interests of transparency, including tariff information relating to all types of usage charges.⁴⁷¹ General Condition 14.2 requires the published usage charges for calls to NTS numbers, 0870 and Personal Numbers are given the same prominence in terms of location and prominence given to geographic calls, calls to mobiles and call packages. In addition the NTNP specifies that if the OCP charges for 080 calls, it must notify the caller at the start of the call.

A4.31 The effectiveness of these information provision requirements has been limited as evidenced by consumers' continuing poor awareness of prices (see evidence in Section 4). We consider whether the information provided to consumers could be improved at the following decision points:

- Point of subscription. One option we have considered is to tighten the requirements to provide point of sale information and up to date price lists.
- Point of call. In particular we have considered the following:
 - Pre Call Announcements (PCAs);
 - Price information line; and
 - Tariff Display Message.

Preliminary observations

A4.32 In response to the Call for Inputs, the Federation of Communication Services and FlexTel emphasised the importance of price transparency and suggested call price labelling and/or maximum tariffs as means of achieving it. Call price labelling allows the user to listen to a price information message when the caller dials the number with a pre-defined prefix before placing the call. This is conceptually similar to a price information line. Another respondent commented that it may be appropriate to require OCPs to play a PCA for calls to PRS numbers to improve the transparency of call charges to PRS numbers.

A4.33 Some respondents to the Call for Inputs were not in favour of mandated PCAs as a general remedy for NGC. C&W considered PCAs as an expensive and intrusive regulatory intervention. It also questioned whether meaningful price information could be provided by OCPs under the current pricing structure with a single network serving multiple retail providers. Scottish and Southern Energy Plc was also not in favour of mandated PCAs.

A4.34 We recognise that simply providing more information does not always assist consumers – there is the risk that they simply become overloaded or confused by large amounts of data. Before considering the options mentioned above it is useful to consider under which circumstances more or better information (i.e. in terms of timing and/or quality) could help consumers to make better choices. In order to be effective such information needs to:

- Be easily accessible by consumers at a time which is relevant for their choices;

⁴⁷¹ [Conditions which apply to all CPs and SPs are available at: http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/general-conditions/](http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/general-conditions/)

- Be complete and easy to understand and relevant to the choice facing consumers; and
- Enable consumers to act upon it.

A4.35 It is important to consider when price information may be important for consumers. In the case of NGCs consumers make two important choices:

- First, at the point of subscription. This involves consumers comparing different OCPs' offers and selecting their OCP.
- Second, at the point of call. This involves consumers deciding whether or not to make a non geographic call, which non geographic number to call (i.e. choosing between competing SPs) and which of the OCPs that they subscribe to they will use (e.g. making the call on their landline or on their mobile).

A4.36 In both cases it is important that consumers make well informed choices. The subscription choice ensures that OCPs have the right incentives to price their packages competitively and that they meet consumers' preferences. The choice at the point of call ensures that consumers do not make incorrect consumption choices i.e. they do not either under- or over-consume simply because they do not know the price. It also imposes a competitive discipline on both SPs and OCPs.

A4.37 In order to substantially reduce the scope of consumer harm requires improving consumers' decision both at the point of subscription and at the point of call.

Assessment of options at the point of subscription

A4.38 Currently many consumers are not provided with information on NGC prices at the point of subscription. For example, as set out in Annex 2, for those fixed and mobile consumers who had considered switching in the last 12 months, just 29% and 11% respectively had received information about 08/09 numbers.⁴⁷² However the majority of consumers did not appear particularly interested in receiving further information at the point of sale. Of those consumers that did not receive information, only 26% of respondents that had considered changing their fixed line supplier and 24% of respondents that had considered changing their mobile supplier would have liked to have receiving information about 08/09 numbers.⁴⁷³

A4.39 Given the current range and spread of NGC charges (as discussed in Annex 2) it seems very difficult to present information in a comprehensible form. OCPs' full price lists typically run to many pages. Moreover, callers would need to reach a view on which non geographic numbers they are likely to call. Unless the current charges could be substantially simplified consumers are unlikely to be able to effectively compare the various OCPs' offers. Therefore more obligations on OCPs to disclose information at the point of sale – such as tightening up the requirements to provide point of sale information and up to date price lists – seem unlikely to be effective. This is consistent with the high levels of consumer confusion that currently

⁴⁷² Q11/16: "Have you switched, considered switching you fixed line provider/mobile phone operator in the past 12 months?" Q12/17: "Did you receive any information about 08/09 numbers from the landline provider/mobile phone operator?" The 2010 Consumer research.

⁴⁷³ 29% of fixed respondents and 18% of mobile respondents answered "maybe". 45% of fixed respondents and 58% of mobile respondents would not have liked to receive information about 08/09 calls. 2010 Consumer research questions 14 and 19.

exist in relation to non geographic numbers, notwithstanding the existing publication requirements.

Assessment of options at the point of call

- A4.40 There are several different potential alternatives to providing point of call price information to increase awareness:
- Pre-Call Announcement (PCA). PCA is a non-chargeable price information message played to the caller at the beginning of a call.
 - Tariff Display Message. Price information could be potentially conveyed via a splash box that appears on the caller's screen when dialling a number.
 - Price information line. OCPs could be required to implement a price information line that provides price information on request.
- A4.41 PCAs are short duration and non-chargeable voice message played to the caller at the beginning of a call and is a direct response to low consumer price awareness of non-geographic calls. But some consumers might find PCAs as an annoying intrusion when making a call.
- A4.42 The tariff display message is equivalent to PCA, except that the message is displayed on the calling device. Tariff displays are likely to require much tighter integration between user devices and networks than that would be required for PCA. Moreover, tariff display capability might be limited to a selected set of devices hindering the effectiveness of this approach.
- A4.43 Price information line would be a standalone service that the consumers would call to obtain price information prior to making a call. Decoupling the price information from the actual call would reduce any annoyance some consumers might experience with PCA and avoid the risk associated with time-sensitive calls. But, a two-step calling process might cause unnecessary inconvenience to consumers. A variation of this approach to obtaining price information is
- A4.44 In the 2008 Consumer research we asked consumers their views on options to improve price transparency including PCA, tariff display messages and price information line⁴⁷⁴. The responses, based on 164 respondents, are summarised as average scores out of 10 in Table A4.1.

⁴⁷⁴ The 2008 Consumer research

Table A4.1: Average score (out of 10) of consumer views on point of call measures

	Overall	Ease of use	Improves price transparency	Like this option
PCA	8.0	8.7	8.5	8.1
Tariff display message	9.2	9.5	9.5	9.5
Price information line	7.3	7.6	8.0	7.6

A4.45 The small set of consumers surveyed wanted easy access to information and therefore preferred tariff display messages and PCAs over a price information line. They preferred tariff display messages because they are perceived to be less intrusive than PCAs. However, we consider that tariff display messages are likely to require much tighter integration between user devices and networks than that would be required for PCA. Moreover, tariff display capability might be limited to a selected set of devices hindering the effectiveness of this approach. Therefore, we consider PCA as the most effective measure among the three options.

PCAs

A4.46 The PCA could be delivered by the OCP, TCP or the SP and the content of the message might vary depending on the entity that delivers the message. An announcement conveying the total price of the call could be delivered by the OCP, whereas it would be too complex for the TCP to deliver such an announcement because of the complex retail price structures of the OCPs. Instead, the TCP could deliver an announcement about the service charge portion of the call. The different implementation options are described in detail in the 2010 Implementation Costs study.

A4.47 The 2010 Implementation Costs study did not find any technical barrier that prevents the implementation of PCAs and suggested some steps would be necessary to protect time-sensitive services from potential risks associated with PCAs. PCAs are currently implemented in some networks to convey generic messages to the caller; for example, mobile networks that charge for calls to 080 numbers announce a generic message that indicates the call is chargeable. PCAs were also implemented, albeit for a brief period, on calls to 070 numbers that exceed a price ceiling following Ofcom's decision. These requirements were subsequently withdrawn following concerns expressed by stakeholders on potential risk to time-sensitive services using 070 numbers⁴⁷⁵. Some countries, e.g. France, Netherlands, have implemented PCAs for NGC.

A4.48 The scale and complexity of delivering PCAs are greater for an OCP than a TCP due to the larger volumes of calls and greater number of price points handled by an OCP relative to a TCP. However, the TCP is unlikely to be aware of the retail price of a call and therefore might be unable to play an announcement that provides the total price of the call. The scale and complexity would be further reduced if the PCA

⁴⁷⁵<http://stakeholders.ofcom.org.uk/consultations/numbering03/070precall/>

is delivered by the SP, but a vast majority of SPs are unlikely to have the necessary capability to deliver a PCA. TCPs are also better placed to identify NGC associated with time-sensitive services and avoid playing a PCA on such calls. Moreover, legacy local exchange equipment deployed by some OCPs might lack the capability to play PCA suggesting a further limitation with delivery of PCAs by OCPs and preference for PCAs delivered by TCPs. Therefore, although all types of player face difficulties, the trade-off between the content of the PCA and the scale and complexity of implementation suggest that TCPs are best placed to implement PCAs.

- A4.49 Implementing PCAs across all call types would require significant implementation costs to upgrade network equipment to store, retrieve and play announcements at the point of calling. The 2010 Implementation Costs study found significant variation in capability among TCPs. TCPs quoted implementation periods up to 24 months and costs per TCP in the range £300k to greater than £1m. The costs suggested by TCPs were significantly lower than those suggested by OCPs.
- A4.50 We do not consider PCAs are likely to provide an effective and efficient general remedy for NGCs under the current pricing structure given the implementation costs and limitations set out above. Although PCAs increase price awareness at the point of calling, they are unlikely to improve price awareness at the point of subscription.
- A4.51 Moreover, information remedies as standalone measures might not address concerns stemming from vertical and horizontal externalities. Therefore, Ofcom considers it is appropriate to limit the scale of announcements to calls where other measures we are consulting on this review might not be sufficient to provide adequate protection to consumers.
- A4.52 It could still be a complementary measure to a remedy that better addressed the fundamental problems with the current regime. For example, it could accompany a remedy where retail prices are constrained in a predictable manner (under our proposed unbundled remedy or maximum tariffs). In such circumstances it would be possible to transfer responsibility for the PCA to the TCP (or SP) which might allow its affordable use in some contexts (e.g. high maximum calls charges in the 09 range) and so assist in improving price awareness. We discuss this option in more detail in Annex 6.

Preliminary views

- A4.53 We have considered a number of options to increase price information. We consider that providing more information at the point of subscription within the current pricing structure is unlikely to be effective. On the other hand, the provision of point of call information could improve price awareness for consumers. However, as stand-alone remedies, we have serious doubts that these could be an effective and efficient (in terms of cost of provision) way to completely address the consumer concerns we have identified. On the other hand, they might be a valuable complement to other remedies that tackle the root of the concerns.

Fourth option: Link termination rates to retail prices

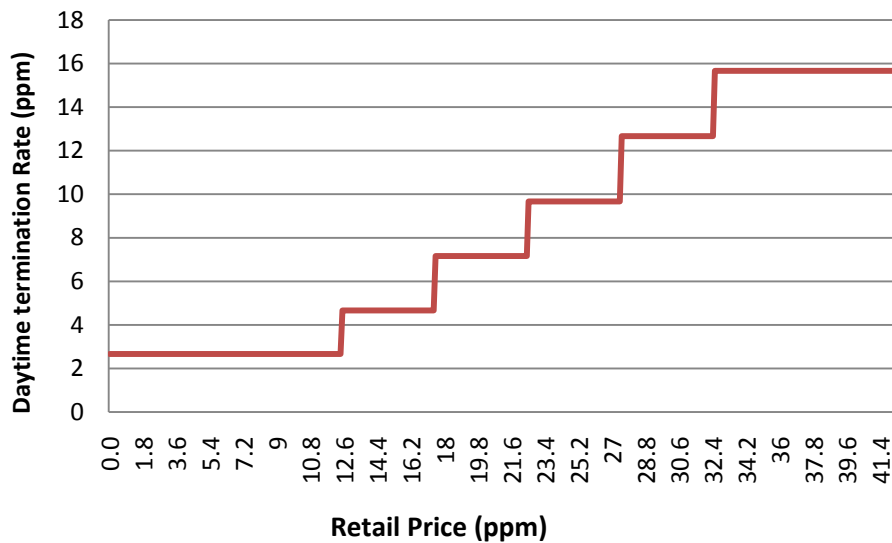
- A4.54 Instead of intervening at the retail level, it might be argued that a change to the wholesale arrangements could address our concerns. One potential option is a variable termination charge which depends on each individual OCP's average retail price for calls to a particular non-geographic number range (as shorthand we refer to such termination charge schedules as "variable termination charges").

- A4.55 In principle, termination rates that are linked to retail call prices might be developed by those involved in the supply chain rather than being initiated by regulation. Indeed, variable termination charges are a recent development in the market, as indicated by the introduction of variable termination charges for some non-geographic number ranges by BT, and 3 other TCPs.
- A4.56 Additionally, there are a number of scenarios considered in this consultation where variable termination charges introduced by the industry could be relevant:
- a) The status quo;
 - b) Deregulation; and
 - c) The unbundled remedy.
- A4.57 Given these recent market developments and the potential relevance of industry-led⁴⁷⁶ variable termination charges in certain scenarios in the future, we believe it is necessary to consider the potential economic effect they may have in order to assess whether variable termination charges introduced by the industry would be an appropriate mechanism to address the issues relating to NGCs⁴⁷⁷. Termination rates that are linked to retail prices are thus somewhat different to the other options discussed above since they might arise as a consequence of other developments in the industry rather than regulation.
- A4.58 There are several forms a variable termination charge could take. For example, BT introduced a variable termination rate schedule for 080, 0845 and 0870 calls, which meant the termination rate increased with price in a series of steps as illustrated in Table A4.2.⁴⁷⁸ We are also aware that at least one other TCP introduced a linear termination rate schedule, i.e. the termination charge increases proportionally with the OCP's average retail price rather than in steps.

⁴⁷⁶ Alternatively, variable termination charges might arise as a consequence of some form of regulation at the wholesale level. Although the discussion below is focused on an industry-led approach, we briefly comment at the end on the possibility of regulatory imposition of variable termination charges.

⁴⁷⁷ In order to do this, we abstract from our determinations of the disputes we received in relation to BT's variable termination charges for 080, 0845 and 0870 as we consider disputes within the existing regulatory environment.

⁴⁷⁸ NCCNs 956 (and subsequently, 1007 and 1046), 985 and 986.

Table A4.2: An example design of variable termination charges

A4.59 There are some practical implications of variable termination charges. For example, the placing of OCPs on the termination schedule, any complications around ported numbers, and the methodology behind determining the retail price used, for example, an average price calculation. The practical complications in deriving the average retail price of each OCP may include the calculation methodology when OCPs offer a range of tariffs with different charging structures, changes over time in tariffs and their use by consumers (which may affect the weights in any average price calculation), and the treatment of wholesale partners of the OCP (e.g. BT has proposed that the average retail price for mobile OCPs for its variable termination charges should include the average retail prices of that OCP's wholesale partners such as the MVNOs to which it provides wholesale services – any such arrangements would need to avoid the risk of anti-competitive sharing of price information between competitors).⁴⁷⁹ In addition, we note that there are likely to be implementation costs which, depending on the approach used, could be significant.

A4.60 Industry level agreement on variable termination charges and how to address these practical issues would appear unlikely given the opposing incentives of stakeholders. For example, the strong opposition of mobile OCPs to linking termination rates to retail prices for 080, 0845 and 0870 calls is evident in the 080 Dispute Determination and the 0845/0870 Dispute Determination. However, our analysis of variable termination charges abstracts from these issues in order to determine the effectiveness of this industry-led approach, were it achieved.

Stakeholder views

A4.61 In response to the Call for Inputs, three respondents commented on variable termination rates:

- Flextel considered that termination rates being based on OCPs' retail prices should not be permitted as it is unworkable, does not follow the "free market supply-chain model" and will lead to costly disputes.⁴⁸⁰

⁴⁷⁹ See, for example, the practical issues related to BT's 0845/0870 variable termination charges discussed in the 0845/0870 Dispute Determination, paragraphs 9.44-9.48.

⁴⁸⁰ Flextel response to the Call for Inputs, page 4.

- T-Mobile/Orange consider that there seems to be no logical basis or similar precedent for a move to retail price-related termination rates, and Ofcom should not allow the precedent to be established without careful analysis of its wider implications. In particular, it considers that a move away from cost-based interconnection toward a bilateral bargaining approach would have far-reaching and difficult to predict consequences for operators, competition and consumers.⁴⁸¹
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A4.62 BT, who has previously introduced a form of variable termination charges, did not explicitly advocate such an approach in response to the Call for Inputs. Instead, it advocated maximum retail prices applicable to all OCPs, although it did state that the division of revenue should be open to commercial negotiation⁴⁸².

Preliminary assessment

A4.63 The fundamental economic issue is that an approach relying on variable termination charges leaves the balance of prices between callers and SPs to be determined by TCPs, i.e. the level of the call price and the payment by or to the SP including revenue share. It is not clear that TCPs, acting in their own self-interest, have the right incentives to set a reasonably efficient balance of prices between callers and SPs for each number range.

A4.64 We would expect TCPs to introduce termination rate charging arrangements that are most profitable for them. In this respect a TCP faces conflicting incentives:

- a) If its variable charges induce OCPs to reduce retail prices, this may lead to increased call volumes from which the TCP may benefit.
- b) On the other hand, the more that OCPs reduce retail prices, the lower the variable termination charges and so the smaller the TCP's profit margin per minute of termination.

A4.65 It is not immediately clear which of these effects is likely to dominate, nor that it will necessarily be the same for all TCPs. Therefore there is some ambiguity in the incentives of a TCP in setting variable termination charges. As a result, it is not clear whether they will target reductions in NGC prices by OCPs or increases in termination payments, nor how this would vary by TCP and number range (meaning there may be implications for the externalities as well as price transparency).

A4.66 As the SP is the customer of the TCP, the preferences of the SP may affect the incentives of the TCP and the variable termination charge introduced. For example, if the SP would prefer a lower retail call price to its service, the TCP may be incentivised to introduce a variable termination charge that incentivises a price reduction from OCPs in order to reflect the preferences of the SP (and so avoid losing the SP to a competing TCP). Conversely, some SPs may prefer a greater revenue share, and so encourage the TCP to set a variable termination charge which does not incentivise a strong price reduction from OCPs but instead generates a greater termination charge (and profit margin) per minute. Therefore, in theory, competitive pressure in the hosting market may mean that variable

⁴⁸¹ T-Mobile/Orange response dated 2 June 2010 to the Call for Inputs.

⁴⁸² BT response to the Call for Inputs, dated 30th April 2010

termination charges are able to internalise the vertical externality by incentivising OCPs to charge the retail price preferred by the SP.

- A4.67 However, there are reasons why variable termination charges may not provide an effective approach to internalise the externalities: because the TCP may not have a strong incentive to reflect the SP's preferences; and because SPs (like OCPs) are subject to the horizontal externality and so may not have the right incentives to deliver the best outcome for consumers.
- A4.68 Firstly, as noted above, the TCP's incentive to reflect the preferences of the SP relates to competition to win or retain that SP in competition against other TCPs. However, with respect to an SP's preference for lower retail call prices, this competitive motivation depends on the OCPs setting different retail prices for calls to different TCPs. For example, if TCP A introduced variable termination charges that led OCPs to reduce their retail call prices, but the OCPs reduced prices for calls to all TCPs, then other TCPs would also benefit and TCP A may not gain a clear competitive advantage over other TCPs. Indeed for mobile OCPs (the view of fixed OCPs is more mixed), although practices could change, the current approach is generally not to set different retail prices for calls to different TCPs (as discussed in Annex 3)⁴⁸³. This is another type of externality: because the benefits of the actions of any individual TCP accrue not only to that TCP but also to its competitors, its incentive to reflect the preferences of the SP through competitive pressure may be muted.
- A4.69 Secondly, although some SPs may care sufficiently about the call price paid by the caller that they have an incentive to provide the best outcome for consumers (e.g. those SPs subject to strong competitive pressure or providing a socially important service), many SPs are likely to be subject to the horizontal externality. That is, it is likely that many SPs have an incentive to set higher call prices than would maximise the benefit of the NGC system to consumers. Analogously to OCPs, these SPs have an incentive to free-ride on, and thereby contribute to undermining the reputation of, the relevant non-geographic number range and consumer confidence in the NGC system as a whole (see discussion of the horizontal externality and SPs in Annex 2). This is especially the case, for example, for SPs that offer 'locked-in' NGCs (as discussed in Annex 2).
- A4.70 There is generally a mix of types of SP on each number range. These differences mean it is not clear whether variable termination charges would target lower retail prices or higher termination payments (to increase the revenue share to the SP). How these preferences differ by SP and the balance within number ranges is also uncertain.
- A4.71 Whether the preferences of TCPs (and SPs) are aligned to incentivise NGC price reductions or not, TCPs are in any event reliant on the design of the variable termination charge incentivising a behavioural response from OCPs to deliver the desired retail prices. However, providing the right incentives to create this response is likely to be a complex task, the outcome of which is uncertain and may lead to unintended consequences (such as for the level and distribution of prices for consumer across tariffs).
- A4.72 Therefore, different TCPs (and SPs) may have different preferences and incentives, so they target different call prices as the outcome of their variable termination

⁴⁸³ In contrast, fixed OCPs generally set a range of retail prices within non-geographic number ranges (with the exception of 080, 0845 and 0870 calls) – see discussion in Annex 3.

charges. Additionally, the incentive properties of any variable termination charges depend on its design and the behavioural response it induces from OCPs, and so is complex and uncertain. Within this context, below we consider this option against our proposed assessment criteria to assess whether variable termination charges introduced by the industry could alleviate the consumer detriments of the current regime.

Transparency/consumer price awareness

- A4.73 Variable termination charges do not directly address poor consumer price awareness as there is no clear relationship between this concern and the termination rate schedule. Therefore any effect would be an indirect one, relying on the termination rate schedule creating the right incentives for OCPs to simplify their NGC pricing and/or reduce the absolute price levels in a way which ultimately improves price transparency and awareness.
- A4.74 There are three issues in relation to the impact on retail prices – firstly, the preferences of the TCP and SP; secondly whether these preferences are aligned, particularly within number ranges; and finally the behavioural response of the OCP.
- A4.75 Firstly, if TCPs and SPs have an incentive to target reduced NGC prices, variable termination charges may result in lower retail prices. As set out above, it is unclear that the TCP or SP has an unambiguous incentive to set variable termination charges that target reductions in call prices by OCPs.
- A4.76 Secondly, given this ambiguity, it is not clear that the incentives of each TCP (or SP) are necessarily aligned within and across all non-geographic number ranges. Therefore, different TCPs may adopt different strategies and different sets of variable termination charges which have different target prices for the same number range. As a result, it is unclear that the outcome of such a process would necessarily be to reduce retail prices or provide greater uniformity of prices. This may not only have implications for price transparency, but may also exacerbate the horizontal externality. Additionally, if the preferences of SPs diverge within number ranges, the vertical externality may not be internalised for all SPs unless multiple variable termination charges are available within number ranges.
- A4.77 Thirdly, not only will the impact on retail prices levels (and, indirectly, price transparency/awareness) depend on the incentives of the TCP, the outcome is also dependent upon the design of the schedule introduced and the behavioural response it incentivises from OCPs. It is likely to be difficult for TCPs to predict and incentivise particular responses from OCPs through the design of a variable termination charge due to the complexity and uncertainty around OCP pricing decisions and responses to this approach.
- A4.78 For example, it is possible that different TCPs will set different termination rate structures and levels, meaning OCPs face different variable termination charge structures by different TCPs⁴⁸⁴. OCPs will therefore have to consider their retail pricing response to the introduction of these charges (and any future price changes) within the context of variable and TCP-specific termination charge levels and structures, increasing the complexity of retail price decisions. The implication of this for the absolute and relative price levels of NGCs (and therefore consumers) is not

⁴⁸⁴ For example, different TCPs have already set different termination charge schedules linked to the OCPs' retail prices for 0845 and 0870 calls (i.e. BT and 3 other TCPs). This issue was discussed in the 0845/0870 Dispute Determination, paragraph 9.48.

clear. For example, some OCPs may simplify their NGC prices in order to make its placement on a schedule (and ultimately ensure appropriate margins) easier. Alternatively, others could perhaps adopt more extreme variations in prices to influence the termination rate payable through an average price (if used) due to any traffic weighting, whilst maintaining a high margin on some NGCs. These decisions are further complicated if the termination rate schedule can be varied by TCPs at different times.

- A4.79 Therefore this relationship between retail prices and termination rates adds a layer of complexity to OCP price setting behaviour (particularly if the schedule of variable charges differs by TCP), and it is not clear how OCPs would react to such an approach. In particular, the pricing response by an OCP will depend on a variety of factors such as its own strategy, its approach to pricing, and the starting price, and so could also vary by OCP (meaning some consumers may be worse off even if some benefit). This may make the design of any variable termination charge by the TCP much more complex so as to incentivise the preferred outcome from all OCPs. Depending on which consumers are worse off and which better off, it may also affect the desirability of the outcome, e.g. in terms of socially important services. As a result, the effect for consumers and price awareness is uncertain.
- A4.80 Widespread NGC retail price reductions or consistency of prices are not therefore guaranteed, and this could have implications for the externalities. Variety in OCP retail prices may exacerbate the horizontal externality. Additionally, although the variable termination charge could be introduced with the aim of internalising the vertical externality, the complexity and uncertainty around achieving the target retail price from all OCPs through a variable termination charge means the retail price may still not reflect the preferences of the SP. This is also complicated if the preferences of SPs and TCPs are not aligned, particularly within number ranges.
- A4.81 Even if variable termination charges change the level of retail prices, this may not automatically improve transparency. For example, mobile OCPs generally set very simple price structures for NGCs, such as a single pence per minute price for all calls to a particular 08 number range or a limited number of price bands for 09 calls. Despite this simplicity, consumer awareness of the price of mobile calls remains very low.⁴⁸⁵
- A4.82 It is possible that variable termination charges could lead to greater uniformity of prices across OCPs, if they all respond to the variable termination charges in a similar way (and the incentives of TCPs and SPs - reflected in the schedule chosen - are aligned within a number range). It is conceivable this outcome (if achieved) could assist in improving consumers' price awareness since pricing structures may be less complex, and comparisons between OCPs may be easier as a result. However, uniform prices within number ranges may still be confusing for consumers if there continued to be a large number of ranges, each with a different – albeit uniform – price which required knowledge of the third or even fourth digit of the prefix. In addition, the variable termination charges and retail prices would be susceptible to change by any TCP or OCP at any time, according to their own incentives. Therefore SPs would still not have certainty about the retail price consumers would pay to reach their service, making the provision of accurate price information more difficult for SPs.

⁴⁸⁵ For example, as explained in section 5 the majority of consumers say that they are “not confident” that they know the cost of calling different non-geographic numbers from their mobile. 2010 Consumer research, Q36.

- A4.83 Therefore, given the potential for the private incentives of TCPs (and SPs) to not be fully aligned for each number range, the potential persistence of the horizontal and vertical externalities, and the potential complications for retail price responses by OCPs, it is not clear that a variable termination rate would directly help price transparency and improve price awareness.

Price

- A4.84 Firstly, given the uncertainty around the effect on retail prices and price transparency, it is difficult to determine what effect the variable termination charges could have on the structure of prices, and therefore whether they will lead to a pricing structure which more accurately reflects informed consumer preferences (also reflecting the vertical horizontal and vertical externality). In particular, the effect on retail prices will be highly dependent upon the structure and level of termination charges, and the incentives of the different players (which will be affected by competition and price transparency). Therefore, although as noted above variable termination charges could, under certain conditions, incentivise a change in NGC prices (thus potentially triggering a restructuring of all retail prices), it is difficult to be confident that this would be the case given the uncertainty and complexity around designing a variable termination charge that will incentivise a particular NGC pricing response from all OCPs.
- A4.85 Secondly, as discussed above, the structure of prices may still fail to reflect the preferences of SPs or consumers (i.e. fail adequately to internalise either the vertical or the horizontal externalities).
- A4.86 Thirdly, taking the considerations above into account, it is not clear that variable termination charges provide an effective mechanism to deliver a more efficient structure of retail prices by OCPs. The mechanism by which variable termination charges seek to provide incentives to OCPs to reduce their NGC retail prices is by the threat of higher termination charges if OCPs do not do so. Where lower prices by OCPs down to the target level are desirable and achieved by variable termination charges, they are effective in achieving this aim. However, if the variable termination charges fail to induce any price reduction or only partial reductions (i.e. not all the way down to the target level), not only is the mechanism ineffective in achieving the desired outcome, it may also be inefficient, because the result involves higher termination charges. This leads to a reduction in OCPs' profits from non-geographic calls, not because of lower retail prices, but because of higher termination charges. There is the potential for an undesirable tariff package effect, i.e. higher prices and reduced volume of other services offered by OCPs. There is also the potential for the higher termination charge to lead to increased revenue share to the SP, which might lead it to increase the quality or variety of non-geographic services, which would generally be desirable. It is uncertain whether the overall effect is desirable or detrimental to consumers.
- A4.87 Fourthly, even if TCPs wish to induce price reductions by OCPs and have the right incentives to set a reasonably efficient balance of prices, there is also the question of what level of call price they are targeting for each number range. The target may differ between number ranges and for some number ranges it may be difficult for the TCP to know the target. For example, the current policy intention is that each OCP's prices for 0870 calls are aligned with that OCP's geographic call prices. However, the TCP may not know each OCP's geographic call prices, which in any case may vary between different OCPs and may vary over time for each OCP.

A4.88 In summary, as set out above, the suitability of variable termination charges is highly dependent on achieving a structure which incentivises all OCPs to reduce their NGC prices to the “correct” level (leading to an overall restructuring of prices) and improve price transparency. Therefore we consider that the structure of prices is likely to continue to be suboptimal under variable termination rates as it is unclear that TCPs have the right incentives or information to target an efficient balance of prices and it is very difficult to predict the pricing response by OCPs with reliability. As a result, there is a significant risk of not achieving the desired outcome for consumers.

Service quality, variety and innovation

A4.89 Similarly, it is not clear what effect variable charges could have on SPs and their incentives to invest. As discussed above, SPs may be able to influence the variable termination charges introduced by their TCP to reflect their preferences (i.e. lower prices or higher termination – and therefore revenue share – payments). Therefore if NGC prices reduced or the termination rate increased to the level desired by the SP (internalising the vertical externality), then they may well benefit from the variable termination charges, either in terms of stimulating call volumes or receiving the desired level of revenue. Therefore it could incentivise innovation by SPs.

A4.90 However, it is not clear that variable termination charges will improve price transparency or adequately internalise the vertical or horizontal externality (as discussed above). Therefore consumer confusion may continue, meaning call volumes may remain relatively low, thereby failing to incentivise investment by SPs. If the result is higher termination charges and revenue share, there may be an enhanced incentive to invest. But, as noted above, the potential associated adverse effects of higher termination charges would also need to be taken into account.

A4.91 As a result, the impact on service quality, variety and innovation is not clear, and depends on the ability of TCPs to reflect the preferences of SPs, the extent of alignment in SP preferences, and the impact on consumer price awareness.

Access to socially important services

A4.92 Due to uncertainty around the effect on retail prices, it is not clear that variable termination charges will address the distributional concerns we have identified.

Regulatory burden and policy choices

A4.93 The regulatory burden of this option is limited given that it would arise as a result of industry agreements (as explained above). However, we noted above that there could be material costs of implementation for the industry, such as related to the derivation of average retail prices for each OCP.

Preliminary views on variable termination rates

A4.94 In light of the above, our preliminary view is that it is unlikely that the industry would be able to establish a coordinated approach to variable termination charges which addresses the three market failures or the consumer concerns we have identified.

A4.95 This is because the suitability of this option is dependent upon the incentives of TCPs and SPs, and the behavioural responses of OCPs. As set out above, there is a risk that those incentives are not aligned (across TCPs/SPs, within number ranges, with consumer preferences), and the behavioural response by OCPs is

complex to both predict and incentivise. Therefore the outcome is uncertain and dependent upon these factors, meaning it may not reflect the preferences of SPs, TCPs, OCPs or consumers and may fail to address the market failures identified (i.e. lack of price awareness, vertical and horizontal externalities).

- A4.96 Variable termination charges are, at best, an indirect way to achieve desirable outcomes, such as improved price awareness and a better structure of prices. However, there is a great deal of uncertainty around the impact of their introduction and the incentives they create. These points apply whether variable termination charges are industry-led or driven by regulation. We therefore consider that there are likely to be significantly more effective ways to address the market failures and concerns in NGCs and promote improved outcomes for consumers.

Fifth option: Regulating termination rates

- A4.97 Mobile OCPs, in their responses to the Call for Inputs, considered that the most appropriate intervention was regulation of the level of termination rates but no further intervention at the retail level. Our understanding is that the legal basis for such intervention (according to the mobile OCPs) would be our power to specify SMP conditions. The intention would be to address what the mobile OCPs saw as the strong wholesale market power of terminators. They regarded the retail level as competitive and considered that no further intervention was appropriate at that level.⁴⁸⁶

- A4.98 We do not consider that such an approach would be appropriate:

- a) First, even if termination rates are set at the appropriate level (whatever that might be - for some number ranges it is not entirely clear) through regulation, this would not address the retail concerns set out in Sections 4 and 5. The consequences of poor consumer price awareness would not be addressed. OCPs would still be free to charge whatever retail price they could commercially sustain and SPs would continue to have little control over the retail price of calls to their service. The reputation of non-geographic number ranges individually and collectively would remain impaired. To put the same point another way, the sources of the market failure we have identified arise even in the presence of effective retail competition, because they relate to lack of price awareness and externalities (vertical and horizontal).
- b) Second, the picture at the wholesale level is more complex than set out in the mobile OCPs' responses to the Call for Inputs. As explained in Annex 3, the balance of wholesale negotiating power depends on the identities of the OCP and the TCP involved. While a large TCP such as BT might be in a strong position when negotiating with small OCPs, smaller TCPs might be in a very weak position.

- A4.99 In terms of our proposed assessment criteria:

⁴⁸⁶ For example, Vodafone suggested that direct regulation of termination rates and observed that this does not require Ofcom to regulate retail prices. It stated that "Focusing regulation at the wholesale level would be consistent with Ofcom's regulatory principles, to adopt the least intrusive form of regulation available, and to prefer wholesale remedies over retail intervention whenever possible." Vodafone response dated May 2010 to the Call for Inputs, paragraph 36. Also O2 response dated 28 May 2010 to the Call for Inputs, page 5 and EE response dated 2 June 2010 to the Call for Inputs, page 4 (on termination rates) and pages 6-7 (on retail regulation).

- a) **Transparency/consumer price awareness:** as set out above, regulating the termination rate would not address the retail concerns, and the sources of market failure we have identified would continue. Therefore it is not clear why price transparency and awareness would improve following regulation of termination rates.
- b) **Price:** given the limited effect on price awareness and the failure to address the vertical or horizontal externality, it seems likely that high non-geographic call prices would continue under this option, resulting in a distorted structure of prices.
- c) **Service quality, variety and innovation:** the lack of price awareness and the vertical externality would continue under this option since SPs would still not have the ability to control the retail price of their services. Therefore, even if the termination rate was regulated, the issues around SP incentives to invest and innovate in services when demand is reduced and retail prices are high and vary by tariffs/OCP (set out in Annex 2) would continue.
- d) **Access to socially important services:** as this option does not address the price transparency or price level concerns, access to socially important services would still be a concern.
- e) **Regulatory burden:** this option would increase the regulatory burden as it would require regulation in order to determine and enforce the appropriate termination rates(which is the case of many of the number ranges; it would be difficult for the regulator to determine as we would need to form a view on the 'correct' level of revenue sharing to be supported).

A4.100 Therefore we consider that regulating termination rates is unlikely to be an effective way to address the consumer concerns we have identified.

Annex 5

The unbundled tariff remedy

Introduction

A5.1 In this Annex we discuss the unbundled tariff option. This option would be a departure from the current structure of charges for non-geographic calls. The potential impact of this option is highly dependent on the precise rules governing the components of the charges. Accordingly, we have set out our analysis of the option in some detail.

A5.2 This Annex is structured as follows:

- First, we describe how this option would work;
- Second, we discuss what tariff principles and maximum prices might apply to the access charge ('AC');
- Third, we discuss what tariff principles and maximum prices might apply to the service charge ('SC');
- Fourth, we consider SPs control over the SC charged to callers where the SP has ported its non-geographic number;
- Fifth, we discuss likely obligations relating to price disclosure;
- Sixth, we discuss implementation costs;
- Seventh, we discuss the implications of this remedy for the wholesale level; and
- Eighth, we evaluate this option against our assessment criteria.
- Finally we set out our preliminary views.

Definition

A5.3 A key retail concern identified in our analysis of the market is the lack of price transparency/consumer awareness of non-geographic call services. This arises from the difficulties for consumers to access price information and obstacles to understanding such information and acting upon it. This would suggest that a natural point of intervention would be the way in which call charges are structured, made available and presented to callers.

A5.4 When consumers can get access to information, the current standard presentation of the charges for non-geographic calls runs along the following lines:

"This call will be X pence a minute from a BT landline, possibly more from other communications providers and considerably more from your mobile."

A5.5 This approach has the advantage of offering some price information but clearly offers little real information or certainty for any caller not using a BT landline.

- A5.6 The approach can be contrasted with the message used for most mobile short codes:
- “This call/text will cost you X pence per minute plus your network access charge.”*
- A5.7 This short code message is less ambiguous, offering a clearly stated price point applying to all networks, though admittedly an understanding of the full retail charges is dependent on knowledge of the network access charge.
- A5.8 One approach to the provision of price information on non-geographic calls is to draw on the approach adopted in short codes. We call this approach the “unbundled tariff”. An unbundled tariff would separate the retail price of a non-geographic call into two parts: a service charge (“SC”) set by the service provider (usually through a TCP intermediary) and an access charge (“AC”) set by the OCP. It would potentially protect consumers by presenting the price of non-geographic calls in a simpler fashion. By helping to inform consumers about retail prices, well informed consumers are likely to be protected from high non-geographic call prices because competition works more effectively.
- A5.9 The unbundled approach would mean that SPs could provide callers with a message such as:
- “This call will cost you X pence per minute plus your network’s access charge”*
- A5.10 In this example, the X pence per minute figure would be the SC. This enables callers to readily compare the amounts charged by different SPs, which would facilitate competition between SPs. Provided that the caller knew what the AC charged by their OCP was, the caller would also know the price of the call.
- A5.11 We would expect the SC to approximate the termination rate (the exact relationship between the SC and termination rates is discussed in further detail below). In conjunction with the hosting payment from the SP to the TCP, it covers the costs of termination and hosting and the excess is likely to be passed to the SP through a revenue share where permitted. The SC supports service provision and is set by the SP. The AC is set by the OCP and would contribute to the costs it incurs, such as origination, retailing, billing plus whatever retail margin the OCP considers profitable.
- A5.12 Taking the two components of the retail price in turn:
- a) The AC is constrained by competition between OCPs. The unbundled approach would facilitate competition between OCPs, since in order to determine the cheapest means of originating a particular non-geographic call, consumers would just need to look at the AC. Provided the AC is structured in a simple way, it potentially provides a simple figure that consumers can readily take into account when selecting which OCP to subscribe to and which callers can easily remember, in order to make an informed choice about which device to use to originate a call. This contrasts with the multitude of non-geographic call prices that consumers are currently faced with; and
 - b) The SC is constrained by competition between SPs. Where two SPs offer similar services, a consumer would only need to compare their SCs in order to identify which SP is the cheapest. Such a comparison should be simpler to make than at

present. It is much easier for SPs to communicate the SC to callers than the multitude of retail prices that current exist for calling each SP.

- A5.13 To illustrate, consider the situation where there are 10 different OCPs and 100 different SPs.
- a) To compare two different OCPs, currently a consumer could potentially have to weigh up 200 different price points (100 different non-geographic call prices per OCP). Under the unbundled remedy, a consumer may simply need to compare two (the AC for each of the OCPs); and
 - b) Similarly, an SP that wishes to advertise the price of calling might have to communicate 10 different price points (one for each OCP). Under the unbundled remedy it only needs to communicate one (namely the SC).
- A5.14 The effectiveness of the unbundled remedy depends on the details of how the AC and SC would be specified. Below we discuss the options for tariff principles and maximum prices applying to the AC and the SC.
- A5.15 We also recognise that the unbundled remedy requires consumers to think about non-geographic call prices differently. Therefore the effectiveness of this remedy also relies upon consumers being able to understand and engage with an unbundled price structure. We intend to carry out further research to test how consumers respond to an unbundled price structure and how it affects their behaviour.
- A5.16 In responding to our Call for Inputs, Scottish and Southern Energy plc (“SSE”) proposed unbundling retail prices in this way (although it used slightly different terminology to that set out above). SSE considered that this approach would educate callers about the chain of costs. It would separate responsibility for the two elements of the price and make it clear that the OCP was responsible for justifying the level of the AC and that the SP was responsible for justifying the level of the SC. SSE considered that the unbundled remedy would make retail prices more transparent to callers. Further, this remedy would avoid the current practice of SPs describing the call prices by reference to the retail price charged by BT.⁴⁸⁷

Tariff principles and maximum prices applying to the AC

Introduction & overview

- A5.17 The AC is an element of the overall price. Below we consider whether we should specify further principles governing this tariff element and/or a maximum price. Specifically we consider three broad issues:
- i. First, the structure of the AC. We explain why it is appropriate to specify principles governing the way the AC can be structured within a particular tariff package (principles limiting variation between number ranges and variation by time of day);
 - ii. Second, variations in the AC between different tariff packages offered by the same OCP. We explain why it is not appropriate to prevent OCPs offering different tariff packages that each specify a different AC structured along the lines describe in i.; and

⁴⁸⁷ SSE response dated 28 May 2010 to the Call for Inputs, page 6.

- iii. Third, the level of the AC. The evidence is finely balanced on whether it is appropriate to set a low (cost based) maximum price in order to drive down this aspect of the price. We would particularly welcome consultation respondents' views on this issue. In the event that we did not specify a low maximum price, it may be appropriate to set a looser AC maximum as a safeguard. Again, we would welcome views on this issue.

A5.18 Below we set out the background to each of these issues. This is followed by an assessment of various policy options.

Background

A5.19 Below we infer how the AC might be structured assuming that we did not specify any tariff principles constraining that structure. This inference is based on OCPs' current retention on non-geographic calls. We also consider what the level of the AC might be in the event that we did not set a maximum price.

Structure of the AC with a particular tariff package

A5.20 Currently OCPs' retention on non-geographic calls varies significantly between number ranges. The 2010 Flow of Funds study suggests that this might be the case.⁴⁸⁸ Table A5.1 below uses this study to calculate OCPs' estimated retention on non-geographic calls i.e. the amount kept by the OCP taking into account retail prices and transfers to/from other communications providers.⁴⁸⁹ This suggests that both fixed and mobile OCPs earn a higher margin on 070, 09 and 118 calls than on 08 calls.⁴⁹⁰

⁴⁸⁸ The figures from the 2010 Flow of Funds study are not entirely determinative since they aggregate (i) across tariff packages supplied by each OCP; and (ii) across OCPs. However, as explained below, this variation is consistent with other data.

⁴⁸⁹ As explained on page 38 of the 2010 Flow of Funds study, where a call is part of a bundle of inclusive minutes no revenue has been attributed to that call. This is particularly relevant for mobile calls to 03 numbers where the data underlying the 2010 Flow of Funds study suggests that over 90% of calls are part of a bundle of inclusive minutes. Accordingly, we do not present figures for 03 calls in Table A5.1. For other number ranges this is less of an issue. Within bundle calls account for a tiny fraction (less than 5%) of calls to all other number ranges with the exception of fixed 03 (13%) and fixed 0845 and 0870 (both 20%).

⁴⁹⁰ Examples presented by TNUK suggest that mobile OCPs' retention on 118 calls may be even higher than given in Figure [COMPLETE]. TNUK 10 August 2010 Submission, Table 7 on page 17.

Table A5.1: OCP's retention by number range, 2009

	Volume (minutes)		OCP retention (excl. VAT) (£m)		Average retention (ppm)	
	Fixed OCPs	Mobile OCPs	Fixed OCPs	Mobile OCPs	Fixed OCPs	Mobile OCPs
070	41m	19m	£5m	£5m	11.6ppm	25.9ppm
080	10659m	529m	£58	£78m	0.5ppm	14.7ppm
0843/4	4907m	599m	£88m	£68m	1.8ppm	11.4ppm
0845	7792m	1218m	£156m	£163m	2.0ppm	13.4ppm
0870	2090m	387m	£63m	£41m	3.0ppm	10.6ppm
0871/2/3	1321m	288m	£10m	£35m	0.7ppm	12.2ppm
09	267m	75m	£47m	£27m	17.6ppm	36.1ppm
118	268m	109m	£34m	£25m	12.9ppm	23.1ppm
Total	27,454m	659m	£463m	£443m	1.7ppm	13.3ppm

Source: Ofcom calculations using data from 2010 Flow of Funds study. Volumes rounded to nearest million minutes and retention rounded to nearest £m and 0.1ppm

A5.21 Comparing OCPs' published retail prices with an estimate of the termination rate also reveals variations. To illustrate, Table A5.2 shows TalkTalk's retail prices (for its "Talk UK Anytime" package) and deducts VAT and an estimate of the termination rate to calculate TalkTalk's post-VAT retention.⁴⁹¹ This post-VAT retention varies significantly between number ranges. 0870 calls are inclusive ('free') but attract a small termination charge, resulting in negative retention. 080 calls are free to the caller but TalkTalk retains a small amount as a result of a payment from the TCP. On an 0844 call, TalkTalk retains a positive amount per call but its retention gradually falls the longer that the call goes on. On a high priced 09 call, TalkTalk's retention is markedly higher than on 08 calls.

⁴⁹¹ The termination rate was calculated using BT's NTS calculator. This calculates the termination rate (or, equivalently, the POLO) that BT would pay if that call originated on BT's network. Historically the termination rate paid by BT has been a strong influence on the termination rate that other OCPs pay (see Annex 3). It is thus a reasonable proxy for the termination rate paid by TalkTalk for the purposes of this calculation.

Table A5.2: Illustration of variation in retention between number ranges (TalkTalk retention on selected chargebands)

Charge band	Example prefix	Retail price (including VAT)	Retail price (excluding VAT)	Estimated termination rate (week day)	Estimated retention
	080	0	0	0.66ppm	0.66ppm
	0870	0 (inclusive)	0 (inclusive)	-0.56ppm	-0.56ppm
g6	0844	9.9ppc	8.43ppc		8.43ppc
		5ppm	4.26ppm	-4.98ppm	-0.72ppm
p0	090	9.9ppc	8.43ppc		8.43ppc
		165ppm	140.43ppm	-121.75ppm	18.68ppm

Source: Ofcom calculations. Retail charges for a “Talk UK Anytime” package taken from TalkTalk website. Termination rate calculated using POLO figures from NTS calculator (version 9; issued October 2010) assuming single tandem point of call handover

A5.22 Similarly BT’s post-tax retention is currently regulated on the majority of non-geographic calls. BT is permitted to retain a larger amount on some calls, to reflect differing bad debt risks (see below for further details).

A5.23 In addition, current non-geographic call prices are not simply a flat pence per minute amount. They can have a number of different components:

- *Time of day variation*: some fixed OCPs charge different retail prices for calling some numbers on a weekday, weekday evening and at the weekend. The large mobile OCPs do not vary their retail prices in this way.
- *Call set up fees*: fixed OCPs’ charges typically include these on most non-geographic calls, although there are some exceptions (some calls are entirely free). The large MNOs do not include call set up fees.

A5.24 To illustrate, we asked BT about the retail price of calling a specific 0870 number. Under BT’s “unlimited weekend” plan the price was 9.9ppc plus 5.9ppm on weekdays, 1.5ppm on weekday evenings and 0ppm on weekends. BSKyB and TalkTalk’s prices varied in a similar manner, while Virgin Media’s prices included a call set up fee but did not vary by time of day. In contrast, MNOs simply specified a ppm charge for calls to 08 numbers.⁴⁹²

A5.25 A further issue relates to bespoke agreements. There is evidence that some OCPs set lower charges for some SPs. As discussed in relation to the SC, some OCPs currently set lower charges for their preferred or affiliated DQ provider. Similarly, if the unbundled tariff were in place, some OCPs might agree a lower AC for their

⁴⁹² Orange also specified a minimum call price of between 15p and 40p for calling 08 numbers. BT response dated 23 June 2010 to question A5 of our information request dated 2 June 2010. BSKyB, TalkTalk, , Everything Everywhere, Vodafone and O2 responses to question A6 of our information request dated 27 May 2010.

preferred supplier (for example, in return for the SP charging a lower SC for calls from that OCP).

- A5.26 Our preliminary views, based on OCPs' current behaviour and evidence, is that it is likely that we would observe the following features if we did not specify any principles governing the structure of the AC. First, OCPs are likely to set different ACs for different number ranges, and possibly even for different numbers within a number range. Second, some OCPs are likely to set different ACs at different times of the day for some calls. Third, some OCPs are likely to include a per call element (e.g. an AC of 10p per call plus 3ppm). The implications of multiple ACs for consumers are discussed later in relation to our policy options for the AC.

Variation in the AC between different packages offered by the same OCP

- A5.27 Currently non-geographic call prices vary between packages offered by the same OCP.
- A5.28 In particular, the price of calling a non-geographic number is often higher for a pre-pay mobile caller than a post-pay (contract) mobile caller. The magnitude of the difference varies between operators and between non-geographic numbers. For example, on Orange's most popular tariffs the difference is 10ppm for an 080 number (15ppm compared to 25ppm), 20ppm for an 0870 number (20ppm compared to 40ppm) and 5ppm for an 0871 number (35ppm compared to 40ppm). On O2's most popular tariffs the difference is typically smaller: 5ppm for an 080 number (15ppm compared to 20ppm) and a 0870 number (20ppm compared to 25ppm) and there is no difference for an 0871 number (both are 35ppm). On T-Mobile, headline prices were the same on its most popular pre-pay and post-pay tariffs for 080, 0870 and 0871 numbers (40ppm in each case).
- A5.29 The variation in non-geographic call prices is not limited to the distinction between pre- and post-pay mobile tariffs. For example:
- 0845 and 0870 are inclusive at all times under BT's "Unlimited Anytime" package but are only inclusive at the weekend under its "Unlimited Weekend" package;
 - Vodafone offers a bolt-on that results in 080, 0845 and 0870 calls being part of the bundle of inclusive ('free') minutes. The headline cost of this bolt-on is £5 per month; and⁴⁹³
 -
- A5.30 In conclusion, based on OCPs' current behaviour, we consider that many OCPs are likely to set different ACs for different packages, and the implications of this for consumers are discussed later in consideration of the policy options for the AC.

Determination of the level of the AC

- A5.31 The level of the AC would be set by the OCP. It would be shaped by the extent of competition between OCPs. Forming a view on what the level of the AC would be (in the event that we did not specify any principles governing its level) involves considering the extent of competition. Competition can take place at the point of

⁴⁹³ Email from Vodafone dated 12 August 2010.

subscription and when deciding whether to make a particular call. These are discussed in turn below.

Competition at the point of subscription

- A5.32 In essence, competition at the point of subscription involves callers taking the AC into account (alongside other factors, such as the monthly subscription charge) when deciding which OCP to select.
- A5.33 Currently, notwithstanding the poor consumer price awareness identified in Annex 2, there is evidence that there is at least some competition in relation to non-geographic calls. In particular, in January 2009 BT announced that it would include calls to 0845 and 0870 numbers within its calling plans.⁴⁹⁴ Other fixed OCPs then followed suit. For example, TalkTalk announced in April 2009 that it would also offer inclusive 0845 and 0870 calls.⁴⁹⁵
- A5.34 Obviously the extent of competition depends on whether OCPs provide information on the level of the AC at the point of subscription (in a similar manner to the way they provide information on monthly subscription charges or geographic call prices). We would envisage that the unbundled tariff remedy (if we were to adopt it) would be accompanied by a requirement for OCPs to present the AC in a clear and unambiguous manner at the point of sale. This will support competition at the point of subscription.
- A5.35 Nonetheless, the majority of callers currently do not consider that the cost of 08 and 09 calls would be important when deciding which fixed or mobile OCP to subscribe to (see Annex 2 for further details).⁴⁹⁶ In the 2010 Consumer research we asked why respondents did not mention the cost of 08/09 calls.
- The main reasons for not mentioning 08/09 calls when selecting a landline supplier were “rarely use these numbers” (29%) and “don’t use these numbers” (28%); and⁴⁹⁷
 - The main reasons for not mentioning 08/09 calls when selecting a mobile supplier were “don’t use these numbers” (30%), “don’t use a mobile for these numbers” (16%) and “rarely use these numbers” (10%).⁴⁹⁸
- A5.36 In 2009 non-geographic calls accounted for 20% of fixed call minutes and 3% of mobile call minutes.⁴⁹⁹ When assessing the extent to which non-geographic calls

⁴⁹⁴ BT press release, 8 January 2009. Available at:

<http://www.btplc.com/news/Articles/ShowArticle.cfm?ArticleID=E501C5EF-11A2-4779-A932-177450ECD870>

⁴⁹⁵ TalkTalk press release, 3 April 2009. Available at: <http://www.talktalkgroup.com/press-centre/news/press-office/132/talktalk-to-offer-free-local-calls-anytime>

⁴⁹⁶ For example, in the 2010 Consumer research, only 11% of respondents spontaneously mentioned “the cost of calls to 08xx/09 numbers” as an important factor when choosing a new landline supplier (question 5). This was the eighth most popular response (most popular was “monthly cost of the package” which was spontaneously mentioned by 65% of respondents). Total mentions (prompted and unprompted) were 30% (questions 5 and 7). Similarly, only 9% of respondents spontaneously mentioned “the cost of calls to 08xx/09 numbers” as an important factor when choosing a new mobile supplier (question 6). This was the eighth most popular response (most popular was “cost of calls/texts” which was spontaneously mentioned by 65% of respondents). Total mentions (prompted and unprompted) were 21% (questions 5 and 7).

⁴⁹⁷ 2010 Consumer research, question 8.

⁴⁹⁸ 2010 Consumer research, question 10.

⁴⁹⁹ 2010 Flow of Funds study, pages 2 and 4. This is consistent with confidential data provided by BT.

would be taken into account, how often callers *believe* they call non-geographic numbers is arguably more relevant than how often they *actually* call these numbers. Callers were asked to estimate how often they called different number ranges. The results are set out in Table A5.3 below.

- Respondents claim they call 0800 numbers on their landline more often than other 08 number ranges. Claimed usage of 09 numbers is much lower than 08 numbers. However even for 0800, usage appears low: the majority of respondents (66%) claim never or rarely to call these numbers and only 11% claim to call them regularly (every week); and
- The majority of respondents claim that they never call these numbers on their mobile and those that do call these numbers generally do so less than once a month.

Table A5.3: How often respondents estimate they call particular number ranges from their landline and mobile phone

	Regularly (every week)		Sometimes (every month)		Rarely (less than once a month)		Never	
	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile
0800	11%	1%	23%	7%	44%	18%	22%	74%
0844/0871	3%	1%	14%	4%	38%	13%	45%	82%
0845/0870	6%	2%	22%	7%	39%	14%	33%	77%
09			4%	1%	16%	6%	80%	92%

Source: 2010 Consumer research, questions 21 and 25

A5.37 Overall, callers believe that they currently call non-geographic numbers infrequently, especially on their mobile phones. This suggests that the majority of callers would place little emphasis on the AC when switching supplier, particularly when selecting a mobile supplier. This issue is exacerbated if the unbundled remedy does not apply to certain popular number ranges such as 080.⁵⁰⁰ It implies that competitive constraints on the AC at the point of subscription are unlikely to be strong.⁵⁰¹

A5.38 This is consistent with callers' lack of interest in receiving additional information. Callers that had considered switching supplier in the last 12 months were asked whether they received information about 08/09 numbers. Those that responded that they had not received any information were asked whether they would have liked to have received information. The responses are reported in Table A5.4 below.

⁵⁰⁰ We discuss this issue further as part of our analysis of different number ranges.

⁵⁰¹ We are not suggesting that the unbundled remedy reduces competition relative to the current situation or the Deregulation Scenario. Rather the increase in competition from the unbundled remedy may not be large.

Table A5.4: Interest in receiving information about 08/09 calls when switching supplier amongst those who did not receive this information

	Respondents that considered switching landline supplier	Respondents that considered switching mobile supplier
Yes	26%	24%
Maybe	29%	18%
No	40%	55%
Don't know	4%	3%

Source: 2010 Consumer research, questions 14 and 19

Competition at the point of call

- A5.39 The second point at which competition occurs is when selecting which device to use to make a call. In particular, the majority of callers have both a landline and a mobile and may thus have some scope to substitute between them.⁵⁰² Note that, for competition to be effective, such substitution is not just a matter of identifying the cheapest means of making a call. Understanding the magnitude of any price difference is important, so that price can be weighed up against other factors. For example, a caller might decide “I know the AC is only a couple of pence higher on my mobile than on my landline, so I’ll use my mobile since it is more convenient”.
- A5.40 Under the unbundled remedy, the strength of competition at the point of call depends on callers’ ability to recall the ACs for both their fixed and mobile OCPs when considering whether to make a call.⁵⁰³ This will depend not least on how simple the AC is – it is likely to be harder to accurately remember if it varies by time of day, by number range etc.
- A5.41 Callers seem able to form a view on the relative price of mobile and fixed calls (notwithstanding their general poor awareness of prices). We asked callers about the relative price of fixed and mobile calls. For 0800 calls, 79% thought mobiles were more expensive (11% responded “don’t know”). For other 08 calls and 09 calls, 77% thought mobiles were more expensive (14% responded “don’t know”).⁵⁰⁴ It is plausible that this awareness would be even higher under the unbundled remedy.
- A5.42 However, while callers seem able to develop broad ‘rules of thumb’ about the price of these calls, this does not necessarily mean that they can accurately recall charges. In this regard, our consumer research found that callers are increasingly

⁵⁰² In the 2010 Consumer research, 70% of respondents said they use both a landline and a mobile phone when making telephone calls for personal use (question 1). 8% only used a landline and 22% only used a mobile. Separate research for Ofcom found that only 14% of adults live in a household with a mobile phone but no landline (Q1 2010). Source: <http://media.ofcom.org.uk/facts/> viewed on 26 October 2010.

⁵⁰³ Whether or not callers remember the AC seems to be the key issue. While in principle callers could look up the AC if they are unsure, in practice most callers are unlikely to do so. This is supported by the 2009 Consumer research which indicates that only a minority of consumers (18%) have ever looked up pricing information to determine the cost of a call. 2009 Consumer research, question 33 (base: all respondents, n=1,229).

⁵⁰⁴ 2010 Consumer research, questions 33 and 34.

distant from the costs of an individual call. Callers tend to think in terms of inclusive call minutes and the majority only looked at the headline monthly charge, rather than the detail of their bill.⁵⁰⁵

- A5.43 Table A.9.3 above shows callers' beliefs about how frequently they call non-geographic numbers. Given non-geographic calls account for a relatively low share of calls (particularly on mobiles), they are unlikely to be important enough for callers to exert a large amount of effort trying to remember different ACs. In other words, unless ACs are simple and easy to remember, callers are unlikely to recall them.
- A5.44 Overall, the extent of competition at the point of call depends on callers' abilities to remember the ACs of the different services they subscribe to. Unless ACs are easy to remember, competition is unlikely to be strong.

Other constraints

- A5.45 The unbundling remedy makes it clear which party (the OCP or the SP) is responsible for each element of the price. An OCP that sets a high AC risks attracting negative publicity. This may act as an additional constraint on OCPs' behaviour. However, it is unclear how strong this factor is likely to be and thus we do not take it into account when assessing whether it is appropriate to specify further principles limiting the AC.

Policy options for the AC

- A5.46 In light of the above discussion, we consider various policy options.
- A5.47 First, in relation to the structure of the AC within a particular tariff package whether we should:
- Not specify any principles governing the way the AC can be structured within a particular tariff package (**Option 1**); or
 - Specify tariff principles that prevent the AC from varying in certain ways (**Option 2**), in particular:
 - Preventing the AC from varying between some or all number ranges (**Option 2a**); and/or
 - Preventing the AC from including elements other than a ppm charge that applies at all times of the day (**Option 2b**).
- A5.48 Second, in relation to variations in the AC between different tariff packages whether we should:
- Not specify any principles governing variations in the AC between different tariff packages offered by the same OCP (**Option 3**); or
 - Specify tariff principles that limit the extent to which the AC can vary between different tariff packages offered by the same OCP (**Option 4**).
- A5.49 Third, in relation to the level of the AC whether we should:

⁵⁰⁵ 2010 Consumer research, pages 4 and 19.

- Not specify any maximum price (**Option 5**); or
- Specify a maximum price in order ensure that OCPs do not make excessive margins on the AC (**Option 6**); or
- Specify a looser (higher) maximum AC as a safeguard (**Option 7**)
 - Either from the outset (**Option 7a**); or
 - if and when we received indications that the unbundled remedy was not operating as intended (**Option 7b**).

A5.50 It is important to recognise that these decisions are interrelated. In particular, the more complex the structure of the AC, the weaker the likely constraints on its level. In other words, freedom over the structure of the AC (Option 1) would strengthen the case for a maximum price (Options 6 and 7).

Structure of the AC within a tariff package: Assessment of options

A5.51 Absent Ofcom specifying further principles, some OCPs are likely to set ACs that vary by number range and/or vary time of day and/or include a per call element.

A5.52 The key trade-off between Options 1 and 2 is that, in principle, allowing ACs to vary may send more efficient price signals to callers (for example about the underlying costs of providing a particular call). Such efficiencies are only realised if callers are aware of these differences in prices and are able to take them into account. However, as the complexity of tariffs increases, callers will find it more difficult to respond in this way. Increasing complexity can lead to the detrimental effects identified in the Annex 2, such as poor price awareness and higher non-geographic call prices (which, in turn, suppress demand).⁵⁰⁶

A5.53 We first assess Option 1 relative to Option 2a. There are benefits to allowing OCPs to set different ACs for each number range (Option 1). The cost of retailing calls to different numbers may differ. We regulate BT's retention on many non-geographic calls and, to account for these cost differences, allow BT to recover higher margins on some calls. The NTS Retail Uplift is slightly lower on Freephone calls (the difference is less than 0.05ppm) since there are no bad debt costs associated with these calls. To reflect the higher bad debt costs associated with PRS, the PRS Bad Debt Surcharge currently allows BT to retain 3.03% of retail revenues (net of VAT and discounts).⁵⁰⁷ This suggests that the greatest benefit of Option 1 comes from allowing a different AC for PRS calls.⁵⁰⁸

⁵⁰⁶ Indeed in principle OCPs may have an incentive to select a relatively complex structure for the AC because it makes it harder to compare between OCPs. Such complexity may allow OCPs to increase the level of the AC and reduce other prices (such as for geographic calls) which are more visible to potential subscribers.

⁵⁰⁷ *Charges between Communications Providers: Number Translation Services Retail Uplift charge control and Premium Rate Services bad debt surcharge*, 28 September 2005 (the "2005 Uplift Statement"), paragraphs 1.9 and 1.12. Available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/NTSfin/statement/statement_nts_uplift.pdf

⁵⁰⁸ A more fundamental question is whether it is efficient to recover the costs of bad debt by increasing the price of calls to a specific number range. The 2005 Uplift Statement set out some arguments in favour of doing so (at paragraph 5.2). The analysis below *assumes* that it is appropriate to attribute bad debt costs to 09 calls. If Option 2a is appropriate in these circumstances then it will

A5.54 However, we consider that a tariff principle that the AC should be the same for all non-geographic calls covered by the unbundled remedy is likely to be appropriate (Option 2a). The advantages of Option 2a over Option 1 are set out below:

- Vodafone stated that callers' abilities to distinguish between non-geographic numbers based on the third or fourth digit may be limited.⁵⁰⁹ This suggests that callers are likely to struggle to understand and to recall differences between the AC chargeable for a 0844 call as compared to an 0871 call (say). Such differences thus likely to lead to caller confusion;
- Callers' believe that they make relatively few non-geographic calls to each number range (see Table A5.3 above). Fragmenting the total number of non-geographic calls made by a caller into multiple smaller categories (each associated with a different AC) has two effects. First, it makes it less worthwhile to devote effort to recalling the AC for each number range. This limits the extent to which the unbundled remedy reduces uncertainty (and the consumer detriment associated with that uncertainty). Second, it also weakens the extent of competition (and the associated benefits for callers) at the point of subscription. Because each AC accounts for only a small fraction of calls, it is unlikely to be a significant factor in a caller's choice of OCP;
- This is of particular concern for PRS calls. These account for a very low proportion of all calls (as shown in Table A5.3 above). Only 4% of respondents to the 2010 Consumer research believe that they "sometimes (every month)" make 09 calls from their landline; for mobile the figure is 1%. Negligible numbers of respondents claimed to "regularly (every week)" call 09 numbers. In 2009, 09 calls accounted for 16% of fixed and 11% of mobile revenues from non-geographic calls.⁵¹⁰ The 2010 Flow of Funds study states that non-geographic calls accounted for 23% of fixed OCPs' call revenues and 5-6% of mobile OCPs' call revenues.⁵¹¹ Expenditure on 09 calls thus accounts for a very small proportion of callers' expenditure on fixed and mobile telephony. Given these low usage rates, callers are less likely to recall a separate AC for PRS calls. Moreover, competition on this element would be very weak when callers are deciding which OCP to subscribe to; and
- The number of ACs that a caller needs to remember at the point of call is doubled. Imagine the consumer is choosing between two OCPs (one landline, the other mobile) which both set three different AC's for three different sets of non-geographic numbers. In order to make an informed choice of whether to make a call using a landline or a mobile the caller would need to recall six different ACs (three landline ACs, three mobile ACs).

A5.55 Setting the same AC for calls that attract a higher bad debt risk (such as 09 calls) as for other calls where this risk is smaller (such as 08 calls) is likely to decrease the OCPs' margin on the former call type but increase the OCPs' margin on the latter call type. We have attempted to estimate the magnitude of this effect:

also be appropriate if fewer costs are attributed to 09 calls i.e. if the cost difference between 09 and other calls is smaller.

⁵⁰⁹ Vodafone response dated May 2010 to the Call for Inputs, paragraph 14.

⁵¹⁰ For fixed OCPs, retail revenue from 09 calls was £198m and total revenue from non-geographic calls was £1,204m. For mobile OCPs, retail revenue from 09 calls was £74m and total revenue from non-geographic calls was £659m. Ofcom calculations based on data underlying 2010 Flow of Funds study.

⁵¹¹ 2010 Flow of Funds study, pages 14 and 17.

- Under the unbundled tariff, OCPs' retention will equal the AC. We have used data from the 2010 Flow of Funds study to calculate OCPs' retention in 2009. We then calculated what access charge would generate the same level of retention for OCPs. To illustrate, suppose OCPs' average retention (in 2009) on one number range was X pence per minute and on another number range was Y pence per minute. This is equivalent to access charges of X and Y (under Option 1, where access charges vary between number ranges) or a single access charge that is the weighted average of X and Y (under Option 2a, where OCPs set a single access charge).
- This implicitly assumes that OCPs' average retention does not change as a result of the unbundling remedy.⁵¹² This assumption is made for modelling simplicity. and
- We are proposing that the unbundled remedy would not apply to the 080, 0870 and 03 number ranges (see Annex 7). Our calculations thus relate to the 070, 0843/4, 0845, 0871/2/3 and 09 number ranges.

A5.56 Applying this methodology, the results are set out in Table A5.5 below.

- Suppose OCPs set two different ACs: one applying to 09 calls and one applying to all other non-geographic calls that are covered by the unbundled remedy. Fixed OCPs might set ACs in the region of 17.6ppm (for 09 calls) and 2ppm (for other calls). Mobile OCPs might set ACs of 36.1ppm and 13.3ppm respectively.
- Suppose instead that we specified a tariff principle that the AC cannot vary between number ranges. This would result in a significantly lower price for calls to 09 and 118 and a slight increase in the price for calls to the other number ranges. Fixed OCPs might set an AC of 2.3ppm and mobile OCPs might set an AC of 14ppm (an increase for other calls of 0.3ppm and 0.7ppm respectively). The reason that the impact on the AC for calls to number ranges other than 09 is small is because retention on calls to 09 numbers is only a small fraction of total retention (approximately 8% of total non-geographic call retention).⁵¹³

⁵¹² This implies that the ratio of calls between different number ranges does not change. For example, if call volumes were to increase by X%, this increase is assumed to apply uniformly across all number ranges.

⁵¹³ Total OCP retention on non-geographic calls in 2009 was £906m. 09 calls accounted for £74m of this. Ofcom calculations based on the 2010 Flow of Funds study.

Table A5.5: Estimate of impact of specifying separate access charges for 09 and 118 calls

	Estimated fixed AC	Estimated mobile AC
Separate access charges (illustration of Option 1)		
All ranges except 09	2.0ppm	13.3ppm
09	17.6ppm	36.1ppm
Single access charge (Option 2a)		
All ranges	2.3ppm	14.0ppm

Source: Ofcom calculations based on 2010 Flow of Funds study. 03, 080 and 0870 number ranges excluded. Figures exclude VAT.

- A5.57 We now assess Option 1 relative to Option 2b, given these estimates. In principle, there are benefits to Option 1. Allowing OCPs to vary the AC by time of day potentially sends a price signal to encourage callers to use networks when they are less busy. Similarly, in principle, including a fixed component in the AC can reflect cost elements that do not depend on the length of a call, and thus sends price signals to callers that better reflect underlying costs.
- A5.58 However, in practice, we consider that these benefits of Option 1 are small. Callers' believe that they make relatively few non-geographic calls (see Table A5.3 above). Callers are thus unlikely to devote much effort to recalling the fine details of the AC.⁵¹⁴ In other words, the majority of consumers are unlikely to be aware of (or respond to) price signals being sent to them.
- A5.59 Further, on fixed OCPs non-geographic calls only account for 20% of voice minutes while this proportion is even lower from mobile OCPs.⁵¹⁵ Once data traffic is taken into account, the share of total traffic accounted for by non-geographic calls is likely to be modest. As a result, managing the time at which non-geographic calls are made is likely to only make a small contribution towards managing congestion on communications networks.⁵¹⁶
- A5.60 The limited benefits of Option 1 need to be weighed up against its disadvantages relative to Option 2b, namely the likely increase in caller confusion from setting more complex AC structures.
- A5.61 In summary, we consider that Options 2a and 2b would be more appropriate, namely specifying a tariff principle that the AC should solely consist of a ppm charge. That ppm amount should be the same for all non-geographic number ranges, should not vary by time of day and should not include any fixed (per call) elements. This is subject to one exception. Typically a post-pay (contract) mobile

⁵¹⁴ Callers are particularly unlikely to take these price signals into account at the point of subscription. To take such price signals into account when selecting an OCP a caller would need to form a view on their precise calling pattern (e.g. a view on what time of day they call at).

⁵¹⁵ 2010 Flow of Funds study, page 2.

⁵¹⁶ Calls to non-geographic numbers only account for 3% of mobile minutes so this effect would be even smaller on mobile networks (source: 2010 Flow of Funds study, page 4). This is consistent with the fact that mobile OCPs generally do not vary non-geographic call prices by time of day i.e. mobile OCPs are currently not using non-geographic call pricing as a means of managing congestion.

subscription will consist of bundles of inclusive ('free') calls to geographic and mobile numbers; once this allowance of minutes has been used up, calls attract a ppm charge. It is possible that under the unbundled tariff remedy an OCP might wish to count all non-geographic calls towards the allowance of inclusive minutes (i.e. an AC of zero provided the caller still had inclusive minutes remaining and a positive ppm AC once the allowance of inclusive minutes was exhausted; the caller would still be charged the SC on top of this).

- A5.62 We consider that this pricing structure (i.e. including non-geographic calls within bundles of inclusive minutes) is likely to make it easier for callers to remember – it is in place for the majority of calls from post-pay mobile contracts. We thus do not think it would be appropriate to have a tariff principle precluding MNOs setting an AC structured in this way, provided that structure applied to all the non-geographic number ranges covered by the unbundled remedy.⁵¹⁷
- A5.63 OCP compliance with the requirement to have only one AC per consumer package could be monitored and enforced on a similar basis as other consumer protection measures are currently enforced. In addition, individual consumers would retain the right to take a case to an Alternative Dispute Resolution scheme.

Variations in the AC between different tariff packages

- A5.64 Absent Ofcom specifying further principles, OCPs are likely to set different ACs for different packages.
- A5.65 The advantages of allowing different ACs for different packages (Option 3) is that it allows OCPs to price discriminate between different callers.⁵¹⁸ The importance of non-geographic calls clearly varies between callers. For example, a minority of callers believe they make reasonable numbers of non-geographic calls (see Table A5.3 above). Option 3 allows OCPs to offer packages tailored to their preferences (as is currently the case – see for example Vodafone's bolt-on described above). Therefore, it also means consumers are able to choose a package which suits their individual preferences for the balance of prices across the different services provided in the bundle.
- A5.66 Moreover, some packages generate other revenue streams and it is thus not surprising that this leads to differences in the AC. For example, post-pay mobile contracts include a monthly subscription charge which is offset by lower prices per call, such as lower AC. This flexibility is lost under Option 4.
- A5.67 The benefit of Option 4 relative to Option 3, namely greater simplicity (and thus improved consumer price information), is likely to be small. Option 4 might lead to a slight reduction in the number of packages that are available but it is plausible that this effect is limited.⁵¹⁹ In any event, for those callers that are interested in the price of non-geographic calls, it is easy to communicate what the AC associated with

⁵¹⁷ As explained above, adopting different ACs for different non-geographic number ranges is likely to lead to uncertainty and weaker competitive constraints on the level of the AC.

⁵¹⁸ Preventing such price discrimination would potentially make OCPs' pricing less efficient and may make it harder for OCPs' to tailor packages to particular callers' preferences. In terms of our proposed assessment criteria it might increase the regulatory burden on OCPs and lead to less attractive prices.

⁵¹⁹ To illustrate, consider an MNO that offers different pre-pay and post-pay tariffs (i.e. a choice of two packages). That OCP is still likely to offer pre-pay and post-pay tariffs, even if required to specify a single AC (i.e. callers would still choose between two packages). Those two packages would differ with respect to other aspects of the price (monthly subscription, geographic call prices etc).

each package is: as explained above, we consider that the AC should be a single ppm number.

- A5.68 Pre-pay prices for non-geographic calls are frequently higher than the post-pay (contract) prices. Under Option 4 such variation would not be permitted in the AC. Averaging out prices would mean that pre-pay customers would pay a lower AC (compared to Option 3) and post-pay (contract) subscribers would pay a higher AC. As explained in Annex 2, we are concerned about the prices that low income callers pay when calling socially important services or essential utilities. By lowering the AC for pre-pay mobile subscribers, Option 4 would mitigate this concern about access to socially important services. However, we consider that it is a very intrusive and indirect way of doing so. In particular, we only have distributional concerns in relation to a minority of mobile subscribers (namely those with a relatively low income) and in relation to a minority of non-geographic calls.
- A5.69 Overall we consider that the benefits of Option 4 would be small in comparison to the advantages of Option 3. We thus favour Option 3 i.e. it is not appropriate to prevent OCPs offering different tariff packages that each specify a different AC.

Level of the AC

- A5.70 It is useful to distinguish between two possible risks in relation to the level of the AC:
- The risk that the unbundled remedy is incapable of delivering an appropriate level of AC (namely an AC that is set at a competitive level and which does not allow OCPs to earn excessive margins on non-geographic calls) without further intervention. Option 6 would address this concern;⁵²⁰ and
 - The risk that the unbundled remedy fails to operate as intended and instead worsens consumer awareness, leading to higher ACs. Option 7 would address this concern.
- A5.71 We discuss these options below. Alternatively, the level of the AC could be unregulated (Option 5) either because the above risks are not material or because Options 6 and 7 are not proportionate.
- A5.72 By way of illustration, if OCPs' retention on those non-geographic calls covered by the unbundled remedy remained unchanged then fixed OCPs would charge an average AC of 2.3ppm and mobile OCPs would charge an average of 14.0ppm (see Table A5.5 above).

Appropriateness of a cost-based maximum price

- A5.73 The assessment of Option 6 involves an assessment of whether the structure of call prices, across the bundle of services supplied by an OCP, should be determined by competition or regulation. Option 6 directly affects OCPs' retention for non-geographic calls and indirectly affects the prices of other services provided by the OCP (via the "tariff package effect" discussed in Annex 2).

⁵²⁰ We understand that an approach akin to the unbundled remedy was adopted in France. Under the French system, the AC was capped at the price of a geographic call.

A5.74 We have considered whether the unbundled remedy is likely to deliver an appropriate AC level. There is a degree of risk that the AC exceeds an appropriate measure of the OCPs' costs.⁵²¹

- First, there is some evidence that suggests that competitive constraints on the AC may not be strong, particularly on mobiles (see above). In particular, the unbundled remedy would apply to approximately 11% of fixed voice call and 2% of mobile voice call minutes (these estimates are based on call volumes in 2009).⁵²² Given that the unbundled remedy only applies to a minority of calls, it is unlikely to be at the forefront of most consumers' minds;
- Second, OCPs will not take the horizontal and vertical externalities into account when setting their retail prices (these externalities are described in Annex 2);
- Third, as explained in Annex 2, we have a specific distributional concern in relation to the high prices that vulnerable citizens in mobile-only households pay to access public services and essential utilities; and
- Fourth, if fixed OCP's retention does not change as a result of introducing the unbundled tariff then our estimate of fixed OCPs' average AC (2.3ppm – see above) is higher than the retail margins that BT is allowed under the NTS Call Origination Condition (typically a fraction of a penny).⁵²³ Similarly, our estimate of mobile OCPs' average AC (14.0ppm) seems high.

A5.75 These concerns, if considered sufficiently substantial, could be addressed by specifying a maximum AC for the purpose of ensuring that the AC is set at a competitive level (Option 6). A maximum AC set for these purposes is likely to be cost based. It is thus likely to affect non-geographic call margins for most (or all) OCPs. As discussed in Annex 6 (in the context of maximum prices), it may be appropriate in certain circumstances to set different maxima for fixed and mobile OCPs to reflect any differences in costs. However, as discussed in that annex, setting a higher maximum price for mobile OCPs simply because their current prices are higher is unlikely to be appropriate. Option 6 is thus particularly likely to affect mobile OCPs, given that their retention is currently markedly higher than fixed OCPs' retention.

A5.76 It is important to recognise the uncertainties around the benefits of Option 6:

- We cannot be definitive how intense competition will be under the unbundled remedy. Further, we favour a very simple structure for the AC (Options 2a and 2b) which should facilitate competition on this element of the tariff; and
- While OCPs would not take the externalities identified in Annex 2 into account when setting the AC, the unbundling remedy should expose retail margins to

⁵²¹ The appropriate measure might include some attribution of other costs (such as fixed or common costs).

⁵²² As explained in Annex 7, our current view is that 03, 080 and 0870 calls should be excluded from this remedy (and instead subject to maximum prices). Excluding calls to these number ranges, in 2009 there were 14,595m fixed non-geographic calls and 2,308m mobile non-geographic call minutes (source: Ofcom calculations using data from the 2010 Flow of Funds study). In 2009, total fixed voice calls were 135bn minutes and total mobile voice calls were 113bn minutes (source: 2010 Flow of Funds study, pages 2 and 4). Even a significant increase in non-geographic call volumes is only likely to change the overall percentage of call minutes accounted for by non-geographic calls by a small number of percentage points.

⁵²³ The 2005 Uplift Statement, paragraph 1.9.

greater competition than at present. By reducing OCPs' ability to charge high retail margins, this should lessen both externality effects. Further, by proposing to specify maximum prices for the 03, 080 and 0870 number ranges (see Annex 6) we are addressing these externalities on those number ranges where they are particularly important.

A5.77 Option 6 also has a number of significant drawbacks:

A5.78 First, the revised EU Framework is explicit that the maximum prices can be specified for the purposes of consumer protection. It is thus arguable whether these powers can be used to address concerns about retail competition. On the one hand, it is well established that weak competition can be harmful to consumers. On the other hand, it could be argued that there are other, more appropriate, instruments to address competition concerns, such as determining whether any supplier has SMP and, if so, setting SMP conditions. Moreover, as explained in Annex 2, it is not clear whether there is a general concern about the level of telephony prices overall – rather a major concern is the balance of prices (with weak competition leading to high non-geographic call prices which, in turn, support lower prices for other services such as geographic calls). In short, it is arguable whether the revised EU Framework provides an adequate legal basis for Option 6.

A5.79 Second, setting the maximum AC level is likely to be a complex exercise. As explained above, Option 6 is motivated by the concern that the AC would exceed an appropriate measure of the costs of call origination. Accordingly setting a maximum price would involve analysis of the costs of originating and retailing non-geographic calls.⁵²⁴ It thus has similarities to the exercise of setting the NTS Retail Uplift and PRS Bad Debt Surcharge – albeit with the additional complication of considering the costs of mobile, as well as fixed OCPs (and a different legal basis).⁵²⁵

A5.80 Third, such a remedy would be intrusive. It is likely to affect non-geographic call margins for most ((or all) OCPs meaning that non-geographic call prices would largely be set by regulation, rather than by suppliers.

A5.81 Fourth, Option 6 would involve setting a maximum for the AC for all non-geographic calls. It would reduce fixed and mobile OCPs' profits from non-geographic calls. As explained in Annex 2, we would expect OCPs to respond by increasing their prices for other services (such as geographic calls) somewhat but perhaps by a smaller amount, so the actual effect on the OCPs' overall profits is much smaller. Option 6 is thus likely to involve a significant rebalancing of tariffs. The survey evidence from the 2010 Consumer research presented in Annex 2 suggests that the majority of callers are opposed to driving down non-geographic call prices if the consequence is an increase in the price of other telephony services.⁵²⁶ There are a number of reasons why these survey results should be treated with caution. Nonetheless, the

⁵²⁴ Current non-geographic call prices and margins reflect how competition currently operates. Competition is unlikely to be working well at present given the concerns about poor price awareness etc set out in Annex 2. Accordingly using current prices or margins as a benchmark is unlikely to be good proxy when setting the Option 6 maximum.

⁵²⁵ Note that the NTS Retail Uplift and PRS Bad Debt Surcharge result from a designation that BT has SMP. The parallels between Option 6 and the setting these SMP conditions emphasises the first drawback of Option 6, namely its uncertain legal basis.

⁵²⁶ 2010 Consumer research, question 42. Also question 39 and 40.

majority of consumers do not seem to have a strong preference for a significant rebalancing of tariffs.⁵²⁷

- A5.82 Fifth, as explained above a maximum AC that applied to pre-pay mobile tariffs might address our distributional concerns i.e. high prices for some vulnerable (mobile only) citizens when calling socially important services. However socially important services tend to be located on a few number ranges, particularly 080 and 0845 (see Annex 7). Setting a maximum AC for all non-geographic calls is thus not particularly well targeted.
- A5.83 One possibility is that we could wait to see how the unbundled remedy operates – once the system has been in operation for several years it would be clearer whether ACs are unduly high. At that later stage, if the remedy was not working well, we could consider more intrusive interventions (e.g. tighter controls on ACs) in future reviews.
- A5.84 Our current view is that it is finely balanced whether Option 6 is appropriate at this stage. While there are a number of arguments in favour of Option 6, it has considerable uncertainties and drawbacks, including uncertainty over whether the revised EU Framework gives us the powers to implement Option 6. We would welcome the views of consultation respondents on this issue.

Appropriateness of a maximum price as a safeguard

- A5.85 An unbundled regime differs significantly from the status quo. There is thus a risk that it would not operate as intended and will in fact worsen consumer awareness of prices (e.g. because callers struggle to understand the concept of an unbundled tariff). If this occurred then some OCPs might set ACs that are higher than their current retention.
- A5.86 This risk could be addressed through a maximum price that sets a limit on the AC as a safeguard or backstop (Option 7). The objective of such a maximum would be to protect consumers from high prices that might arise if the remedy does not operate as intended. Such a maximum would thus be set at a relatively high level and, provided the unbundled remedy operates as intended, it would not 'bite'. It is thus far less restrictive than Option 6.
- A5.87 As set out in Table A5.5 above, assuming that OCPs' retention did not change, the average AC would be 2.3ppm for fixed OCPs and 14.0ppm for mobile OCPs (excluding VAT). Obviously some OCPs' current retention is above this average and others' retention is below. Given the purpose of the maximum AC under Option 7 is to act as a safeguard (rather than 'biting' for significant numbers of OCPs), this suggests that any maximum AC principle would be higher than these 2.3ppm and 14.0ppm figures.
- A5.88 Initial, preliminary analysis of the data underlying the 2010 Flow of Funds study suggests that there are significant variations in OCPs' modelled retention. At face value, this suggests that any maximum AC principle may need to be significantly (5ppm or more) above the average figures quoted above. However, that study is based on information provided to us by CPs. The quality of some of that information

⁵²⁷ Such regulator driven rebalancing of tariffs should be distinguished from any rebalancing that occurs as a result of greater price awareness leading to greater competitive pressures on the AC. Where increased competition rebalances tariffs in this way, it is more likely to be reflective of consumers' underlying preferences

was weak and a number of assumptions underlie the 2010 Flow of Funds study.⁵²⁸ We are concerned that relying on firm specific estimates (for example to identify an upper limit for retention in 2009) may involve placing undue reliance on the underlying data.⁵²⁹

- A5.89 At this stage, we are not proposing what the level of any maximum AC specified under Option 7 might be. However, our working hypothesis is that it would be towards the upper end of the range of margins we currently observe (since it is not intended to 'bite'). As a working hypothesis, and to assist consultation responses on the appropriateness of Option 7, it may be several pence per minute above the 2.3ppm and 14.0ppm averages set out above.
- A5.90 Option 7 could be implemented in two ways:
- The maximum price for the AC could be introduced at the same time as the unbundled remedy (Option 7a). The intention of such a remedy is that it would only be a temporary measure. If the unbundled remedy was working as intended then the maximum AC could be removed; or
 - Ofcom could commit to rapidly introducing a maximum price if the unbundled remedy did not operate as intended (Option 7b).
- A5.91 The benefits of Option 7(a) are very uncertain – they only arise in the unlikely event that the unbundled remedy would make matters worse. We thus consider that the benefits are likely to be limited.⁵³⁰
- A5.92 However, the drawbacks of Option 7(a) are also likely to be limited. The maximum AC is not intended to bite (provided the unbundled remedy operates as planned) and is thus unlikely to be burdensome or restrictive for OCPs.⁵³¹
- A5.93 The main potential drawback of Option 7(a) is the risk that such a maximum operates as a "focal point".⁵³² By specifying a maximum permissible AC then this raises the risk that OCPs tacitly coordinate and all choose to price at or close to that maximum. As a result, Option 7(a) may actually increase, depending on the level chosen, the level of the AC. The magnitude of this risk depends on the strength of competition between OCPs when supplying non-geographic calls which (as explained above) may not be strong.
- A5.94 If Option 7(b) means that the potential level of the maximum AC is not specified at the time the unbundled remedy is introduced then it avoids the risk that it acts as a focal product. However Option 7(b) has an additional drawback, namely the time needed to determine and then introduce such a cap. Moreover, under Option 7(b) maxima would be introduced to try and limit a rise in the AC following the introduction of the unbundled remedy. It is thus likely to 'bite' on a significant number of OCPs and potentially raises similar legal obstacles to Option 6 (see above).

⁵²⁸ 2010 Flow of Funds study, pages 23-24.

⁵²⁹ In contrast, data relating to any particular firm has less of an effect on aggregate figures and overall averages.

⁵³⁰ Indeed if the risks of the unbundled remedy operating in this unintended manner were significant, it would be an argument against introducing the unbundled remedy.

⁵³¹ Since the maximum is unlikely to bite it is unlikely to result in any rebalancing of relative prices (the "tariff package effect" discussed in the Annex 2).

⁵³² The concept of "focal points" was introduced in *The strategy of conflict*, T Schelling (1960).

A5.95 In conclusion, we do not consider that the benefits of Option 7(b) outweigh the drawbacks. We consider that the case for Option 7(a), rather than Option 5, is finely balanced. We would welcome consultation respondents' views on this issue.

Tariff principles and maximum prices applying to the SC

Overview

A5.96 We now turn to the second element of the overall tariff, namely the SC. Below we consider whether we should specify principles governing this tariff element and/or maximum prices. Specifically we consider two broad issues:

- First, the structure of the SC. We explain why it is likely to be appropriate to specify a tariff principle that the SC should be the same, regardless of which OCP originated the call. We also explain why we think it would not be appropriate to specify a principle preventing SCs varying by time of day or from including a per call element.
- Second, the level of the SC. We explain why we consider that it would not be appropriate to set a maximum price in order to address concerns that some SPs are subject to weak competitive constraints. However we think it would be appropriate to specify a maximum price for each number range, so that each number range provides the caller with a broad indication of the price of the call.

A5.97 Below we out background to each of these issues, followed by our assessment of policy options.

Background

A5.98 Below we infer how the SC might be structured assuming that we did not specify any tariff principles constraining that structure. This inference is based on the prices we currently observe. We also consider what the level of the SC might be if we did not set a maximum price.

Structure of the SC

A5.99 Below we discuss three aspects of the structure of the SC: bespoke (OCP-specific) charges, time of day variation, and per call charges.

Bespoke charges

A5.100 Some TCPs have introduced bespoke termination rates, which depend on the identity of the OCP. The equivalent would be, for example, a SC of 3ppm for calls originating on network X and a SC of 4ppm for calls originating on other networks.

A5.101 It is plausible that some SPs would agree bespoke termination rates with some OCPs. For example, Vodafone currently has a preferred DQ provider (Conduit) and Orange operates its own DQ business. The retail price of calling these preferred services is lower than for calling other DQ services and lower than from other mobile networks.⁵³³ If the unbundled remedy were in place, DQ providers might agree a lower bespoke SC with one OCP in return for that OCP promoting their DQ service. However the unbundled tariff may make such agreements less common

⁵³³ TNUK 10 August 2010 submission, pages 17-18.

since we are proposing that the OCP cannot offer a lower AC that only applies when calling that particular DQ provider.⁵³⁴

- A5.102 Agreeing bespoke SCs is also a means by which OCPs could seek to exert their wholesale strength as a buyer of termination. For example, an OCP might threaten not to originate calls to a particular TCP unless SPs hosted on that network charge it a slightly lower SC.
- A5.103 A subset of bespoke termination rates are those that depend on the retail price charged by the OCP.⁵³⁵ Under the unbundled remedy this would be equivalent to a SC that depends on the AC charged by a particular OCP. It is not clear that such structures would arise if tariffs were unbundled because they are less attractive than is currently the case.
- A5.104 One explanation for why a TCP might link its termination rate to the retail price is to encourage OCPs to lower their retail prices. Under the unbundled remedy, this mechanism seems much less likely to work, which would discourage TCPs/SPs from setting SCs in this way. Specifically, as explained above, we propose that the same AC would be set for all calls covered by the unbundled remedy, rather than just calls to a particular TCP/SP. An OCP is less likely to change the AC it charges for all calls if that only affects the SC levied on a minority of calls (namely those calls to the TCP that linked its SC to the AC).
- A5.105 An alternative explanation why TCPs may currently link the termination rate to the retail price is to share in the margin earned by the OCP. This mechanism works differently under the unbundled remedy. A 1ppm increase in the SC automatically increases the final retail price by 1ppm, without directly affecting the OCP's margin.⁵³⁶ As a result, charging a high SC to some (high margin) OCPs is less attractive than charging those OCPs a high termination rate is at present, because the impact on final retail prices (and thus call volumes) is greater.

Time of day variation

- A5.106 For the majority of non-geographic numbers, the termination rate is specified as a ppm amount. Currently those ppm amounts vary by time of day (day/evening/weekend).
- A5.107 In many cases this may be a consequence of the current regime. BT's retail prices typically vary by time of day so, when BT's regulated margin is deducted, the resulting termination rate that BT pays also varies by time of day.⁵³⁷ Moreover BT's regulated margin also varies by time of day. Thus, even if BT's headline retail price does not depend on the time of day, the residual amount that is paid to the terminator does. Thus while termination rates currently vary by time of day, it is unclear whether many SPs would choose to continue with this practice when setting SCs.

⁵³⁴ As explained in our analysis of the AC, we are proposing to specify a tariff principle that would prevent the AC varying between particular non-geographic numbers.

⁵³⁵ In their responses to the Call for Inputs, C&W (on page 15) and EE (on pages 4-5) expressed concerns about linking termination rates to retail prices.

⁵³⁶ In principle, a higher SC changes the marginal cost faced by the OCP and thus creates an incentive for it to change its retail price. In practice, this effect may be weak, particularly as the AC is set for a large number of calls.

⁵³⁷ As explained in Annex 3, historically the termination rate BT pays for calls originating on its network were been widely adopted.

A5.108 However there are some exceptions. The retail price of calls from BT to a small proportion of 070, 0844, 0871 and 09 numbers vary by time of day. Since the SP has selected that particular price point, this suggests that a small proportion of SPs prefer time of day variation. These SPs are thus likely to choose a SC that varies by time of day.

Per call charges

A5.109 For some 09 and 118 numbers, the SP has selected a number with a per call component to the termination charge. On these number ranges, some SPs are likely to favour a SC that includes a per call element.

Preliminary views on the structure of the SC

A5.110 In summary, in the event that we did not specify any principles governing the structure of the SC, we would expect some SPs would select SCs that include a per call component and vary by time of day. Bespoke SCs might also arise, although it is questionable whether those bespoke SCs would be explicitly linked to the level of the AC. The implication of this for consumers is set out later in our consideration of the policy options for the SC.

Determination of the level of the SC

A5.111 The level of the SC would be selected by the SP. The SP's choice would be shaped by the extent of competition between SPs. This will vary significantly between SPs, depending on the type of service they offer. To illustrate:⁵³⁸

- A consumer calling the telephone banking line of their current high street bank is likely to be 'locked-in' and is unlikely to switch supplier of the underlying service (banking) on the basis of call price.
- Similarly, there are likely to be few alternatives to calling the voting line for a specific television show.
- In contrast, a consumer wishing to call a sexual entertainment service has a wide choice of competing suppliers and can easily switch away from a provider if it became more expensive (provided they have ready access to information on call prices).

A5.112 In the 2010 Consumer research we asked when calling 08/09 services "do you shop around and decide which person or service to call based on the price of a call?" The overwhelming majority of respondents currently do not do so – see Table A5.6.

Table A5.6: Whether respondents "shop around" between SPs based on call prices

Yes, all the time	Yes, sometimes	No, never	Don't know the prices	Don't know
5%	10%	62%	15%	7%

Source: 2010 Consumer research, question 38

⁵³⁸ We discussed these differences in call type in the 2004 NTS Termination Consultation, paragraphs 3.43-3.47.

A5.113 We recognise that the unbundled remedy makes it easier to compare SPs' charges and thus the numbers of callers that "shop around" between SPs may increase. However these low figures also reflect few alternatives to calling many SPs. In the *2005 NTS Consultation* we estimated the proportion of calls which were made by callers that were "locked in" to a particular SP (e.g. post-sales support, billing enquiries). We estimated that 45-55% of 0870 calls and 30-40% of 0871 calls were locked in at that time.⁵³⁹ Similarly in the 2010 Consumer research we asked those respondents that sometimes or regularly call 08 and 09 numbers what type of services those numbers represent. The top seven responses are set out in Table A5.7, along with our view on whether there is likely to be an alternative non-geographic services that consumers could call.

⁵³⁹ 2005 NTS Consultation, paragraph 5.74. We recognise that these figures are several years old. However we are not relying on the precise percentages that we presented in 2005. Rather the key point is that there is a significant proportion of non-geographic calls for which there are not viable substitutes. We do not rely on the estimate that less than 5% of 0845 calls were "locked in" in 2005. At the time calls to dial-up ISPs accounted for 85% of 0845 traffic (see paragraph 5.29 of that consultation). We took the view that such calls are not "locked in". Given the decline in dial-up internet access volumes since 2005, we anticipate that the current volume of "locked in" 0845 calls is significantly higher. Similarly, in 2005 the average proportion of locked in calls for the 084 and 087 number ranges as a whole was 20-30%. Since this overall average depends on the 0845 figure, we consider that it is likely to understate the current proportion of locked in calls

Table A5.7: 08/09 services that are regularly or sometimes called

Service	Proportion of respondents regularly/sometimes calling on their landline	Proportion of respondents regularly/sometimes calling on their mobile	Alternatives for callers
Bank/building society	58%	52%	Unlikely to be an alternative number
Public services (hospital, local council, tax office)	56%	66%	Unlikely to be an alternative number
Customer support lines	43%	18%	Depends on precise service (e.g. alternatives for pre-sales services but not for post-sales services)
Doctors surgery	27%	37%	Unlikely to be an alternative number
Builders/plumbers	8%	8%	Depends on precise service
Voting on TV shows	6%	8%	May be few alternative numbers
Quiz/entertainment lines	4%	5%	Likely to be alternative number

Source: 2010 Consumer research, questions 22 and 26; alternatives based on Ofcom's judgement

A5.114 In principle, the level of the SC could be constrained by callers switching to alternatives such as geographic numbers, contacting the SP via the internet or visiting the SP in person. Obviously the feasibility of such alternatives will vary significantly, depending on the particular service that the caller is seeking from the SP. We asked callers whether they were "aware of any alternatives to having to call numbers starting with 08 and 09 numbers?" 68% of respondents were not aware of any alternatives.⁵⁴⁰

A5.115 Even where consumers do have an alternative, whether they are able to make an informed decision about which SP to call depends on what price information is available. For example, where services are advertised in print media (e.g. business directories, magazines) there seems ample scope for SPs to advertise their SC and for consumers to pick between those services based on the SC.

A5.116 There are two other factors that are relevant to this discussion:

⁵⁴⁰ 22% of respondents said that they could make use of the internet, instead of making the call and 8% said that it is possible to find a geographic number. 2010 Consumer research, question 30.

- First, the horizontal externality (discussed in Annex 2). SPs will set their SC without taking into account the impact on the reputation of the number range.
- Second, the unbundling remedy makes it clear which party (the OCP or the SP) is responsible for each element of the price. A SP that sets a high SC risks attracting negative publicity. This may act as an additional constraint on SPs' behaviour. However, it is unclear how strong this factor is likely to be.

A5.117 In summary, there is likely to be a large proportion of non-geographic numbers for which the nature of the service means that competition between SPs is weak. As a result, the SP is able to charge a comparatively high SC for that service. Also there is likely to be a significant proportion of calls where, in principle, competition between SPs could operate. Intuitively it seems plausible that many 09 services fall in the latter category, as do DQ services.

A5.118 Note that, while some SPs would be able to set a high SC, this does not imply that the unbundled remedy worsens matters (relative to either the status quo or the Deregulation Scenario). Current prices for calling those SPs are likely to be high – currently the SP could simply select a number range associated with a relatively high call price.

Policy options

A5.119 As explained above, absent further regulation relating to the SC:

- Some SPs are likely to choose relatively complicated SC structures; and
- It seems likely that there will be few alternatives to a significant proportion of SPs' services, allowing them to set relatively high SCs. However there is also likely to be a significant proportion of other SPs that are subject to a degree of competition that would constrain the level of the SC.

A5.120 Below we consider what (if anything) the appropriate regulatory response to these issues is.

A5.121 In relation to the *structure* of the SC we consider whether we should:

- Not specify any principles governing the way the SC can be structured within a particular tariff package (**Option 1**); or
- Specify principles that prevent the SC from varying in certain ways (**Option 2**), in particular:
 - Preventing bespoke SCs that vary depending on the identity of the OCP (**Option 2a**); and/or
 - Preventing SCs varying based on the time of day (**Option 2b**); and/or
 - Preventing SCs including a per call charge rather than just a pence per minute element (**Option 2c**).

A5.122 In relation to the *level* of the SC we consider whether we should:

- Not specify any maximum prices (**Option 3**); or

- Specify maximum prices applying to the SC and aimed at addressing weak competition between SPs (**Option 4**); or
- Specify maximum prices applying to the SC and aimed at protecting consumers' perception of different number ranges (**Option 5**).

Structure of the SC

A5.123 Below we assess the various ways in which the structure of the SC might be restricted, relative to Option 1. Specifically we first consider bespoke SC (Option 2a), then time of day variation (Option 2b) and finally per call charges (Option 2c).

Bespoke SC

- A5.124 There are legitimate reasons why a SP may wish to set a different SC for some OCPs. In particular, SPs may negotiate with OCPs in order to become the favoured supplier of their particular service on that network. This may involve offering a lower (bespoke) SC on that network, in return for greater marketing. The benefit of Option 1 is that it would enable such arrangements.
- A5.125 However, we consider that few of these arrangements would arise and thus this benefit is likely to be relatively limited. Our understanding is that such arrangements are currently only in place for DQ services (see above). This is not surprising. Most callers do not regard non geographic calls as important when deciding which OCP to subscribe to (see Annex 2 and the discussion of constraints on the AC above). It is thus unsurprising that OCPs do not see such 'favoured supplier' agreements as a significant source of competitive advantage, particularly as there is a transaction cost to negotiating them. Moreover, as explained above, the unbundled remedy means that OCPs are unable to offer to lower their AC for calls to a particular SP in return for a bespoke SC from that SP. This makes the sort of arrangements we currently observe between MNOs and DQ providers less attractive from the SP's perspective.
- A5.126 These limited benefits should be weighed against the drawbacks of Option 1. These drawbacks would be addressed by Option 2a.
- A5.127 First, and most importantly, bespoke SCs reduce how informative the AC is. Under Option 2a, in order for a caller to determine the cheapest way of making a non geographic call they simply need to compare the AC offered by different OCPs. The OCP with lowest AC will always be the cheapest means of making any non geographic call. In contrast, bespoke SCs make this decision more complex. The caller needs to know both the AC set by a particular OCP and the SCs associated with that SP (which, in turn, requires the caller to form a view about the particular SPs they are likely to call). An OCP with a relatively high AC may in fact be the cheapest means of making a call, provided this is offset by lower bespoke SCs. However, if bespoke SCs are relatively common, then it becomes much harder to compare ACs between different OCPs. As explained in our analysis of the AC we consider that it is important to make it as simple as possible for callers to make an informed choice between OCPs.
- A5.128 Second, bespoke SCs also add some complexity to the pricing message that the SP is communicating. This may make it harder for callers to remember the price of calling that particular SP. Uncertainty about the price is detrimental for callers and also diminishes the strength of competition between SPs. However, as explained below as part of our assessment of Option 2b, this effect is likely to be limited.

- A5.129 Although our primary focus is on the retail level, we have also considered the benefits of Option 2a at the wholesale level.⁵⁴¹ Bespoke service charges provide a means by which OCPs can exercise their buyer power when dealing with TCPs/SPs or vice versa. Such imbalances in wholesale negotiation power may have negative consequences for consumers, SPs and, in the longer term, for competition in the provision of hosting (see Annex 3).
- A5.130 As explained in Annex 3, BT is likely to be in a strong position when originating calls. Indeed in the Wholesale Narrowband Statement we found that BT possessed SMP in the market for call origination on a fixed narrowband network in the UK excluding the Hull Area.⁵⁴² As a result of that SMP, we imposed the NTS Call Origination Condition on BT. Absent that regulation, we considered that TCPs and thus SPs would have smaller revenues as a result of BT raising the charge it retained for retailing NTS calls: given a fixed (constrained) retail price, BT would increase its margin by pushing down the termination rate.⁵⁴³ If the unbundled remedy were in place, BT could engage in equivalent behaviour by exerting downward pressure on the SC that it pays. This suggests that there is a strong case for not allowing BT to agree a BT-specific SC.
- A5.131 However it is likely to be more appropriate to implement any restriction that just applies to BT through SMP conditions (given our existing finding that BT has SMP in wholesale call origination). In other words, rather than imposing a tariff principle relating to bespoke SCs via the revised EU Framework (Option 1) we would instead use our separate the Act powers to specify SMP conditions.⁵⁴⁴
- A5.132 As explained in Annex 3, BT is not the only OCP that is likely to be in a strong position. The wholesale situation is complex, with the bargaining position depending on the identities of the parties involved. TalkTalk and Virgin Media (the second and third largest OCPs) are likely to be in a strong position when dealing with TCPs other than BT. EE, Vodafone and O2 may be in a strong position when dealing the smallest TCPs (although not larger TCPs such as BT and C&W). None of these firms is designated as possessing SMP in wholesale call origination. Similarly, in Annex 3 we argued that large TCPs (such as BT and C&W) may be in a strong position when dealing with small OCPs. This could result in some TCPs being able to set higher SCs for calls from these small OCPs.
- A5.133 A prohibition on bespoke SCs (Option 2(a)) may help the wholesale level operate more smoothly. The magnitude of this benefit depends on the extent to which strong OCPs (or TCPs) would seek bespoke SCs. If bespoke SCs were not permitted then an OCP would gain limited commercial advantage from driving down the SC. For example, any reduction in the SC secured by BT would apply to all OCPs, preventing BT (when acting as an OCP) gaining a commercial advantage over rival OCPs. This lessens BT's incentive to engage in such behaviour, although we accept that it does not eliminate it.⁵⁴⁵

⁵⁴¹ Option 2a would also prevent SPs/TCPs specifying a SC that depends on the particular AC charged by the OCP.

⁵⁴² Wholesale Narrowband Statement, paragraph 6.42.

⁵⁴³ Wholesale Narrowband Statement, Section 15 in particular paragraphs 15.32-15.34.

⁵⁴⁴ The unbundled remedy would represent a major change in the structure of prices and would alter OCPs' incentives. In this changed environment, changes to the current formulation of NTS Call Origination Condition may be required.

⁵⁴⁵ This is for two reasons. First, a reduction in the SC will lower the retail price, which will tend to increase demand. This, in turn, will increase the total amounts of revenue OCPs generate through the AC. Second, if BT (acting as an OCP) were to reduce the SC that other TCPs are able to receive, this

A5.134 In conclusion:

- We have previously found that BT has SMP in wholesale call origination and imposed SMP conditions to protect TCPs and SPs. This risk would continue to exist under the unbundled remedy. However the most appropriate remedy might be revising the SMP conditions on BT, for example to prevent BT securing a bespoke SC;
- If a revised SMP condition addressing BT's position were in place then this is likely to make bespoke SCs less common. Since the benefits for SPs of 'favoured supplier' agreements with OCPs appear limited, few SPs are likely to choose to offer bespoke SCs. In these circumstances, both the costs and benefits of specifying a tariff principle that prevents bespoke SCs may be small. The main advantage of such a principle, namely ensuring that the AC is informative for consumers, depends on the prevalence of bespoke SCs; and⁵⁴⁶
- Accordingly, assuming that BT is subject to some form of SMP condition, bespoke SCs may be rare. It may thus not be necessary to impose a tariff principle that the level of the SC should be the same for all OCPs (Option 2a). Instead the market may deliver an outcome very close to this. This suggests that Options 1 and 2a may in fact be very similar. While our current view is a slight preference for Option 2a, since it would provide certainty that bespoke SCs would not become prevalent, we would welcome stakeholders' views on this issue.

Time of day variation in the SC

A5.135 As explained above, absent intervention we would expect some SPs to select SCs that vary by time of day. Assessment of this issue involves a trade off between the potential for greater efficiency (such as sending more efficient price signals) against the consumer detriment that flows from greater complexity.⁵⁴⁷

A5.136 The advantage of allowing time of day variation in the SC (i.e. the benefit of Option 1) is that it would allow SPs to send price signals to callers, to encourage them to call at particular times of the day. This may allow the SP to use its capacity more efficiently, which is also likely to benefit callers (e.g. if calls are spread more evenly through the day, this may reduce caller waiting times). There is a wide variety of SPs providing a wide variety of services. Option 1 reflects this, by allowing SPs the freedom to take their own particular circumstances into account.

A5.137 The benefit of Option 2b (and the drawback of Option 1) is that time of day variation potentially would make the SC less transparent for callers. In particular, it would make it harder for callers to remember what the SC is. However, we do not regard this as a major concern. We suspect that many callers will obtain the non-geographic number they wish to call from written material (e.g. advertisements, bank statements, utility bills, the internet). Provided that that material also sets out the SC, callers are unlikely to be confused about this aspect of the tariff. Moreover,

might encourage SPs to instead select BT's hosting business, conferring an advantage on BT at the hosting/termination level.

⁵⁴⁶ In terms of our proposed assessment criteria for assessing the different options, Option 2a would improve transparency and consumer price information.

⁵⁴⁷ As explained above, there is a similar trade off when considering the structure of the AC. In terms of our proposed assessment criteria, the trade off is between improving transparency/consumer price information versus the regulatory burden (less freedom for SPs; this may in turn affect service quality and variety).

such callers are well used to responding to time of day price signals (which generally apply, for example, to fixed geographic calls).

- A5.138 We recognise that sometimes consumers may call non-geographic numbers without having a written statement of the SC in front of them and are thus dependent upon remembering the price. However, in these circumstances we consider that only a minority of callers would remember the SC, even if it was very simple. Rather, these callers rely on their general impression of the number that they are calling to make a rough inference about the likely price of the call. We consider that, in these circumstances, the transparency benefits of Option 2b over Option 1 are small.
- A5.139 This view that consumers are unlikely to remember SCs is supported by our consumer research. We asked respondents to think back to any 08/09 numbers that they call regularly and asked “do you feel more confident of the cost of these numbers than 08/09 number you don’t call regularly?” The responses are set out in Table A5.8 below and support the view that callers find it difficult to learn the price of calling a non-geographic number. This is consistent with the results of our qualitative research, which found that participants generally did not check the cost of individual calls on their bill, unless the overall monthly charge was unexpectedly high.⁵⁴⁸

Table A5.8: Impact of regularly calling a number on consumers’ confidence about prices

More confident	No difference	I don’t call 08/09 numbers regularly	Don’t know
9%	30%	50%	10%

Source: 2010 Consumer research, question 37

- A5.140 This differs from our proposed approach to the AC. This is because we believe that there is scope for consumers to learn the AC, provided it is simple enough. In particular, the AC will apply to all non-geographic calls whereas the SC will be specific to a particular number. Since any particular SC only relates to a small subset of the non-geographic calls that a consumer will make, callers are far less likely to recall it.
- A5.141 In summary, we consider that Option 2b is less attractive than Option 1 i.e. that it would not, in our view, be appropriate to establish tariff principles further limiting the structure of the SC. Specifically, callers that obtain non-geographic numbers from written material are likely to be well informed about the SC and able to respond to price signals. The efficiency benefit of Option 1 thus outweighs the simplification resulting from Option 2b. Callers that do not have the SC in writing are likely to be poorly informed about the SC regardless, and thus Option 2b is likely to make little difference.

Per call charges

- A5.142 As explained above, some SPs on the 09 and 118 number ranges are likely to set a SC that includes a per call element as well as a pence per minute element. Again, the assessment of this issue involves a trade-off between the potential for more efficient price signals versus greater complexity.

⁵⁴⁸ 2010 Consumer research, page 19 (see also page 4).

A5.143 Allowing a per call element (Option 1) has a number of advantages:

- First, a per call charge allows a small transaction for a set amount to be carried out. This may support the provision of innovative services, for example a micropayment for a particular product or means of donating to charity.
- Second, it provides a potential avenue for competition between SPs. For example, different DQ providers have sought to position themselves differently: the charge from a BT landline for calling 118 118 (operated by TNUK) is £1.29/call plus £0.39ppm whereas the charge for calling 118 500 (operated by BT) is £0.49/call plus £1.16ppm. Indeed calling 118 811 (also operated by TNUK) involve a flat charge per call of £0.50 with no per minute charge.⁵⁴⁹ Such charges are thus an aspect of competition (they also affect the attractiveness of additional services such as call completion).
- Third, it may better reflect the costs to the SP of providing the service. For example, where the incremental costs to the SP of a long duration call are small, the SP could set a per call charge combined with a low pence per minute charge. This would send more efficient price signals to callers.
- Fourth, it would provide callers with greater certainty about the overall cost of a call. In contrast, a larger pence per minute charge means the total price is more sensitive to the call duration (which may be uncertain).

A5.144 The benefits of Option 2c (and the drawback of Option 1) would be the same as for Option 2b, namely reduced transparency for callers. As explained under Option 2b above, we consider that these transparency benefits are small. This suggests that it is not appropriate to prevent the SC including a per call element. As explained above we reached a different conclusion on this issue for the AC. In particular we believe that it is important for consumers to face a simple AC to allow them to compare packages and to remember their AC once chosen their package. The nature of the SC is different. As explained above in the case of per call charges, any particular SC only relates to a small subset of the non-geographic calls that a consumer will make. Callers thus are far less likely to recall it. Those callers that obtain the non-geographic number they wish to call from written material are unlikely to be confused about this aspect of the tariff, provided that that material also sets out the SC. Only a minority of callers those consumers that call non-geographic numbers without having a written statement of the SC in front of them and likely to remember the SC, even if it was very simple.

A5.145 Note that callers that do not have the SC written in front of them at the time they make a non-geographic call are reliant on their general impression of the number that they are calling, in order to make a rough inference about the likely price of the call. As explained below, we consider that it is appropriate to specify maximum tariff principles for the SC so that each number range provides the caller with a broad indication of the price of the call (Option 5).

A5.146 In summary, we consider that Option 2c is less attractive than Option 1 i.e. it would not be appropriate to establish tariff principles further limiting the structure of the SC. Our reasoning is similar to that used to reject Option 2b.

⁵⁴⁹ TNUK 10 August 2010, table 1 on page 6. Figures correct on 4 August 2010.

Preliminary views on the structure of the SC

A5.147 Our current view, on which we are consulting, is that Option 1 would not be appropriate. Rather, we consider it would be appropriate to adopt Option 2a, namely specifying a tariff principle that the SC should be the same, regardless of which OCP originated the call. We do not consider that further restrictions on the structure of the SC (Options 2b and 2c) would be appropriate.

Level of the SC

A5.148 It is useful to distinguish between two possible risks in relation to the level of the SC:

- The risk that competition is weak between (some) SPs, leading to high SC. Option 4 would be intended to address this risk; and
- The risk that consumers' perception of number ranges is undermined. Linked with this is the risk of fraud, namely callers being deliberately misled into paying for a high price non-geographic call. Option 5 would be intended to address this risk.

A5.149 We discuss these options below. Alternatively, the level of the SC could be unregulated (Option 3) either because the above risks are not material or because Options 4 and 5 would not be proportionate.

Addressing any lack of competition between SPs

A5.150 As explained above, the constraints on the pricing of calls to different non-geographic numbers differ sharply, depending on the type of service offered by the SP. As a result, some SPs are likely to be able to set a high SC for calling their service. Accordingly, it might be argued that maximum prices should be set for the SC (Option 4). The intention of such maxima would be to force down the SC of those services where competition is weak.

A5.151 However, Option 4 would have some major drawbacks in our view.

- First, we consider it is unlikely to be effective. If there was a maximum permissible SC on a number range then SPs that face limited competitive constraints on their business could simply select a number in a different number range that permits a higher maximum SC. The effectiveness of the maximum at forcing down the SC of those services where competition is weak would thus be undermined by migration and new entry by SPs on more expensive number ranges;
- Second, as explained in the context of the AC, the revised EU Framework is explicit that the maximum prices can be specified for the purposes of consumer protection. It is thus arguable whether these powers can be used to address concerns about retail competition (i.e. the competitive constraints on some SPs); and
- Third, setting the level of any maxima is likely to be exceptionally challenging. SPs' services are very varied and thus the appropriate SC maximum is likely to vary between services. Further, non-geographic numbers facing effective competitive constraints are likely to be intermingled with numbers facing weak

competitive constraints.⁵⁵⁰ This makes it very difficult to set a maximum which ‘bites’ for those services where competition is weak but does not ‘bite’ for those services facing effective competition (and for which an appropriate SC would arise without regulatory intervention).

A5.152 Accordingly our current view is that Option 4 would not be appropriate.

Protecting the perception of different number ranges

A5.153 As explained in Annex 2 callers have poor awareness of prices. Nonetheless, there is a degree of broad recognition of the number ranges, at least based on the first two digits. This recognition exists notwithstanding the current degree of price variation and obstacles to price transparency. For example, callers recognise that calling a 09 number tends to be more expensive than calling an 08 number, even if they do not have an accurate understanding of precisely what the prices are.

A5.154 We consider that it is intuitively plausible that callers make an inference about the likely price of call, based on the first few digits of the number that they are dialling. Moreover, there are a number of pieces of evidence supporting this view.

A5.155 First, MNOs’ responses to the Call for Inputs argued that callers are likely to mistake 070 and 076 numbers for mobile numbers.⁵⁵¹ This argument rests upon the proposition that significant numbers of callers use the first two digits to infer the type of call that they are making.

A5.156 Second, in the 2009 Consumer research we asked consumers how much they thought it cost to call different number ranges during daytime on a weekday from their landline phone and their mobile phone. While callers overestimate the level of prices (see Annex 2), there is nonetheless a ladder of price expectations (Table A5.9). 080 calls are (on average) believed to be cheaper than other 08 calls. 09 calls are perceived to be more expensive than 08 calls.⁵⁵²

⁵⁵⁰ This position implicitly underlies the arguments in 2004 NTS Termination Consultation, paragraphs 3.48-3.49 and 3.53.

⁵⁵¹ O2 response dated 28 May 2010 to the Call for Inputs, pages 2-3. Also Vodafone response dated May 2010 to the Call for Inputs paragraphs 24-25 and Everything Everywhere response dated 2 June 2010 to the Call for Inputs page 3 express concerns about the misuse of 070 and 076 numbers. Paragraph 14 of Vodafone’s response also states that “that while number ranges can potentially provide some useful information to consumers about pricing and service type at a broad brush level, consumers’ practical ability to distinguish subtle differences between NTS numbers at a 3 or 4 digit level ... may be limited.”

⁵⁵² The numbers responding “don’t know”, rather than guessing at what the price was, may have been increased since these questions were asked towards the end of the survey. As a result, respondents might be more aware of weaknesses in their knowledge about non-geographic calls.

Table A5.9: Mean expected call price by number range

Number range	Mean price expected by respondents		% responding "Don't know"	
	Landline	Mobile	Landline	Mobile
0800	6ppm	29ppm	27%	46%
0845	30ppm	46ppm	46%	51%
0870	39ppm	51ppm	57%	56%
0871	41ppm	52ppm	63%	60%
09	70ppm	70ppm	72%	71%

Source: 2009 Consumer research, questions 43 and 44. Mean price rounded to nearest ppm

A5.157 A significant number of consumers thus appear to use the first few digits of a telephone number to infer who they are likely to be calling and to get a broad (albeit imperfect) indication of the magnitude of the price.

A5.158 We consider that it is beneficial for consumers for number ranges to provide a broad indication of the price of a call. Provided callers' perception is broadly accurate this is likely to help protect consumers from both bill shock and fraud.⁵⁵³

A5.159 If we did not adopt Option 5 we are concerned that there is a significant risk that number ranges would not provide a reliable guide to the price of calls. For example, the risk is that a SP might choose to set a £1/minute (say) SC for an 0844 number. This is likely to expose consumers to considerable risk of bill shock as well as create opportunities for scams (fraud).⁵⁵⁴ Note that we are not objecting to SPs setting a £1/minute SC, merely the range in which they do so (a £1/minute SC for an 09 number is unlikely to be problematic).

A5.160 For calls that originate on or transit BT's network, but terminate on a third parties' network, there is already a broad ladder in termination charges. The maximum termination charge for an 09 number, for example, is much higher than for an 08 number (although a few exceptions have emerged recently).⁵⁵⁵ Formalising this through Option 5 need not be onerous for communications providers.

A5.161 In conclusion, we believe the most appropriate approach is likely to be to specify maximum prices for the SC i.e. Option 5 is more attractive than Option 3. Option 5 would help different number ranges to convey information about the approximate

⁵⁵³ For example, in the 070 Consultation we discussed "missed call scams" where mobile phone users are left unsolicited missed calls encouraging them to call back an 070 number. We stated that one reason why the 070 range was particularly vulnerable to fraud was consumers' poor understanding of what price they should expect to pay when they call an 070 number. 070 Consultation, paragraphs 2.24-2.25, <http://stakeholders.ofcom.org.uk/consultations/070options/>

⁵⁵⁴ A SP setting that high SC damages the perception of the number range i.e. the horizontal externality discussed in Section 5.

⁵⁵⁵ Historically, termination rates have generally mimicked the amounts that BT pays third party TCPs for calls originating on its network. Recently, TCPs have sought to depart from this approach. In particular, BT sought to introduce termination rates for 080, 0845 and 0870 calls that were linked to the OCPs' retail price and thus could be comparatively high (at least for some OCPs).

cost of a call, including protecting consumers from scams. It means that a caller to an 08 number (say) knows that the service charge will never be more than a certain amount. This is likely to assist consumers understanding and give them a greater confidence about non-geographic call prices.

Compliance with a maximum SC

A5.162 We have considered how compliance with the maximum SC should be assessed.

A5.163 The ppm component of the SC might vary depending on time of day etc. This begs the question of whether any ppm maximum should apply to the average (blended) time of day price or to each component. To illustrate, suppose the maximum SC were 5ppm. Could a SP charge a daytime SC of 8ppm combined with a low evening/weekend SC, provided the average charge were below 5ppm? We consider that assessing compliance by comparing the average (or blended) SC that a SP charges against the maximum charge has two significant disadvantages:

- First, it would mean that callers no longer know what the maximum SC would be for their specific call. This would undermine the benefits of Option 5, namely giving callers confidence that the service charge will not be more than a known amount.
- Second, it would be difficult to enforce. Ensuring that a SP had not exceeded the overall maximum would require data on both volumes and charges by time of day. This would create a burden for SPs and the regulator. Moreover, compliance would presumably have to be calculated based on historic volumes (otherwise a SC risks failing to comply with the overall maximum if it fails to forecast call volumes by time of day accurately). However, this begs the question of what volume assumptions would be used for new entrant SPs, for which historic data is not available.

A5.164 We thus consider that it would not be appropriate to assess compliance with an SC maximum by using some form of blended average of the SPs' charge. Rather, the SP should be required to comply with the maximum SC at all times. To illustrate, if the SC maximum were 5ppm then the SC for that number range must never exceed 5ppm. The SC could vary by time of day, provided that it was always below the 5ppm maximum.

A5.165 A SC could consist of a charge per call and/or a ppm charge. Since we do not consider it would be appropriate to adopt a blended approach to compliance, we would also need to specify maxima for both these elements.

A5.166 In summary, we consider that the maximum price for the SC should apply at all times of the day (rather than being a blended average).

A5.167 We are satisfied that Ofcom can monitor and enforce any maxima for the SC. Given that SC maxima will apply across the entire industry, there could be a perception that there would now be greater opportunities for non-compliance, including deliberate breaches and consumer scams. In practice, we do not think that will happen. The SC is linked to the termination rate payable by the OCP to the TCP and we would not expect OCPs to make outpayments in excess of the maximum. It is highly likely that both the OCP and the TCP will face new legal obligations with respect to ensuring the SC does not breach the relevant maximum.

Levels for SC maxima

- A5.168 The final issue is what levels would be appropriate for the maximum prices applying to the SC. Since we do not consider a blended approach to compliance to be appropriate, it would be necessary to specify both a maximum pence per call charge (i.e. a maximum call set up fee) as well as a maximum pence per minute charge.
- A5.169 In this consultation we do not propose what the levels of the SC maxima might be. However below we set out our initial thoughts on how to approach this issue. We would welcome stakeholders' views on how to set these maxima.
- A5.170 Insofar as the maximum SC for a particular number range is lower than the current termination payments that TCPs (and ultimately SPs) receive then this is likely to prompt SPs to migrate elsewhere. As explained in Annex 8, migration imposes a cost on SPs. In order to mitigate these costs, this suggests that the natural starting point for SC maxima would be current termination rates.
- A5.171 Table A5.10 below sets out the average outpayments by OCPs in 2009 (03, 080 and 0870 are excluded, given that we are not proposing to apply the unbundled remedy to these number ranges). This gives an indication of what the average SC for these number ranges might be (excluding VAT).

Table A5.10: Estimate of average SC (2009 data)

No. range	070	0843/4	0845	0871/2/3	09	118
Average SC	28.4ppm	3.2ppm	1.7ppm	9.9ppm	57.6ppm	64.1ppm

Source: Ofcom calculations based on outpayment data from the 2010 Flow of Funds study

- A5.172 The estimates presented in Table A5.10 are averages. Obviously some SPs are currently charging termination rates considerably above these averages (these SPs would presumably seek to charge SCs that are above these averages too). Moreover these estimates do not provide a basis for specifying pence per call limits. We thus consider that a more informative starting point would be the current POLOs specified by BT.⁵⁵⁶
- A5.173 There are a number of additional factors that would need to be considered.
- A5.174 First, basing SC maxima on current termination rates is likely to lead to different maxima for 0843/4 calls, 0845 calls and 0871/2/3 calls (see Table A5.10). This begs the question of whether the maximum SC principles for the 08 number range should be simplified. For example, would callers recognise the difference between 0844 calls and 0845 calls (i.e. a distinction based on the fourth dialled digit) or should a single maximum be applied to both types of call? Similarly, should a separate (higher) maximum be set for 0871 calls or should there be a single maximum for all 08 calls that are covered by the unbundled remedy?
- On the one hand, setting a single maximum SC is likely to be simpler and easier to remember for callers; and

⁵⁵⁶ For most non-geographic number ranges these POLOs can be determined using the NTS calculator available on BT's website. As explained in Annex 3, historically these POLOs have generally applied across the market, rather than just for calls originated on BT's network.

- On the other hand, imagine that we set a single, relatively high, SC maximum (for example, an SC maximum for all 08 calls that is based on the upper end of 0871 termination rates). This would provide less information to consumers about the likely price of a specific call. Lowering this maximum SC would be more informative for calls but is likely to prompt some SPs to migrate elsewhere (which is costly, depending on the pace of migration).

A5.175 Second, for any number range specific factors would need to be taken into account. In particular:

- 070 and 076 calls are particularly likely to be confused with calls to mobiles. As discussed in Annex 8, it may be appropriate to set a similar SC to that applying to mobile voice call termination;
- In order to protect callers, retail prices for 09 calls are currently capped. A consequence of this is a de facto limit on the termination rate that can currently be charged for 09 calls. As discussed in Annex 8, it may be appropriate to raise this limit (i.e. set a SC maximum that is higher than current termination rates) provider callers are more aware of the likely charge; and
- Similarly, we would need to consider whether there should be a maximum SC for 118 calls, analogous to the maximum for 09 calls.

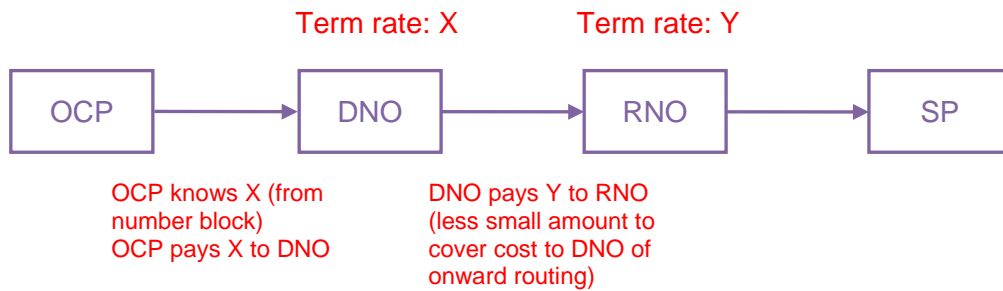
Control of the SC for ported non-geographic numbers

A5.176 As explained in Annex 3, where a non-geographic number has been ported the OCP pays the donor network operator's ("DNO") termination rate. While the OCP will know which TCP was originally allocated a particular non-geographic number (the DNO) it is unlikely to know which TCP ultimately terminates calls to that number (the Recipient Network Operator or "RNO"). While the OCP knows the DNO's termination rate, it does not know the RNO's termination rate (since it generally does not know the RNO's identity).

A5.177 This is illustrated in Figure A5.1 below. The OCP routes a call to the DNO and pays the DNO its termination rate (X in the example). The DNO then routes that call to the RNO and pays the RNO its termination rate (Y in the example) (less a small amount to cover the cost of onward routing). The OCP may well be unaware that the non-geographic number has been ported and is thus unaware of the RNO or the termination rate that it charges.⁵⁵⁷

⁵⁵⁷ For simplicity this explanation has assumed that the SC is the same as the termination rate. In practice it may be slightly different, as explained later in this annex.

Figure A5.1: Routing of calls to ported non-geographic numbers



A5.178 This may have consequences for the operation of the unbundled remedy. The OCP will know what SC is charged by the DNO for calls to a particular block of numbers. However, where a number from that block has been ported, the OCP may not know the SC that the RNO charges for calls. Accordingly, the OCP is likely to charge callers the DNO’s SC (plus the AC) rather than the RNO’s SC.

A5.179 This implies that, if a SP ports its non-geographic number, the SP is then unable to alter the price that callers pay. Even if the RNO changed its SC this would not feed through into a price change for callers.

A5.180 In order to estimate the potential scale of this issue, we asked TCPs how many calls they received to non-geographic numbers that have been ported in from another TCP. This is shown in Table A5.11 below. The proportion of calls for which the SP potentially does not have control over the SC paid by callers varies significantly between TCPs and between number ranges. In some cases it is negligible; in other cases it accounts for over a quarter of calls or more.

Table A5.11: Proportion of non-geographic calls to ported in numbers

	C&W	BT	Gamma	Magrathea
080	25%	29%	4%	Negligible
0843/4	1%	No data	8%	Negligible
0845	37%	20%	22%	Negligible
0870	37%	14%	33%	Negligible
0871/2/3	14%	13%	17%	Negligible
09	3%	13%	0%	Negligible

Source: Responses to information request dated 2 June 2010. Response to question C2 divided by response to C1.

A5.181 We would welcome stakeholders’ views on this potential problem. In particular:

- How serious is this issue? Since it only arises where a SP wishes to select a different SC to that charged by the DNO, how likely is this to occur? If SPs were required to move to a different non-geographic number if they wished to change their SC, how onerous would this be?
- Is our description of this problem correct and are there technical solutions?

Price disclosure obligations on providers

A5.182 The effectiveness of the new unbundled structure relies on consumer understanding of how the tariff structure operates and the consumption choices that they will now have. Effective understanding of the tariff structures will require various parties in the value chain to take steps to communicate the new tariffs.

Likely price disclosure obligations on OCPs

A5.183 The successful implementation of the unbundled tariff option depends on having a simple and clear AC that is easily understood by consumers. It is our view that this is best achieved by requiring OCPs to have a single AC for all non-geographic calls for each consumer account.

A5.184 To ensure the AC is easily understood by consumers and to promote competition between OCPs on the level of the AC, we consider it necessary to establish new price disclosure obligations on OCPs. It is worth noting that Ofcom already requires OCPs to make a range of information available in advertising and at the point of sale, including:

- OCPs are required to publish call charges and must give NTS charges (including 0870 and Personal Numbers) the same prominence in terms of location and format given to charges for geographic calls, calls to mobiles and call packages, including bundles.⁵⁵⁸
- OCPs must publish in advertising and promotional material which refers to call pricing, alongside maximum prices applying to NTS calls (including 0870 and Personal Numbers), a clear reference as to where published price lists can be found.⁵⁵⁹
- When a new customer signs up for the provider's service, OCPs must provide, as well as maximum prices for NTS calls (including 0870 and Personal Numbers), a clear reference to where complete set of call charges can be located.⁵⁶⁰
- Both fixed and mobile providers must, before entering into or amending a contract with a customer, use reasonable endeavours to ensure the customer is provided with a range of clear, comprehensible and accurate information that is provided in a durable form. Information that must be provided to the consumer includes the name of the legal entity entering into the contract, relevant contact details of that entity, a description of the service, key charges, and payment terms.⁵⁶¹

⁵⁵⁸ By virtue of General Condition 14.2(b)

⁵⁵⁹ By virtue of General Condition 14.2(b)

⁵⁶⁰ By virtue of General Condition 14.2(b)

⁵⁶¹ General Conditions 23.5 and 23.6.

- Mobile providers are also under obligations to ensure that the terms and conditions of any relevant sales incentives are fully disclosed to consumers at the point of sale in a clear, comprehensive and accurate manner.⁵⁶²

A5.185 It is our view that it is necessary to impose obligations on OCPs to make information clearly available to consumers about the relevant Access Charge for each tariff package – in both advertising and at the point of sale. It is our initial position that, as well as amending existing General Conditions to reflect the new NGCS environment, new General Conditions will need to be introduced:

- At the point of sale (before entering into or amending a contract), an OCP must also disclose to the customer in a clear and accurate manner the relevant AC that will apply to their package. Such information would need to be provided in a durable form.
- Advertising or promotion material for a specific package that refers to call pricing must also include the relevant AC for that service.

A5.186 We would welcome initial stakeholder views on these proposed new requirements. Any new obligations will be consulted upon fully in a follow-up consultation.

Likely price disclosure on service providers / information providers

A5.187 In an unbundled tariff environment, the AC is only one component of the charge that a consumer will face when making a non-geographic call. Information at the point of call is an important means of enabling consumers to make the right consumption choices of NGCs. Given the increased flexibility that SPs will have in determining the price point for their service, we consider it important that such SPs have responsibility for communicating that cost to consumers.

A5.188 At present 09, 0871 and DQ services are all regulated by PhonepayPlus as premium rate services. Such regulation carries a number of responsibilities for parties involved in those services, including an obligation to ensure that consumers are fully informed of the cost of the call prior to incurring any charge.⁵⁶³ We would expect in a future unbundled tariff environment that this would require SPs to inform consumers of the relevant SC and that those consumers will also incur an AC as set by their OCP. As is explored in Annex 7, if the current maximum price guidance for 09 calls is raised then it is likely that this will also be complemented by an obligation on TCPs to state the relevant SC in a PCA.

A5.189 The remaining revenue-sharing range that is not currently subject to SP/IP price disclosure obligations is 0843/4. As noted in our examination of this number range, concerns include a lack of pricing transparency and the potential for scams being undertaken. Ofcom's ability to regulate the advertising activities of SPs/IPs is limited and we consider that, as well as the introduction of an unbundled tariff, a case can be made for amending the PRS Condition to make 0843/4 services subject to regulation by PhonepayPlus.⁵⁶⁴ We would expect any subsequent regulation to be

⁵⁶² General Condition 23.10.

⁵⁶³ Rule 5.7.1 of the PhonepayPlus Code of Practice (11th Edition).

⁵⁶⁴ The test for amending the PRS Condition to include or exclude certain service categories was established through Ofcom's 2009 Scope Review (http://stakeholders.ofcom.org.uk/binaries/consultations/prs_scope/statement/prs.pdf). We consider a prima facie case exists that in a future unbundled tariff environment there would be sufficient risks of consumer harm associated with the 083/4 number ranges to justify an extension of

applied by PhonepayPlus to be 'light touch', but to include an obligation on providers to state the SC in all advertising. The extension of PRS regulation to this number range will be subject to a follow-up consultation in 2011.

- A5.190 At present we do not consider that there is a need to impose further pricing transparency obligations on SPs operating on non-revenue sharing number ranges. Our proposals for the other number ranges will address largely address issues of concern by reducing the total charge paid by the consumer (e.g. 0800 and 03) or by closing down the number range (e.g. 070 and 0870).
- A5.191 SP/IP compliance with obligations to disclose the Service Charge in advertising will fall within the remit of PhonepayPlus, who as the premium rate regulator is able to investigate individual consumer complaints to determine compliance with its Code of Practice.

Implementation costs of introducing the unbundled tariff

- A5.192 There are two implementation aspects related to the adoption of unbundled tariff structures. These were explored with communication providers and billing systems vendors in the 2010 Implementation Costs study:
- The first aspect is the level of pricing granularity that could be supported by the billing systems in order to be commensurate with the level of variation of the unbundled tariff components across non-geographic numbers; and
 - The second aspect relates to the ability of OCPs to correctly charge their customers for non-geographic calls.
- A5.193 The 2010 Implementation Costs study found that OCPs' billing systems are capable of charging at a level of granularity corresponding to at least the same level as BT's current level of charging granularity, i.e. blocks of 10,000 numbers. Some OCPs currently charge a single retail price across a larger range of numbers. This is not due to any implementation constraints of their billing systems and largely for reasons of administrative convenience.
- A5.194 Although some OCPs might have to update their billing systems to reflect an unbundled tariff structure, the study didn't identify any insurmountable implementation barrier in adopting an unbundled tariff structure. Modern rule-based billing systems would be capable of coping with the two different tariff components of the unbundled tariff structure. However, the study identified some limitations with legacy retail billing systems that require a single charge to be fed into the retail billing systems. Although this might restrict the level of disaggregated information presented in a bill, it is unlikely to cause any issue in applying the correct call charge. The AC and SC components could be combined together before being fed into the legacy retail billing systems. The limitations of legacy retail billing systems would however restrict the presentation of the bill to a single charge per call rather than identifying the access and service charge on a per call basis.
- A5.195 Some OCPs might face billing systems implementation costs in upgrading legacy billing systems if they were to adopt an unbundled tariff structure. The OCPs that were interviewed as part of the 2010 Implementation Costs study suggested an

premium rate regulation. The key risk of consumer harm is that in the absence of any price notification obligations in an unbundled tariff environment it is likely that consumers will be unaware and unable to easily determine the total price they will pay for a 0843/4 call.

implementation period of up to 24 months and investment costs in the range £2m to £10m per firm to support both correct charging under an unbundled tariff structure and to present a bill with disaggregated call charges on a per call basis. These cost estimates are not based on detailed cost assessments of the specific upgrades required to support an unbundled tariff structure and therefore should be considered as preliminary and illustrative estimates of the potential costs. The OCPs were unable to split the implementation cost between correctly charging for the call and presentation of bill. TCPs and SPs are unlikely to face any significant implementation costs, but might have to change their price publication material in response to new retail tariff structures.

A5.196 We consider these estimates are likely to over-estimate the complexity of the unbundled tariff structure and the details that would have to be presented in a bill. The implementation burden could be reduced at the beginning by not presenting the AC and SC on a per call basis and only presenting them as charges aggregated on a per number range basis.⁵⁶⁵ This might achieve a faster implementation of the consumer transparency objective while delaying the full implementation of itemised bill presentation to be rolled into the normal billing upgrade cycles.

A5.197 Moreover the effects of delaying the presentation of separated ACs and SCs on consumers' bills may be limited. Therefore, the limitations in presenting a fully itemised bill with disaggregated charges are unlikely to hinder the effectiveness of an unbundled tariff structure. In particular:

- Participants in our 2010 qualitative consumer research would generally look at the total charge on their bill, without considering individual calls. If the total charge was within the usual range then callers would not look further⁵⁶⁶;
- The 2009 Consumer research found that only 18% of respondents had ever looked up the cost of a call and, of these, only 29% used information printed on their bill (this corresponds to approximately 5% of overall respondents)⁵⁶⁷; and
- Pre-pay (PAYG) mobile subscribers do not receive a monthly bill and therefore are unlikely to benefit from any detailed charging information presented in a bill.

A5.198 We have not identified any implementation barrier that OCPs would face in adopting an unbundled tariff structure. Although we recognise that some OCPs, and in particular those with legacy billing systems, might face implementation costs, we are of the view that these costs could be minimised by restricting the level of disaggregated information presented in the bills to consumers. On the other hand, OCPs with modern billing systems would, in our view, be able to adopt the unbundled tariff structure without incurring significant upgrade costs. Therefore, we consider that the unbundled tariff remedy should not be discarded for purely implementation considerations if it could be an effective remedy.

⁵⁶⁵ Since we are proposing that there would be a single pence per minute AC associated with each tariff package and which applies to all non-geographic calls it would appear simple to calculate the total AC incurred by a consumer. It is simply the number of minutes of non-geographic calls multiplied by the pence per minute AC.

⁵⁶⁶ The 2010 Consumer research, page 6. See also pages 4 and 19.

⁵⁶⁷ The 2009 Consumer research, Figures 19 and 20.

Implications of the unbundled tariff at the wholesale level

A5.199 We are proposing the unbundled approach in order to address concerns at the retail level. However we have also considered its implications at the wholesale level.

Relationship between the SC and termination rates

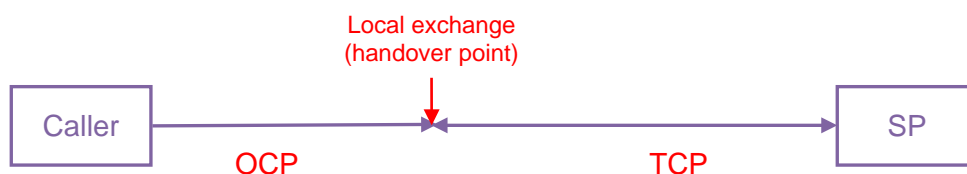
A5.200 We have considered the relationship between the SC and the termination rate. Currently the termination rate generally depends on the point at which the call is handed over to the TCP.⁵⁶⁸ Where the TCP has built out a more extensive network, and is thus able to pick up calls at an earlier point, it generally charges a higher termination rate to reflect its higher costs.

A5.201 In our view, it is important for termination rates for non-geographic calls to reflect the point at which the call is handed over. A higher termination rate compensates the additional costs for the TCP if it receives the call at an earlier stage; similarly a lower termination rewards the OCP for conveying the call further. Different termination charges for different points of handover (if appropriately cost reflective) also provide signals for CPs to make efficient “make or buy” decisions about the choice of point of handover.⁵⁶⁹

A5.202 We thus consider that the SC should be the termination rate that would prevail if the call was handed over at a particular point (the “Assumed Handover Point”). We discuss below what this point should be. However, in order to explain how this system would operate below we present an example where, for illustrative purposes, we have assumed that the Assumed Handover Point is the OCP’s local exchange.

A5.203 Suppose for illustrative purposes that the SC was 10ppm. If, as shown in Figure A5.2, a call is actually handed from the OCP to the TCP at the local exchange then the termination rate is the same as the SC, namely 10ppm.

Figure A5.2: Handover to TCP at the local exchange

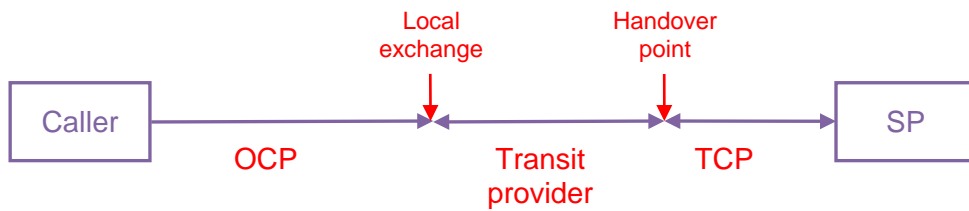


⁵⁶⁸ For example, for an 0871 call originated by BT with a retail price of 10ppm (plus call set up fee) the daytime termination rate is 9.8659ppm if the call is handed to the TCP at the local exchange, 9.7503ppm if it involves single tandem conveyance and between 9.5004ppm and 9.0869ppm if double tandem conveyance is involved. Source: NTS calculator October 2010 v9 for price point g7.

⁵⁶⁹ Unlike calls to geographic numbers, currently calls to non-geographic numbers are typically routed according to the principle known as “near-end handover”. This means that the call is taken off the OCP’s network as soon as possible. Since these numbers do not relate to a specific geographic destination, the OCP does not know the final geographic destination of the call. See the 0870 Dispute Determination, paragraphs 2.7-2.14 for further details.

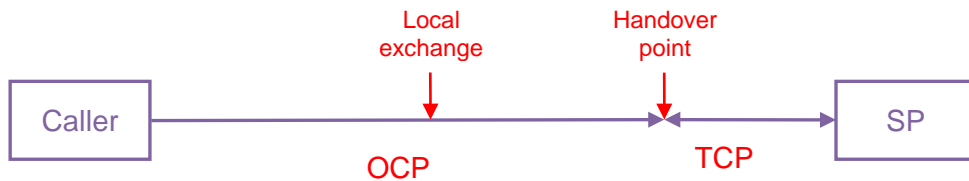
A5.204 Suppose instead that the call is handed over to the TCP after the local exchange. Rather the OCP hands the call to a third party transit provider at the local exchange who conveys that call to the TCP. Suppose, for the sake of illustration, that the transit provider charges 0.1ppm. This situation is shown in Figure A5.3. The OCP pays 10ppm as before. However the TCP only receives a termination rate of 9.9ppm, to reflect the later point at which it collects the call. The difference reflects transit charges.

Figure A5.3: Handover to TCP after the local exchange plus third party transit



A5.205 Finally suppose that, rather than involving third party transit, it is the OCP that conveys the call to a handover point beyond the local exchange. This situation is shown in Figure A5.4. Just as in the previous example (namely Figure A5.2), the TCP receives a termination rate of 9.9ppm. Effectively the OCP is acting as a transit operator for that additional conveyance leg (beyond the local exchange). It thus receives a portion of the SC to cover those additional conveyance costs, just as if that conveyance was carried out by a third party transit provider.

Figure A5.4: Handover to TCP after the local exchange



A5.206 In summary, the AC relates to the retailing of the call and conveying it to the Assumed Handover Point (namely the local exchange in the above examples). The SC relates to the conveyance of the call from that point (plus termination and any revenue share). Where a call is handed over after the Assumed Handover Point the termination rate will be lower than the SC; where a call is handed over before the Assumed Handover Point the termination rate will be higher than the SC.

The Assumed Handover Point

A5.207 We now turn to the issue of what is the Assumed Handover Point. The earlier this point is, then the greater proportion of the costs of conveyance that are deducted from the SC (see the above example). Conversely choosing a later Assumed

Handover Point means that a greater proportion of the costs of conveyance are deducted from the AC.

- A5.208 This overlaps with the discussion in Section 7 about which party is responsible for paying for transit. Choosing an early Assumed Handover Point effectively means that the TCP pays for transit. Choosing a late Assumed Handover Point effectively means that the OCP pays for transit.
- A5.209 As explained in Section 7, we are seeking stakeholders' views on whether the current (asymmetric) responsibilities for paying for transit should be changed. Our intention is to reflect the outcome of that debate in our choice of Assumed Handover Point.

Implications of the unbundled remedy at the wholesale level

- A5.210 In Annex 3 we explained why we are not confident that in the absence of ex-ante regulation the termination rates that would arise commercially are likely to lead to desirable outcomes for consumers. We now consider the impact at the wholesale level of the adoption of the unbundled tariff (i.e. ex ante regulation at the retail level) and, in particular, how it might address our wholesale level concerns.
- A5.211 The unbundled tariff changes the environment in which termination rates are set. Below we first discuss the termination rate for calls that are actually handed over at the Assumed Handover Point (i.e. the SC). We then discuss the variation of the termination rate for calls handed over at a different point.
- A5.212 We discussed constraints on the SC (i.e. the termination rate at the Assumed Handover Point) above. Callers are likely to exert a stronger constraint on this termination rate than they would in the absence of ex ante regulation (the situation analysed in Annex 3). In particular, because this component of the final price would be more transparent and prominent to callers than at present, even if a proportion of calls is locked-in, they are likely to be in a better position than they are today in demanding a price structure that is more reflective of their potential preferences. Further, a 1ppm change in the SC leads to a 1ppm change in the retail price paid by callers. Given the increased transparency to callers about who sets which component of the final price, SPs thus would potentially face the consequences of their choice of termination rate: a higher or variable termination rate could act as a barrier to further usage through a higher or variable SC.
- A5.213 As explained above, for calls that are not handed over at the Assumed Handover Point the termination rate differs from the SC. However there may be constraints on the magnitude of that divergence. For example, suppose that the TCP sought a high termination rate for calls handed over before the Assumed Handover Point (i.e. the reduction from the SC for early handover was unduly low). An OCP, rather than accepting that termination rate, could purchase transit. The transit provider could hand the call over at the Assumed Handover Point, incurring a termination charge equal to the SC. The reduction from the SC for early handover is thus constrained by the possibility of transit. A similar constraint exists in the case of calls handed over after the Assumed Handover Point.
- A5.214 Thus, as explained above, if the unbundled tariff was in place then the environment in which termination rates are set is different to that analysed in Annex 3. It is thus not clear that further regulatory intervention is needed at the wholesale level.

Evaluation of the unbundled tariff against our assessment criteria

A5.215 We now evaluate, at a general level (i.e. not number range specific), the unbundled tariff against the deregulated scenario using the assessment criteria put forward in Annex 1. As discussed in Annex 2 we expect the deregulated scenario to be a potentially slightly worse outcome for consumers than the status quo.

A5.216 In terms of transparency/consumer price awareness this option would have the following potential advantages over the deregulated scenario:

- Overall the complexity of prices is likely to be significantly reduced;
- As explained above, we consider that the AC should be a single pence per minute number for each tariff package. It is thus very easy to compare the AC between different OCPs. The cheapest way of making any call will always be the OCP with the lowest AC (assuming that the SC does not vary between OCPs). This should ensure that consumers find it easier to subscribe to the tariff package and OCP which better meets their overall needs. Moreover since the AC is very simple, it would be more likely to be remembered by consumers at the point of call, compared to the multitude of prices that consumers are currently faced with. This should reduce the risk of under or over-consumption for consumers;
- The current variation in retail non-geographic call prices across OCPs makes it difficult for SPs to communicate to callers the cost of calling their services. The unbundled remedy would address this. SPs would be able to clearly explain the SC for calling them; and
- We are aware that there is uncertainty as to how consumers would react to a change of this type. While we believe that the change would allow consumers easier access to simplified information whether this would work in practice remains an empirical and untested question. Therefore, we intend to carry out further research to gain a better understanding on this.

A5.217 In terms of the price faced by consumers this would depend on the strength of competition between SPs and between OCPs under the unbundled remedy:⁵⁷⁰

- In terms of the AC, the unbundled remedy would be likely to increase competitive pressures both at the point of subscription and at the point of call. The unbundled tariff makes this element of call prices more prominent than at present. However, the strength of the competitive pressures at the point of subscription should not be overstated, especially on mobiles. The unbundled remedy would apply to what is currently approximately 11% of fixed voice calls and 2% of mobile voice calls.⁵⁷¹ As explained above, most callers believe that

⁵⁷⁰ The discussion below assumes that the AC is not subject to a biting price maximum.

⁵⁷¹ As explained in Annex 6, our current view is that 03, 080 and 0870 calls should be excluded from this remedy (and instead subject to maximum prices). Excluding calls to these number ranges, in 2009 there were 14,595m fixed non-geographic calls and 2,308m mobile non-geographic calls (source: Ofcom calculations using data from the 2010 Flow of Funds study). In 2009, total fixed voice calls were 135bn minutes and total mobile voice calls were 113bn minutes (source: 2010 Flow of Funds study, pages 2 and 4). We expect that increasing consumers' price awareness will lead to an increase in non-geographic call volumes. However, even a significant increase in non-geographic call volumes is only likely to change the overall percentage of call minutes accounted for by non-geographic calls by a small number of percentage points.

they do not make many non-geographic calls. Although this may change under the unbundled tariff, it is likely that the level of the AC is likely to play a limited role in most callers' choice of which OCP to subscribe to;

- Greater price transparency would mean that the structure of OCPs' prices (i.e. the balance between non-geographic call prices and the price of other services) is likely to move closer to consumers' underlying preferences. How quickly this may happen depends in part on when the current retail contracts could or will be modified accordingly. As explained in Annex 2, currently consumers' poor awareness of non-geographic call prices makes them 'artificially' insensitive. This distorts the structure of retail prices – non-geographic call prices can be raised in a way that reflects the extent of callers' ignorance, rather than their underlying preferences. We believe the unbundled remedy would reduce this effect;
- In terms of the SC there may be some additional competitive pressure when there is scope for competition between SPs. Where two SPs supply comparable services then callers simply need to evaluate the SCs charged by those SPs to determine which offers the best value for money. However, as explained above, there is likely to be a significant share of non-geographic calls for which callers have no effective choice. We recognise that for such callers there is likely to be limited increases in competition;
- One potential concern is whether unbundling non-geographic calls could lead to a situation where both OCPs and SPs set their charges independently of each other in an uncoordinated way. However, this is a concern at present (see the discussion of the vertical externality in Annexes 2 and 3). Furthermore, we expect the unbundling remedy to alleviate this concern, since it provides the SP with more control over the retail call price, which is the sum of the SC it sets and the AC set by each OCP (for each tariff package); and
- In terms of the horizontal externality we currently believe that OCPs and SPs do not take into account the effect that their pricing decisions may have on the reputation of non-geographic numbers. Greater price transparency (as a result of the unbundled tariff) should help mitigate this externality, since it will be easier for callers to base their decisions on the actual price of calling a non-geographic number, rather than inferring that price from their past experience of calling other non-geographic numbers. Moreover, the objective of applying maximum prices to the SC is to protect the perception of different number ranges. Maximum SCs thus directly address the horizontal externality to some extent.

A5.218 Consumers benefit from service quality, variety and innovation and there are concerns that under the deregulated scenario consumers are not able to make the most of these services.

- As explained above, we consider that the unbundled remedy would increase price awareness. Since consumers would be more confident that they know the price, and less likely to markedly overestimate non-geographic call prices, this is likely to stimulate demand for non-geographic call services. The benefits in terms of (partially) addressing horizontal and vertical externalities are also likely to stimulate demand. Overall this is likely to promote service availability and innovation;

- Currently SPs are harmed as a result of their inability to control retail prices and consumers' poor price awareness. In terms of the first of these factors, SPs would have more control than under the deregulated scenario, given their ability to select the SC, although they still would not control the overall retail price which also depends on the AC (the vertical externality discussed above). SPs will regain incentives to differentiate their services as they can set and communicate to consumers the prices of services of different quality; and
- OCPs would be free to set different ACs for different tariff packages. Consumers have heterogeneous preferences. Some may prefer cheaper non-geographic calls in exchange for more expensive geographic calls or subscriptions, while others may have opposite preferences. The unbundled tariff would allow OCPs to offer a variety of packages cater for the variety in consumer preference.

A5.219 Our access to public services concern relates to citizens' access to socially important services. This is particularly acute where vulnerable citizens are deterred from accessing some of these types of services through non-geographic calls.

- Increased competition may result in some reduction in retail prices (see above), which would somewhat reduce this concern. Competitive pressures on the level of the AC are more likely to arise than on the level of the SC, given that SPs providing socially important services are likely to have few close substitutes;
- Moreover, the unbundled tariff would make it clear to what extent the SP was responsible for the retail price, by making the SC element explicit. SPs providing socially important services may be particularly sensitive to claims that they are profiting unduly from non-geographic calls. The threat of adverse publicity may thus exert a further constraint on the level of SCs;
- We consider that the unbundled tariff may potentially reduce this concern in relation to mobile-only vulnerable citizens and consumers which under deregulation may be deterred from accessing socially important services; and
- However, we are aware that ultimately whether socially important services would become more accessible to vulnerable citizens and consumers will largely depend on the decision of the SP as to under which number range to provide its services.

A5.220 Lastly we consider regulatory burden and unintended consequences. The key advantage of the unbundled option is that it would still allow SPs and OCPs considerable flexibility to select the level of AC and SC, taking into account the extent of competition and consumers' preferences. This option would be less interventionist therefore, than, say, maximum retail prices (discussed in Annex 6). There are likely to be some implementation costs e.g. changes to billing systems. However we have not identified any implementation barrier that OCPs would face. We recognise that the implementation costs estimates from the 2010 Implementation Costs study appear relatively high. However, as explained above, we consider these are likely to be an overestimate. The extent of implementation costs could be minimised by restricting the extent to which disaggregated information is presented to consumers in their bills.

A5.221 In addition, while we consider that in theory the unbundled tariff has a number of attractive features, we have highlighted that in practice we do not know whether consumers will react as expected. We intend to minimise this risk by undertaking

further research in this area. Overall, it seems very unlikely that the outcome under the unbundled tariff, with the safeguards we expressed a preference for, would be worse than under the deregulated scenario.

Preliminary views on the unbundled tariff

- A5.222 Overall our current view is that the unbundled tariff seems very likely to perform substantially better than the deregulated scenario and, given our views expressed in Annex 2 under the status quo. It is particularly attractive for revenue sharing ranges because it makes it clear to the caller whom they are paying for what. In addition, it is sufficiently flexible to still allow for competition between OCPs and between SPs. The magnitude of the benefits from this option would depend on the improvement in consumer price awareness and the resulting increase in the extent of competition. We consider that there would be scope to mitigate the costs of implementing this option.
- A5.223 Our current view is that the unbundled tariff is an appropriate candidate for intervention.

Annex 6

Maximum retail prices

Introduction

- A6.1 In this Annex we discuss another potential retail remedy, namely specifying maximum retail prices for non-geographic calls that would apply to all providers.
- A6.2 Maximum prices⁵⁷² would protect consumers by allowing SPs to give a much clearer statement of the cost of a call, namely “calls cost no more than X”.
- A6.3 We would need to specify a maximum price in a pence per minute amount or a maximum pence per call amount (e.g. calls cost no more than X pence per call or Y pence per minute).
- A6.4 This Annex is structured as follows:
- First, we set out stakeholders’ views on this potential remedy;
 - Second, we explain why the amount of ‘headroom’ between the maximum retail price and the level of termination rates is central to the advantages and disadvantages of this option. Thus, before we can assess this option, we need to discuss both the level of maximum retail prices and of termination rates;
 - Third, we discuss potential approaches to setting the level of retail price maxima;
 - Fourth, we discuss the level of termination rates and the implications of the operation of the wholesale level;
 - Fifth, we discuss the granularity of the price maxima i.e. how many price maxima there are within a particular number range;
 - Sixth, we set out our current high level view on how this option would operate; and
 - Seventh, we evaluate this option against our assessment criteria.

Stakeholder views

- A6.5 Below we summarise stakeholders’ views on maximum retail prices. Specifically, we first set out responses to the Call for Inputs. We then set out callers’ views, as reflected in our consumer surveys. We then set out relevant material from the 2010 SPs survey.

Responses to the Call for Inputs

- A6.6 Several respondents to the Call for Inputs explicitly advocated some form of maximum retail prices. In particular:

⁵⁷² Maximum prices are explicitly provided for in the revised EU Framework - Authorisation Directive, paragraph 1, Annex C.

- BT believed the call pricing requirements in the NTNP should apply to all communications providers. BT considered that there was “tension between consistency, which requires certainty for customer prices within each non-geographic number range, and competition, that requires flexible and dynamic price changes to attract customers”. BT considered that consistency was more important than competition for non-geographic calls⁵⁷³;
- C&W considered that the main problem is the uncertainty associated with the retail price of calling non-geographic numbers from certain networks.⁵⁷⁴ C&W considered that the “ideal outcome” would be requiring the retail price of non-geographic calls to be within an acceptable price range (i.e. both minimum and maximum prices). That range should be sufficiently wide to permit enough freedom for tariff competition to occur⁵⁷⁵;
- The Federation of Communication Services (“FCS”) considered that the main problem associated with non-geographic numbers is overcharging by some OCPs, particularly the mobile operators, which creates a negative perception of non-geographic numbers and consumer confusion. The FCS considered that retail price maxima would be one way of achieving greater price transparency⁵⁷⁶;
- Flextel considered that retail price transparency was low due to high charging by OCPs, particularly mobile operators.⁵⁷⁷ Flextel considered that one potential remedy could be maximum retail prices specified as a set percentage above the termination rate combined with an absolute ceiling of 15ppm for non-09 calls⁵⁷⁸;
- IPV6 favoured maximum prices for all CPs based on the limits on BT specified in the NTNP. IPV6 considered that this would address mobile OCPs’ high prices, which have damaged consumers’ perceptions of non-geographic call services⁵⁷⁹; and
- TeIXL considered that the extent of the variation in OCPs’ retail pricing undermines callers’ understanding of retail prices and the NTNP.⁵⁸⁰ TeIXL favoured maximum retail prices for each number range.⁵⁸¹

A6.7 Note that a number of respondents considered that the retail level was operating effectively and thus did not require further regulation. These views are summarised in Annex 2.

Consumers’ views

A6.8 We have asked consumers for their views on maximum retail prices. One issue is how accurate a guide to the actual price the maximum price is likely to be. This

⁵⁷³ BT response dated 2 June 2010 to the Call for Inputs, pages 2-3.

⁵⁷⁴ C&W response dated 24 May 2010 to the Call for Inputs, page 8.

⁵⁷⁵ C&W response dated 24 May 2010 to the Call for Inputs, page 9; also pages 16-17.

⁵⁷⁶ FCS response dated 28 May 2010 to the Call for Inputs.

⁵⁷⁷ Flextel response to the Call for Inputs, response to question 4.

⁵⁷⁸ Flextel response to the Call for Inputs, Section 4, paragraph 1(b).

⁵⁷⁹ IPV6 response to the Call for Inputs.

⁵⁸⁰ TeIXL response to the Call for Inputs, page 4.

⁵⁸¹ TeIXL response to the Call for Inputs, pages 2 and 4.

suggests that consumers are likely to prefer limited headroom, so that the maximum price is likely to be a reliable indicator of the actual price.

A6.9 In the 2010 Consumer research we asked whether knowing that the price lay within a 10ppm band would make callers more comfortable. The results are set out in Table A6.1 below.

Table A6.1: callers' views on maximum tariffs

Would feel more comfortable	Would make no difference	Would feel less comfortable	Would depend on the price	Don't know
35%	39%	3%	13%	10%

Source: the 2010 Consumer research

A6.10 In the 2008 Consumer research we sought consumer reactions to a range of potential remedies including PCAs, handset display and online price checkers.⁵⁸² Table A6.2 shows consumers' views on the "hybrid ladder" approach. This consisted of a series of maximum prices for non-geographic calls.⁵⁸³ Table A6.3 shows consumers' views on the "capped prices model". This consisted of a series of maximum prices for all calls.⁵⁸⁴

Table A6.2: Consumer views on "hybrid ladder"

	Overall	Ease of use	Improves price transparency	Like this option
Average score (out of 10)	5.4	5.5	5.6	4.8

Note: Likelihood of using this option was 34%

Source: July 2008 Consumer research

⁵⁸² The full range of options considered was as follows: handset display of call prices, PCAs announcing the call price, an information line providing the call price, fixing the price of all calls based on the first two digits dialled, online price checker, setting maximum non-geographic call prices based on the first two digits dialled, audible indications ('pips') of the cost of a call, a series of price bands based on the first two digits dialled and setting maximum prices based on the first two digits dialled.

⁵⁸³ Specifically a maximum price of 5ppm for 03 calls, 10ppm for 04 calls, 15ppm for 05 calls, 20ppm for 06 calls and 35ppm for 08 calls.

⁵⁸⁴ Specifically a maximum price of 1ppm for 01 calls, 5ppm for 02 calls, 10ppm for 03 calls, 20ppm for 04 calls, 35ppm for 05 calls, 50ppm for 06 calls, 75ppm for 07 calls, £1/minute for 08 calls and unlimited for 09 calls. This option thus involved changing the arrangements for geographic calls (currently located on the 01 and 02 number ranges).

Table A6.3: Consumer views on “capped prices model”

	Overall	Ease of use	Improves price transparency	Like this option
Average score (out of 10)	4.5	4.9	4.9	3.7

Note: Likelihood of using this option was 33%

Source: July 2008 Consumer research

- A6.11 The “capped prices model” was the least popular out of the nine options explored: it scored on average 4.5 out of 10. In particular, consumers commented that the range was too wide and was difficult to remember. The “hybrid ladder” was the sixth most popular option and scored an average of 5.4 out of 10. An approach where, rather than being a maximum, the first two digits dialled determined the exact price of a call scored 6.2 out of 10.⁵⁸⁵
- A6.12 We have treated these results from the 2008 Consumer research with some caution. In particular, some of the other options that were explored provided consumers with the exact price of a call. It is unsurprising that the “hybrid ladder” and “capped prices model” received a relatively low score in comparison to such options.⁵⁸⁶
- A6.13 In the context of analysing PCAs, the Experimental Research found that consumers preferred actual price information to maximum price information.⁵⁸⁷

SPs’ views

- A6.14 SPs were asked how desirable it would be to inform callers of the maximum price they could be charged, on a scale of 1 (not important) to 5 (very important). The average response was just under 3. For most number ranges, SPs attached an importance of between 2 and 3 to being able to inform callers of the maximum price. The main exception was the 09 and 118 number ranges, where this was considered highly important (rating of 4.5 or higher).⁵⁸⁸

Why the amount of headroom is central to the assessment of this option

- A6.15 The effects of specifying maximum retail prices depend on the amount of ‘headroom’ between the maximum retail price for a particular call and the termination rate payable on that call.
- A6.16 The amount of headroom determines how much freedom an OCP has to set its retail prices. For example, if the maximum retail price for a particular call was 10ppm and the termination rate was 4ppm (say) then the amount of headroom is

⁵⁸⁵ The 2008 Consumer research.

⁵⁸⁶ The most popular remedy was displaying the exact price of a call on the handset. This scored 9.2 out of 10. the 2008 Consumer research.

⁵⁸⁷ Experimental Research, page 10.

⁵⁸⁸ 2010 SPs survey, Figure 3.6 on page 21. SPs operating on the 0843/4 number range also considered this to be reasonably important (rating of 3.5).

6ppm. We would generally expect an OCP to charge a retail price somewhere between 4ppm and 10ppm.

- A6.17 If the amount of headroom is large then OCPs have considerable freedom to set their retail prices as they wish, subject to whatever competitive pressures they face. The drawback of this is that the maximum retail price may be a poor guide to the actual price that a caller may pay. The maximum retail price is thus less informative for callers.
- A6.18 OCPs incur incremental costs for originating non-geographic calls. If the amount of headroom is insufficient to cover these incremental costs then OCPs may refuse to originate non-geographic calls. If the amount of headroom is smaller than an OCP's current retention (even if it is larger than that OCP's incremental costs) then the introduction of the retail price maximum will reduce the OCP's profits from non-geographic calls. As explained in Annex 2, this is likely to increase the prices of other services supplied by the OCP (the tariff package effect). If there is little headroom then OCPs are also likely to have little freedom to compete on retail prices. However, if the amount of headroom is small then OCPs are likely to set retail prices close to the retail price maximum. That retail price maximum thus gives callers a good idea of the amount that they are likely to pay.
- A6.19 Table A6.4 summarises the consequences of the amount of headroom for the operation of retail price maxima.

Table A6.4: Impact of amount of headroom

	Lots of headroom	Little headroom
Clarity for callers (likelihood retail price is close to maximum)	Relatively low	Relatively high
Freedom for OCPs	Relatively high	Relatively low
Extent of tariff rebalancing	Relatively low	Relatively high
Risk that OCP refuses to originate non-geographic calls	Relatively low	Relatively high

- A6.20 Thus, in order to evaluate whether maximum retail prices are likely to be appropriate, we need to consider how much headroom OCPs would have. This in turn involves discussing both maximum retail prices and termination rates.

Potential approaches to setting maximum retail prices

- A6.21 We now discuss potential approach to setting maximum retail prices. As noted above, we would need to specify maxima for both the pence per minute and pence per call elements of the price.

- A6.22 The discussion below is structured as follows:

- First, we discuss maximum prices based on the limits currently specified in the NTNP;

- Second, we discuss maximum prices based on current retail prices; and
- Third, we discuss whether different maximum prices should be set for fixed and mobile calls.

Maximum prices based on the current NTNP limits

A6.23 One possible approach for setting maximum retail prices is to use the current limits set out in the NTNP. These limits are summarised in Table A6.5 below. It could be argued that these best reflect SPs' preferences about the price of calling their service. This is because currently SPs have the greatest influence over the price of calling their service for calls retailed by BT since BT is constrained by the price limits specified in the NTNP (although even for these calls SPs generally do not control BT's call set up fees (the per call charge) or the level of retail discounts). Setting price maxima that correspond to SPs' preferences for the maximum price of calling them minimises the extent of disruption for SPs. As a result, SPs are less likely to migrate to other number ranges.

Table A6.5: Current maximum prices specified in the NTNP

Number range	Current maximum price specified in NTNP
03	Geographic rates
080	No charge (except where caller is notified at start of call)
0843/4	Up to 5ppm or 5ppc*
0845	Geographic rates*
0870	Geographic rates (unless prices are published)
0871	Up to 10ppm or 10ppc*
09	Up to £1.50ppm or £1.50ppc*

Note: * indicates limit that only applies to BT customers

- A6.24 No price limits are specified in the NTNP for some number ranges, such as 070 or 118. Moreover, OCPs frequently set higher prices than those set out in Table A6.5:
- Some fixed OCPs set higher prices than those set out above. For example, under Virgin Media's most popular tariff plan an 0844 call costs 11 pence per call plus a further 8ppm while an 0871 call costs 11 pence per call plus a further 12ppm. Virgin Media also charges a higher price than geographic rates for 0870 calls.⁵⁸⁹ BT charges a 9.9 pence call set up fee for 0844 calls.⁵⁹⁰ However fixed OCPs do price 03 calls at geographic rates and do not charge for 080 calls.

⁵⁸⁹ Virgin Media response dated 30 June 2010 to question 6 in Section A of our information request dated 27 May 2010. Prices relate to Virgin Media's best selling fixed telephony package.

⁵⁹⁰ BT response dated 23 June 2010 to question 5 in Section A of our information request dated 2 June 2010.

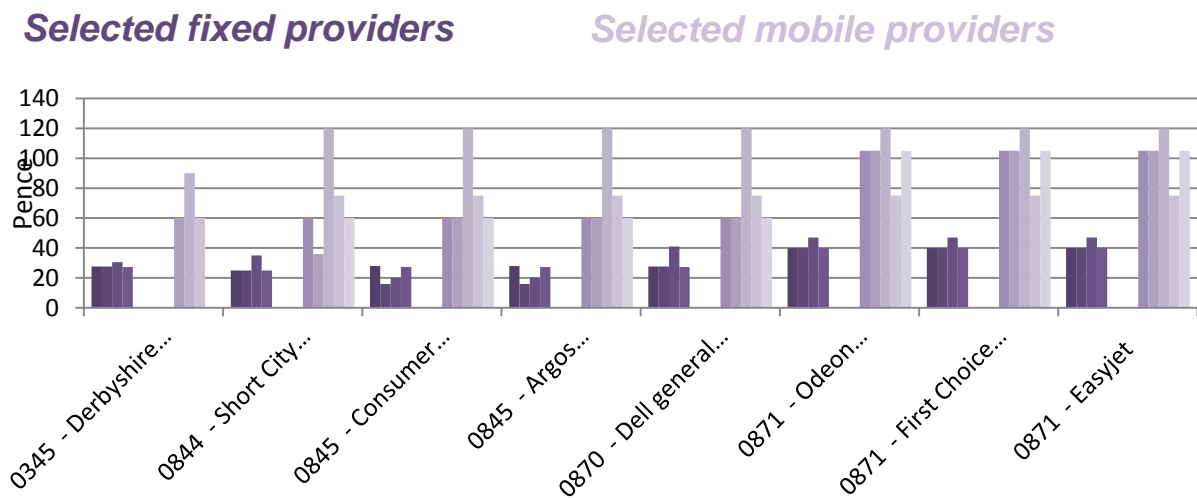
- ii) As explained in Annex 2, mobile OCPs generally charge significantly higher retail prices than fixed OCPs. The main exception is 03 calls which mobile OCPs treat identically to geographic calls.

A6.25 In summary, setting price maxima based on the NTNP will tend to reduce OCP's average retention, unless termination rates fall by a corresponding amount. However an advantage of this approach is that it is likely to reflect SPs' preferences for the retail price of calling their services.

Maximum prices based on current retail prices

- A6.26 Another possibility is to base any maximum prices on the current level of retail prices.
- A6.27 An obstacle to this approach is the current variation in retail prices between OCPs. This means that any retail price maximum either needs to be set at a relatively high level (to accommodate the upper limit of current OCP charges) or some OCPs will need to lower their retail prices. To illustrate, Figure A6.1 shows the retail price of a three minute call to various 08 numbers. While variation between fixed OCPs is relatively limited, there are large differences between fixed and mobile OCPs and between different mobile OCPs.

Figure A6.1: Variation in cost of three minute call to specific SPs under Fixed CP's "most popular" tariff in daytime and Mobile CPs "most popular" post-pay tariff



Source: S135 information requests

A6.28 In addition to the differences in price levels, fixed OCPs and mobile OCPs generally structure their retail prices differently. Fixed OCPs typically include a call set up fee in the region of 10 to 11 pence for an 08 call (with the exception of 080 calls) as well as a pence per minute charge. Mobile OCPs did not include a per call element.⁵⁹¹

⁵⁹¹ Orange specified a minimum call price of between 15p and 40p for calling 08 numbers. BT response dated 23 June 2010 to question A5 of our information request dated 2 June 2010. BskyB, TalkTalk, Virgin Media, Everything Everywhere, Vodafone and O2 responses to question A6 of our information request dated 27 May 2010.

A6.29 In summary, this approach is unlikely to provide a clear guide to setting maximum prices, given the variance in OCP's pricing. Our current inclination would be not to adopt this approach for setting maximum prices.

Setting different maximum prices for fixed and mobile calls

A6.30 As explained above, currently non-geographic calls are generally more expensive from mobiles. Moreover, Ofcom has generally recognised that fixed and mobile networks have different costs. These facts raise the question of whether it is appropriate to set a higher maximum price for mobile calls than for fixed calls. This involves considering the nature of the differences between fixed and mobile OCPs.

A6.31 Currently mobile OCPs generally charge a significantly higher price for non-geographic calls than fixed OCPs. Insofar as this simply reflects current differences in competition between fixed and mobile OCPs, such as BT (whose margin for many non-geographic calls is current regulated) exerting a stronger competitive influence on fixed OCPs than on mobile OCPs, we do not think this is a legitimate reason for setting a higher maximum price for mobile prices.

A6.32 In contrast, insofar as there are underlying differences between mobile OCPs' costs of originating and retailing non-geographic calls (including relevant fixed and common costs) and fixed OCPs' costs, then this is potentially a legitimate reason for setting different retail price maxima. In competitive markets, firms with higher costs generally set higher prices. Moreover this sends price signals to consumers by encouraging them to take those cost differences into account when choosing how to originate a call.

A6.33 However we consider that it is important to consider the magnitude of cost differences between fixed and mobile OCPs. If these differences are small then the benefits of setting different retail price maxima are likely to be limited (for example the price signal being sent to consumers by allowing a price differential is weak). In these circumstances, setting a single price maximum may be a simpler message for consumers.

A6.34 Setting a higher maximum price for mobile calls is likely to be comprehensible for callers. Indeed the majority of callers appear to already have learned that calling a non-geographic number from a mobile is more expensive than from a landline. In the 2010 Consumer research, 79% of respondents thought mobiles were more expensive for 0800 calls (11% responded "don't know"). For other 08 calls and 09 calls, 77% thought mobiles were more expensive (14% responded "don't know").⁵⁹²

A6.35 Setting the same price maxima for fixed and mobile calls could result in significant falls in mobile call prices. We have calculated the potential magnitude of these effects using the figures from the 2010 Flow of Funds study. The impact of setting price maxima depends on the level of the maxima and the extent of substitution from fixed calls to mobile calls. Table A6.6 illustrates the magnitude of the possible effects on OCPs' profits from non-geographic calls. These estimates were calculated as follows:

- These calculations are based on the average prices charged by fixed and mobile OCPs for each number range in 2009. Where the average price in 2009 is above the maximum, it has been reduced to that maximum. Obviously in practice OCPs' prices are currently distributed around the average, meaning

⁵⁹² 2010 Consumer research, questions 33 and 34.

that the maximum may directly affect those OCPs with above average prices. For example, in Table A6.6 since the maxima are at least as high as the average price of a fixed call in 2009, fixed OCPs are assumed not to need to change their prices at all. In fact, those fixed OCPs with above average prices would have to reduce their charges. This effect is not reflected in Table A6.6.

- Three scenarios for fixed to mobile substitution are presented. First, that call volumes do not change. Second, for those number ranges where less than 20% of calls are originated from mobiles, the share of mobile calls rises to 20%. Third, for those number ranges where less than 30% of calls are originated from mobiles, the share of mobile calls rises to 30%. In each case, total call volumes have been assumed not to change. Further, it has been assumed that the incremental cost of call origination is 0.4ppm for fixed calls⁵⁹³ and 0.7ppm for mobile calls⁵⁹⁴
- Three scenarios for the level of the price maxima are used. First, that the maximum for each number range is the same as the current average level of fixed prices. Second, that the maxima are 20% higher than the current level of fixed prices. Third, that the maxima are 50% higher than the current level of fixed prices.
- Termination rates are assumed not to change.

⁵⁹³ For illustrative purposes, fixed OCPs' incremental costs may be in the region of 0.2-0.4ppm. First, this consists of an incremental cost of retailing of 0-0.2ppm. The upper 0.2ppm point is in line with the current NTS Retail Uplift of approximately 0.1848ppm (080 Dispute Determination, paragraph A3.30). However the NTS Retail Uplift was calculated on an FAC (fully allocated costs) basis and may overstate the incremental costs of retailing. Second, the overall figure consists of an incremental network cost of fixed origination of 0.2ppm. This was derived using the costs of termination as a proxy for the efficient network cost of origination (as suggested in 080 Dispute Determination, paragraph A3.23). We note that *BT's Current Cost Financial Statements 2010* suggests that the LRIC of fixed termination (for the year ending March 2010) was between 0.154ppm and 0.388ppm (available at: <http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2010/CurrentCostFinancialStatements2010.pdf>).

⁵⁹⁴ For illustrative purposes, mobile OCPs' incremental costs may be in the region of 0.5-0.7ppm. This consists of an assumed incremental cost of retailing of 0-0.2ppm (the same as for both fixed OCPs – see preceding footnote). The incremental network cost of mobile origination has been assumed to be 0.5ppm. We note that this is broadly in line with the 2010 Mobile Termination Consultation, which estimated a pure LRIC of termination in the region of 0.5ppm (2010 Mobile Termination Consultation, paragraph A11.8 and figure 30 in Annex 7).

Table A6.6: Change in OCPs' profits from non-geographic calls as a result of a price maxima

		Fixed to mobile substitution		
		None	At least 20% calls from mobiles	At least 30% calls from mobiles
Proportion of calls from mobiles		11%	20%	30%
Change in fixed OCPs' profits	Level of maxima does not matter	£0	£22m	£58m
Change in mobile OCPs' profits	Maxima equals average fixed price	£386m	£378m	£362m
	Maxima 20% higher than average fixed price	£332m	£313m	£274m
	Maxima 50% higher than average fixed price	£285m	£249m	£180m

Source: Ofcom calculations based on 2010 Flow of Funds study

- A6.36 As shown in Table A6.6, setting a maximum that reflects fixed call prices would significantly reduce mobile OCPs' profits from non-geographic calls (by £362m-£386m per annum, depending on the extent of fixed to mobile substitution)⁵⁹⁵. Setting a higher maximum would lessen the impact on mobile OCPs. As explained in Annex 3, we would expect mobile OCPs to respond by increasing their prices for other services (such as geographic calls) somewhat but perhaps by a smaller amount, so the actual effect on mobile OCPs' overall profits is much smaller. Nonetheless this indicates the magnitude of the extent to which mobile OCPs might need to rebalance their retail prices. Even if the level of the price maximum is set above fixed call price, mobile OCPs are likely to rebalance their prices in the order of several hundred million pounds per year.
- A6.37 The magnitude of the effect on mobile OCPs could be diminished by reducing the termination rates that they pay (this gives them more headroom, relative to the calculations in Table A6.6. This would effectively shift part of the impact on mobile OCPs' profits to SPs, since lower termination rates would reduce the revenue share that SPs receive or mean that they have to contribute a greater amount to cover the costs of hosting. Fully offsetting the effect on mobile OCPs through lower termination rates would likely have a very large effect on SPs' income. In 2009 SPs received a total of £435m from non-geographic calls.⁵⁹⁶
- A6.38 Thus, in summary, setting the same price maximum for fixed and mobile OCPs either involves setting a maximum considerably above current fixed non-geographic call prices or involves considerable falls in mobile non-geographic call prices (or somewhere between these two extremes).

⁵⁹⁵ Using a lower figure of 0.5 ppm for mobile OCPs incremental costs means that the fall in mobile OCPs' profits from setting a maximum price is slightly smaller in the event that there is fixed to mobile substitution.

⁵⁹⁶ 2010 Flow of Funds study, Figure 1.6 on page 7.

- A6.39 The former option would presumably mean that fixed OCPs (which accounted for the 89% of non-geographic calls in 2009) presumably have a large amount of headroom.⁵⁹⁷ As discussed below, this diminishes the extent to which the remedy improves transparency and consumer price information for fixed callers.
- A6.40 This latter option does result in lower non-geographic call prices for callers. However a consequence of the latter option is either higher prices for other telephony services (the tariff package effect) or lower income for SPs (as a result of lower termination rates). It is questionable whether callers would wish to rebalance prices in this way, while lower income for SPs may harm service quality and variety.⁵⁹⁸ Whether setting the same price for fixed and mobile calls would facilitate access to socially important services depends on what happens to termination rates. If they do not change then callers could access these services more cheaply; if termination rates fall then there is likely to be a negative impact on service availability.

The level of termination rates

- A6.41 Specifying maximum retail prices raises the question of how the retail revenue is divided between the OCP and the TCP/SP i.e. what is the termination rate.
- A6.42 In Annex 3 we explained why we are not confident that the termination rates that would arise commercially absent ex ante regulation are likely to lead to desirable outcomes for consumers. We now consider whether, in the event that we were to specify maximum retail prices, further regulatory measures would be necessary at the wholesale level.
- A6.43 The level of the termination rate determines how the retail revenue is divided between the OCP and the TCP/SP. Given the imbalances in wholesale negotiating power identified in Annex 3:
- Some termination rates may be too high: this reduces OCPs' retail margins on non-geographic calls, leading to the tariff package effect. In extremis some OCPs may refuse to originate non-geographic calls because they do not find it profitable to do so⁵⁹⁹;
 - Some termination rates offered may be too low: this reduces SPs' profits, which may in turn affect service availability (i.e. fewer services will not be provided through non-geographic calls); and
 - Asymmetries between vertically integrated firms and between different TCPs can (in some circumstances) adversely affect consumers, as described in Annex 3.

⁵⁹⁷ 2010 Flow of Funds study, page 5.

⁵⁹⁸ The 2010 Consumer research asked "Which would you prefer? To keep the costs for ... 08 and 09 calls the same as they are now, or reduce the costs of these calls and increase the costs of local and national calls?" (question 42; base: all; n=1,189). 70% of respondents wanted to keep prices the same and only 9% wanted to rebalance prices in this way (13% responded "don't know"). As discussed in Annex 6, there are reasons for treating this result with some caution since the qualitative research suggests that respondents may have believed that overall telephony costs would increase (2010 Consumer research, page 23). Nonetheless these survey results do not provide support for significant rebalancing of retail prices.

⁵⁹⁹ For example, suppose a maximum price of zero were set for 080 calls. If the origination payment (i.e. the negative termination rate) were too small then OCPs with a higher incremental cost (e.g. mobile OCPs) might refuse to originate 080 calls.

- A6.44 The wholesale concerns identified in Annex 3 may lead to detrimental effects. They may also create uncertainty about the effectiveness of maximum prices. For example, for some OCPs the amount of headroom may be large (contrary to our preferred outcome, as discussed below) as they can push down the termination rate. As explained above, this might reduce the extent to which of maximum prices improve consumer price awareness.
- A6.45 If we were to set maximum prices and the concerns we have referred to did subsequently materialise, then it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate in the circumstances.

Granularity

- A6.46 Granularity refers to the number of retail price maxima within a number range. For example, BT currently offers a series of retail price points for 0844 calls including 1ppm, 2ppm, 3ppm, 4ppm and 5ppm.⁶⁰⁰ This raises the question of whether there would be a single retail price maximum applying to a number range (of 5ppm, say) or a ladder of maxima within that number range (at 1ppm, 2ppm and so forth).
- A6.47 The first benefit of greater granularity is that it allows for competition between SPs by allowing them to select a price point that undercuts their competitors. The magnitude of this benefit depends on the importance of competition between SPs. We discussed competition between SPs earlier, as part of our analysis of the level of the SC.
- The scope for competition depends on the nature of the service that the SP is offering. Even for 08 calls in the 2005 NTS Consultation we estimated that a significant proportion of callers are not locked in. There is thus scope for competition between some SPs.
 - Clearly effective competition is dependent on callers having a reasonable awareness of prices. Where the caller has written material promoting competing SPs services in front of them then the price maxima could provide an indication of which service is likely to be cheaper (e.g. that written material might state that “calls to service X cost no more than 4ppm” whereas “calls to service Y cost no more than 5ppm”).⁶⁰¹ Where consumers call non-geographic numbers without having a written statement of the maximum price in front of them they are dependent upon remembering the price. In these circumstances we consider that only a minority of callers would remember the price maxima (see the similar discussion above concerning consumers’ ability to remember the SC for specific numbers).
- A6.48 The second benefit of greater granularity is that retail prices are more likely to reflect SPs’ preferences. This mitigates the vertical externality discussed in Annex 2.
- A6.49 The drawback of greater granularity is increased complexity for the consumer. However, this drawback is relatively small. Consumers are unlikely to remember the price of calls to a particular non-geographic number, even if the structure of retail

⁶⁰⁰ Price points g8-g11 and g6 respectively.

⁶⁰¹ This is dependent on the amount of headroom OCPs are allowed. As discussed above, a larger amount of headroom means that the price maximum is a less reliable guide to the actual price of calling a service.

prices is relatively simple (see the similar discussion in Annex 5 as part of our analysis of the SC).

- A6.50 Greater granularity could also increase complexity for the OCP, particularly those OCPs who have more simplified NGC pricing structures. For example, Annex 2 sets out the variation in NGC prices for consumers of specific fixed and mobile tariffs, and there appears to be limited variation within some non-geographic number ranges for some OCPs, particularly mobile (with the exception of the 09 range). Therefore, granular retail price maxima within each number range may increase the pricing and billing complexity for these OCPs.
- A6.51 Our current view is that a considerable amount of granularity would be appropriate on number ranges such as 09 and 118, where competition between SPs is particularly important and where different SPs are likely to want to set very different prices. On number ranges such as 08, a degree of granularity is also likely to be appropriate because it would facilitate competition between some SPs and help to alleviate the vertical externality.

Current high level view on how retail price maxima might operate

- A6.52 We now discuss how a system of retail price maxima might operate. Our current view is that this remedy would operate most effectively if OCPs did not enjoy a large amount of headroom (i.e. a large gap between the retail price maximum and the termination rate that they pay).
- A6.53 As discussed in Annex 2, consumer price awareness is currently weak. The majority of callers are unlikely to be aware if their OCP chooses to set a retail price that is below the price maximum. This discourages OCPs from competing on price. Further, that maximum price might act as a focal point i.e. OCPs may be encouraged to tacitly collude and price close to that maximum. Thus, in practice, we would expect the majority of retail prices to cluster around the price maxima that we set. Moreover, to the extent that OCPs do choose to price below the maximum, this would reduce how informative that maximum is for consumers (i.e. the maximum is a less reliable guide to the actual price).
- A6.54 One disadvantage of not having much headroom is that the retail price maxima set as part of this remedy are more likely to be the actual level of retail prices. Low headroom means that termination rates would be relatively close to the maximum price. As a result, OCPs would be less likely to introduce packages that include low non-geographic call prices for the (minority) of callers that have a strong preference for such low prices.⁶⁰²
- A6.55 We would be likely to set a ladder of price maxima within most number ranges (the granularity issue). Further, for many number ranges it may be appropriate to set maximum retail prices that are similar to the current limits specified in the NTNP. Those price limits are likely to reflect SPs' preferences. Moreover, in the event that there was limited headroom, this is likely to imply termination rates that are in the vicinity of the current levels. This would avoid large numbers of SPs migrating

⁶⁰² Examples of such packages include Vodafone's bolt-on that includes 080, 0845 and 0870 calls within the bundle of inclusive ('free') minutes. Email from Vodafone dated 12 August 2010.

between number ranges which, as explained in Annex 8, would impose costs on SPs.⁶⁰³

- A6.56 However, on some number ranges, the retail prices (and termination rates) that provide the greatest benefits to consumers may be quite different to the prevailing level. In these cases, the effect of avoiding migration costs needs to be weighed against the benefits of changing the termination rate. A potential example is the 070 number range where consumer confusion (particularly due to the similarity with mobile numbers) means there may be benefits from aligning retail prices more closely for those with calls to mobiles and from reducing the amount of revenue that the TCP receives by reducing termination rates (see Annex 7 for further discussion). As a result, there may be some ranges where there is a case for changing retail prices and termination rates – potentially significantly – from their current level due to the benefits it could create relative to the costs. This would need to be weighed up on a range by range basis.
- A6.57 The above discussion suggests that any price maxima might be set below current retail prices, particularly for mobile calls. This is likely to result in a significant tariff package effect. This effect could be partially mitigated by setting a higher maximum retail price for mobile calls. We invite stakeholders' views on whether the price maxima should vary between fixed and mobile OCPs.
- A6.58 The discussion above assumes that the level of termination rates leaves limited headroom relative to the level of the retail price maxima. However, given our concerns about the operation of the wholesale level in the absence of ex ante regulation, this may not be the outcome. For example, some OCPs may be able to negotiate relatively low termination rates that allow them a considerable amount of headroom. Other OCPs may face termination rates that result in an unduly low level of headroom, which might result in them refusing to originate non-geographic calls. As explained above, if these effects did subsequently materialise, then it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate in the circumstances. It is important to recognise that this creates a degree of uncertainty about how retail price maxima would operate in practice.

Evaluation against our assessment criteria

- A6.59 We now set out a high level assessment of this option using our assessment criteria relative to deregulation. This discussion assumes that the pattern of termination rates is relatively attractive and, in particular, OCPs have a limited amount of headroom. In practice this may not be the case – for the reasons set out in Annex 3 and as explained above, we have concerns about the way in which the wholesale level might operate. Insofar as this was the case, setting maximum prices would be a less attractive option.
- A6.60 Transparency and price awareness would be improved. Unlike under deregulation, SPs would be able to provide an accurate indication of the maximum price that callers would be charged and, since the amount of headroom is likely to be relatively low, retail prices are likely to be close to that maximum. As explained in Annex 2, currently consumers appear to significantly overestimate the retail price of non-geographic calls. A maximum retail price would address this and would be

⁶⁰³ Significantly changing termination rates from the prevailing level is likely to result in SPs migrating between number ranges. For example, 0870 call volumes were 35% lower in 2009 than in 2008 following reductions in 0870 termination rates as a consequence of the 0870 Dispute Determination. See 2010 Flow of Funds study, page 32.

likely to provide more certainty for consumers and expand call volumes relative to deregulation.

- A6.61 There are a number of price effects flowing from specifying maximum retail prices. First, the retail price is effectively determined by the regulator (since the limited amount of headroom means most OCPs are likely to price close to the price maximum). While this helps avoid inappropriately high prices and promotes price transparency, the consequences may be less flexibility or responsiveness compared to the situation absent regulation. In particular, it may be difficult for OCPs to offer alternative packages featuring particularly low non-geographic call prices tailored to the minority of callers that have a strong interest in these calls.
- A6.62 Second, the level of retail prices for non-geographic calls would be significantly influenced by the regulator. It is difficult for us to know the 'correct' retail price for non-geographic calls. There is a material risk that we do not make the choices that maximise the long-term benefits to consumers.
- A6.63 Third, since OCPs' retention is likely to fall from the level it would be absent regulation, this is likely to lead OCPs to some extent to rebalance their retail prices. The tariff package effect is likely to be particularly significant for mobile OCPs. Since the regulator would essentially be determining the balance of retail prices between non-geographic calls and other services this creates the risk of regulatory failure i.e. a balance of prices that does not reflect the preferences of some or all consumers.⁶⁰⁴
- A6.64 The impact on service availability and innovation is likely to be positive. SPs are likely to benefit from any increase in demand relative to call volumes absent regulation as a result of greater caller confidence and more accurate estimation of retail prices. Moreover, a relatively granular series of retail prices would be likely to give SPs the freedom to select price points that enable them to compete on price. There thus would appear to be some scope for competition between SPs. However, there would still be limits on revenue and for some number ranges such limits may not be appropriate (e.g. DQ) as they would undermine competition and the presentation of new offerings.
- A6.65 In principle, this remedy might result in lower retail prices for access to socially important services compared to the prices levels expected absent regulation. There is scope to set lower maximum prices for number ranges with a high proportion of these services.
- A6.66 From a technical perspective, there would be few systems costs to implementing this remedy. However, as discussed above, Ofcom would essentially be setting the retail prices for non-geographic calls. This would reduce flexibility and potentially affect other charges (the extent of the tariff package effect would largely depend on the amount of headroom).
- A6.67 The outcome at the wholesale level is a significant source of uncertainty about the performance of this remedy. For example, one potential unintended consequence of this remedy is that OCPs might refuse to originate some non-geographic calls. This may happen if the level of headroom is lower than an OCP's incremental cost of originating non-geographic calls. This may be a particular issue where there is a

⁶⁰⁴ Moreover, to the extent that some OCPs are currently pricing below the retail price maximum, they may well increase their prices towards that maximum (particularly if termination rates do not allow OCPs much headroom).

high opportunity cost for OCPs, for example calls to SPs that provide access to cheap international calls (which compete with the OCPs own international call origination business).

Preliminary views on maximum prices

A6.68 Overall we consider that setting maximum prices is an attractive option that would protect consumers by giving them greater certainty about the price they are likely to pay. It would involve greater regulatory control than the unbundled tariff and potentially has a larger impact on OCPs' retention on non-geographic calls. While less flexible than the unbundled tariff, it would also be less reliant on effective competition, especially between OCPs. Implementation costs would likely be low although there is the potential for large tariff package effects. It also may not be appropriate for all number ranges – particularly DQ given the impact on competition between SPs. Moreover a significant drawback is that just setting maximum retail prices is unlikely to address our wholesale level concerns. If we were to set maximum prices and the concerns we have referred to did subsequently materialise, then it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate in the circumstances.

Annex 7

Options for the future of the different number ranges

Introduction and overview

- A7.1 In Annexes 2 and 3 we set out our understanding of how the market currently works and the concerns we have about current outcomes, particularly for consumers. We have also considered how the absence of *ex-ante* regulation could affect the current experience. Based on our understanding of the market, our initial view is that, overall, there is a high likelihood that the absence of *ex-ante* regulation would exacerbate the current outcome.
- A7.2 In Annexes 4, 5 and 6 we have considered our broad options for intervention, and have set out our preferences. In this Annex, we build on that analysis and consider the extent to which the different solutions address the issues previously discussed and meet our policy objectives for each of the different number ranges covered in this review.
- A7.3 We have grouped the different number ranges into five groups for the purpose of our analysis. The groupings reflect the common designation that these ranges share in the NTNP and commonalities with respect to the callers' experience.
- A7.4 These groups are:
- i) Group 1: Freephone ranges: 080/050/116;
 - ii) Group 2: ranges with prices historically linked to the cost of geographic calls: 03, 0845, and 0870;
 - iii) Group 3: revenue share ranges: 0843/4, 0871/2/3, and 09;
 - iv) Group 4: Directory Enquiries (DQ) 118; and
 - v) Group 5: numbers beginning with 07 that are not designated as mobile service numbers, 070/076.
- A7.5 In assessing remedies for each number range we are mindful of the identified causes of many of our concerns, specifically, consumer price awareness, and related vertical and horizontal externalities which we explain in Section 4 and Annex 2.
- A7.6 As discussed in Section 6, our response to dealing with these underlying problems requires us to consider both issues within each number range and across all number ranges.
- A7.7 In particular, we would like to amend the overall framework to improve the consumer experience. This would point to the need for efforts to ensure a more intuitive division of call types, simplicity in the presentation of pricing information, fewer opportunities for fraud, and, where possible, removal of existing points of confusion. The resulting clarity would also benefit SPs through the increased ability to control the retail prices for their services and greater incentives for innovation in

the use of these numbers, as well as enabling, where appropriate, greater tariff competition.

- A7.8 In developing this more intuitive approach, we will seek to build on areas where the consumer experience is positive (e.g. many callers' recognition of 080 as Freephone and the natural association with geographic rates due to the proximity between 01, 02 and 03) while proposing the minimum number of changes which are required to enhance confidence and clarity.
- A7.9 In the light of the above objectives we are proposing the following key amendments and preferred options:
- **Freephone:** should be "free-to-caller";
 - **The retention of a geographically rated non-geographic range:** ideally confined to the 03 range, with the possible closure of the 0870 range and de-linking of the 0845 range from geographic rating;
 - **Reform of 09 PRS and revenue sharing 08 number ranges:** adoption of the unbundled tariff and potentially reviewing call charge limits;
 - **Directory enquiries reform:** through unbundling of the tariff; and
 - **Reform of the 070/076 ranges:** better alignment of the prices with mobile calls and reduction of the scope for fraud through removal of the incentives for revenue sharing; and
- A7.10 In the rest of this Annex, we will first set out an overview of the concerns with the current framework that are common across all ranges. We will then briefly review the outcome of the analysis in Annexes 4, 5 and 6 and the potential options for intervention we have identified. We will also set out a brief overview of the assessment criteria we have used to assess the different options (Annex 1).
- A7.11 We will then discuss each of the different ranges. For each individual number range we will:
- Briefly review the key concerns specific to that range;
 - Set out the policy objectives and regulatory options;
 - Consider how each option meets our policy objectives; and
 - Set out our preliminary views and proposals.
- A7.12 This Annex, along with Annexes 1 to 6, constitutes an Impact Assessment of our policy proposals.

Stakeholders affected by our proposals

- A7.13 In this Annex, we consider how potential regulatory options for intervention might impact on stakeholders. Different groups of stakeholders might be affected by our proposals. For the purpose of the analysis carried out in this Annex, these are:
- **Consumers:** we consider the impact of our proposals on all consumers; at times, we refer to them as **callers** (and **subscribers**). In some cases we may be

concerned with the impact of our proposals on a sub-group of citizens and/or consumers, referred to as **vulnerable citizens** and/or **consumers**. In this consultation these are low income mobile only households whose access to socially important services⁶⁰⁵ via non-geographic numbers may be hampered. We have defined as vulnerable those individuals who are in the lower socio-economic DE households and/or with an income below £11,500 a year. Mobile-only households are particularly vulnerable because they do not have the option to make calls from landlines, and so are likely to suffer disproportionately from the current level of NGC charges from mobiles;

- **OCPs**: we consider the impact of our proposals on OCPs, which sometimes we refer to as **originating networks** or **retail providers**. Where appropriate we review separately the effect of our proposals for **mobile** and **fixed OCPs**;
- **Transit providers**: these are providers of transit services;
- **TCPs**: these are providers of termination services. In this Annex, we also refer to them as **terminating networks**. In some cases the same organisation provides both origination and termination for non-geographic calls. In some cases, we refer to **TCPs/SPs** as one entity to highlight those circumstances where their interests are aligned, and the TCP acts in effect as an agent for the SP. In other cases we refer to TCPs as **hosting providers**, or **hosting networks**, when referring to the provision of such services to SPs; and
- **SPs**: these are the firms involved after the termination stage in the provision of services to the caller. In some cases they are an intermediary, or **reseller**, to the ultimate call recipient or information provider (**IP**); whilst in other cases the IP and the SP are the same organisation.

Overview of concerns across all ranges

A7.14 In light of the analysis set out in Annex 2 and 3, we consider that consumers currently suffer a loss in welfare due to the impact of three related market failures in the retail market:

- a) Lack of price awareness;
- b) Vertical externalities; and
- c) Horizontal externalities.

A7.15 Further, we consider five consequences of these market failures:

- Direct effects of poor consumer price awareness;
- Level of NGC prices relative to other telephony services;
- Consumer exposure to fraud;
- Diminished service availability and innovation; and

⁶⁰⁵ In Annex 2 we described socially important services and stated that examples include public information helplines, doctors' surgeries, utility helplines, Citizens' Advice Bureaus and HM Revenue & Customs.

- Distributional concerns.

Overview of broad options for intervention

- A7.16 In Annexes 4, 5 and 6 we have set out and considered a range of potential interventions, including maintaining the *status quo*. We have also considered how consumers and SPs would fare absent *ex-ante* regulation and whether acting on wholesale regulation alone would suffice to address our concerns. We have used deregulation as our base option against which to compare all others.
- A7.17 In summary, our preliminary views so far based on the analysis of Annexes 4, 5 and 6 are as follows:
- maintaining the *status quo* would fail to address the identified concerns, with substantial detriment for consumers and SPs;
 - removing the existing *ex-ante* regulation would make matters worse for consumers and SPs;
 - both the unbundled tariff and the maximum price appear as attractive options. They are in principle capable of improving matters for consumers by increasing consumer price awareness. We consider that, on balance, for most number ranges we have a preference for the unbundled tariff option. The unbundled tariff seems better at reconciling the need for consumers to have easy and quick access to information, but at the same time retaining scope for competition among OCPs and among SPs and providing clearer responsibilities for providers of each service element. Furthermore, it appears that the unbundled tariff option may be preferable in terms of wholesale implications. We are aware, though, that there are some uncertainties around how it would perform in practice and we plan to undertake further research on how consumers may act under the unbundled tariff. But for some specific number ranges, such as where the detriments arising from the vertical and horizontal externalities are especially serious, the maximum price option may perform better;
 - using informational remedies is not an attractive stand-alone option, as it would fail to address concerns about consumers' price awareness at the point of subscription and it would be costly to implement; and
 - regulating termination rates or the use of a variable termination rate linked to retail prices are not attractive options since they would not necessarily address our retail level concerns.
- A7.18 On the basis of the analysis and preliminary views set out in Annexes 4, 5 and 6, and having regard to the way markets work as set out in Annex 2 and 3, we now focus our analysis on the assessment of the options for intervention at the level of each group of number ranges.
- A7.19 In particular, we will not discuss in this Annex the option of removing *ex-ante* regulation and its impact for each range. Instead, we rely on the assessment carried out in Annex 2 and 3 of how the market works in the absence of *ex-ante* regulation, which sets out our preliminary view that, in the absence of *ex-ante* regulation, the market would not work well for consumers and providers.
- A7.20 There are, however, some groups of number ranges where either the unbundled or maximum retail price option is not attractive (unbundling for Freephone and 03; and

maximum retail prices for DQ). For these ranges, we have discussed specific alternative approaches including maintaining the *status quo*.

Policy objectives and assessment criteria

- A7.21 We have set out in Annex 1 the criteria we have used to consider how the different options deliver on our objectives. These are:
- i) Transparency and consumer price awareness;
 - ii) Price;
 - iii) Service quality, variety and innovation;
 - iv) Access to socially important services; and
 - v) Regulatory burden.
- A7.22 In the rest of this Annex, we now discuss the application of these criteria to the different options across each number range, and set out our preliminary views and proposed approach.

Group 1: Freephone numbers (080, 050, 116)

Overview

- A7.23 As discussed in the introduction, in considering options for the various NGC ranges we would want to build on the areas of consumer confidence. While, there is some consumer confusion about the charges for 080 calls, it remains the most recognised and understood of the NGC number ranges. Calls that are free of charge are clearly a message that consumers should easily understand. 080 remains the most commonly used non-geographic number range.
- A7.24 There are a number of reasons for having concerns about the *status quo* (and the deregulated scenario). Consumers' price awareness, while not as bad in relation to other non-geographic number ranges, could be significantly better given the simplicity of the pricing message. The fact that mobile retail charges can be relatively high could affect the way consumers perceive calls from fixed OCPs (an example of the horizontal externality). There are also concerns about whether OCPs fully take into account SPs' preferences (we termed this vertical externality). Lastly, vulnerable households that are mobile-only consumers may be harmed by high prices as this may be their only way to get access to socially important services.
- A7.25 We have reviewed a number of options including the *status quo*, making 080 free to callers, or alternatively allowing some OCPs to charge callers to cover the costs of origination (but not as much as today's prices from mobile OCPs). We have a preliminary preference for 080 to be free at the point of call.
- A7.26 Most of the issues concerning 080 are also common to the 050 and 116 ranges. We will therefore set out in full our analysis and evidence for the 080 range and build on this for the 050 and 116 ranges. Because of the smaller size of these ranges we have more limited evidence and we would be grateful for stakeholders to provide evidence and feedback which arguments developed for 080 they consider do not also apply to 050 and 116.

080

Introduction

A7.27 Calls to 080 fall into two categories:

- Those that are always “free-to-caller”, where the caller is not charged regardless of where the call originates from (i.e. either from fixed or mobile phones). This is a very small sub-set of the total set of 080 numbers; and
- Those that are “free-to-caller” from some OCPs (usually fixed line), but are chargeable from others (usually mobile). In the latter case, a PCA must be provided to notify callers at the start of a call that a charge will be made.

A7.28 080 is by far the largest Freephone range by active numbers, and also the most popular non-geographic range in terms of volumes of calls. It is used for a variety of services, which are provided by both private and public organisations. Typical services include for example:

- Non-profit and charity helplines;
- Some government and social services e.g. Job Centre Plus, the Department for Work and Pensions (DWP);
- Emergency help and rescue (e.g. roadside breakdown);
- Reporting credit cards lost or stolen;
- Point of contact for customer sales enquiries; and
- Customer support lines for commercial services.

A7.29 From its inception SPs have paid for Freephone services. Currently fixed OCPs receive a small origination payment from TCPs⁶⁰⁶. This payment is ultimately funded by SPs. This payment is based on the costs of fixed call origination and is currently approximately 0.5ppm. For mobile OCPs the situation varies. Until recently, some TCPs paid the same origination payment to both fixed and mobile OCPs. In November 2008, BT (when it acts as a TCP) ceased making an origination payment to mobile OCPs⁶⁰⁷. Subsequently some TCPs (including BT) have sought to introduce variable termination rates for 080 calls which link the termination rate to the OCPs’ retail price. These pricing structures are likely to result in mobile OCPs making a payment to the TCP (unless they change their retail prices)⁶⁰⁸.

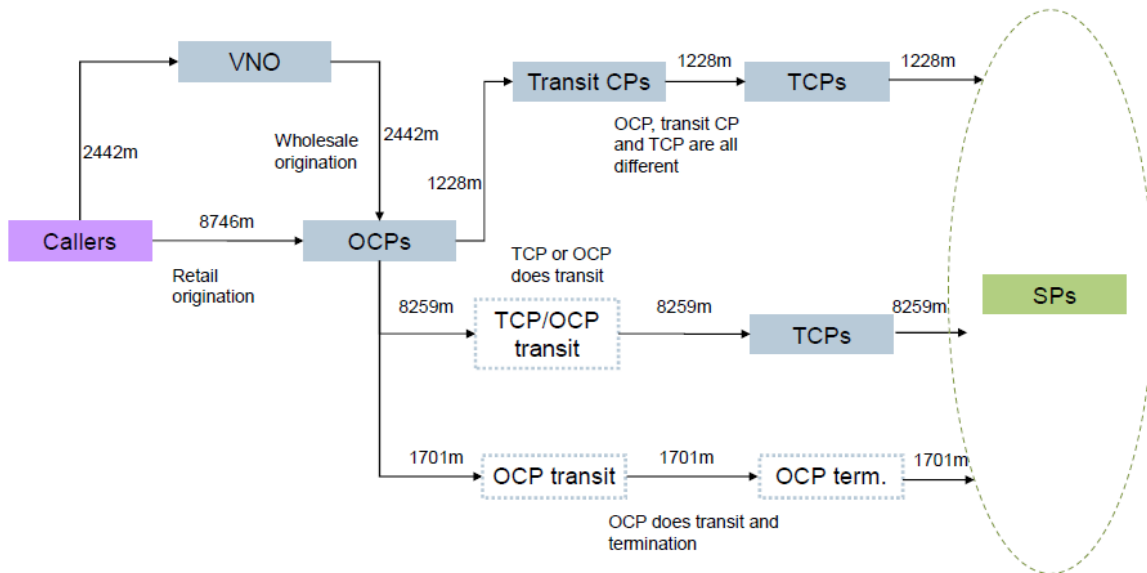
⁶⁰⁶ This origination payment can be thought of as a negative termination rate.

⁶⁰⁷ NCCN 911.

⁶⁰⁸ With effect from 1 July 2009 BT introduced a system of variable termination rates for 080 calls (in NCCN 956). In the 080 Dispute Determination we determined that the parties should revert to the trading conditions that applied before NCCN 956 came into effect (paragraph 1.26). That decision is currently under appeal. In 2010 BT introduced a new system of variable termination rates for 080 calls. We are currently considering a dispute in relation to this new set of termination rates: http://stakeholders.ofcom.org.uk/enforcement/competition-bulletins/open-cases/all-open-cases/cw_01055/

A7.30 Calls to 080 represent the largest by volume of minutes for all non-geographic number ranges. According to the 2010 Flow of Funds study, of the 30.8 billion minutes generated for all the non-geographic numbers in 2009,⁶⁰⁹ 11.2 billion (36%) minutes were generated by calls to 080 numbers⁶¹⁰. Figure A7.1 below shows how the volume of minutes flows across the different actors in the value chain.

Figure A7.1: Flow of volumes for 080 numbers, 2009



Source: The 2010 Flow of Funds study

A7.31 According to the 2010 Flow of Funds study⁶¹¹, the vast majority of call minutes originated from fixed OCPs, where OCPs have maintained a “free-to-caller” pricing model. Mobile OCPs only accounted for 5% of total originated 080 traffic in 2009 (529 million minutes). One factor that contributes to the low mobile usage for 080 numbers is the practice by mobile OCPs of charging for most calls to 080 numbers⁶¹².

A7.32 According to the 2010 Flow of Funds study, SPs paid an estimated total of £120 million in 2009 to receive 080 calls. In addition, callers paid a total of £77 million⁶¹³.

⁶⁰⁹ 2010 Flow of Funds study, Figure 1.4 on page 5.

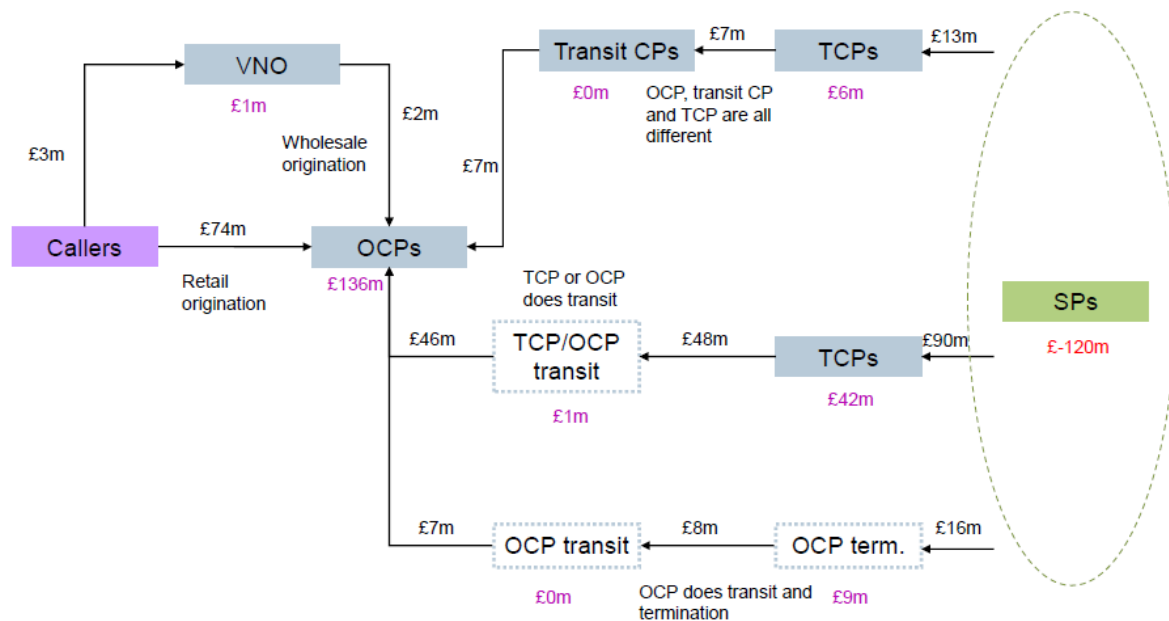
⁶¹⁰ 2010 Flow of Funds study, Figure 5.7 on page 30.

⁶¹¹ 2010 Flow of Funds study, page 36 Figure 5.15 on page 37.

⁶¹² In the 2010 Consumer research, 79% of respondents said that they thought 0800 calls are more expensive from a mobile than from a landline. 8% thought prices were the same and 11% responded “don’t know”. 2010 Consumer research, question 33.

⁶¹³ 2010 Flow of Funds study, Figure 5.23 on page 45.

Figure A7.2: Flow of funds for 080 number, 2009



Source: The 2010 Flow of Funds study

Review of responses to Call for Inputs

A7.33 Many respondents to our Call for Inputs commented on the working of the 080 regime:

- Consumer Focus noted that many helplines were provided on the 080 number range, and that if call charges act as a barrier, then the downstream impact could be high. They were also concerned that 080 calls were being charged at high prices, recognising that this would impact mobile-only households which tend to be low income;
- C&W were concerned about charging for 080 numbers; they believed there was little consumer detriment in relation to the use of 0500 numbers and that they should be treated as analogous to the 080 range;
- Many respondents called for 080 calls to be “free-to-caller”- e.g. DWP, 0800handyman, one TCP and many consumers. The DWP itself has been able to negotiate with mobile networks for its numbers to be “free-to-caller” in exchange for a higher origination fee.
- The Direct Marketing Association noted that consumers believe that 080 is free from landlines; and
- Everything Everywhere pointed out that the higher cost of mobile origination needed to be considered in any change to the current regime and that these additional costs should be met by SPs.

Review of concerns for the 080 range

A7.34 We have a number of concerns in relation to 080, some of which are in common with the concerns relating to most of the other non-geographic ranges, as discussed in full in Annex 2 and 3.

A7.35 In terms of consumer price awareness:

- In the case of fixed calls, in a well functioning market we would expect consumer price awareness to be very good. 080 calls are and have always been free from all fixed OCPs which is an exceptionally easy price point for consumers to remember. While consumer price awareness is better for fixed 080 calls than for other non-geographic number ranges, we still consider that it is low given the simplicity of actual fixed 080 prices. For example, in the 2010 Consumer research, 46% of respondents said that they were confident they knew the price of 0800 calls from a landline (10% were neutral)⁶¹⁴. Similarly, in the 2009 Consumer research, 62% of respondents thought that a fixed 0800 call from a landline was free. 10% thought they were charged for these calls (including 8% who thought the price was higher than 11ppm) and 27% responded “don’t know”⁶¹⁵.
- In the case of mobile 080 calls, we consider that consumer price awareness is poor. While consumers do receive a PCA informing them that they will be charged, this does not let them know the actual price of a call. This lack of price awareness is reflected in our survey results. For example, in the 2010 consumer research, only 25% of respondents said that they were confident they knew the price of 0800 calls from a landline (12% were neutral)⁶¹⁶. There is also some evidence that consumers overestimate the price of 080 calls from mobiles. The mean expected price for mobile calls in 2009 was 29ppm⁶¹⁷. The data underlying the 2010 Flow of Funds study suggests that the actual average price was approximately 14ppm⁶¹⁸.
- It is plausible that high mobile retail charges may affect the reputation of 080 calls from fixed OCPs (an example of the horizontal externality). This is consistent with surveys indicating that some consumers believe that there is a charge for fixed 080 calls. However, we recognise that an alternative explanation for these survey results is consumer confusion between 080 calls and high prices on other 08 number ranges.

A7.36 In terms of prices:

- We do not have concerns with the current level of 080 call prices from fixed OCPs since these calls are always free.
- In contrast, only in a small minority of cases 080 numbers are “free-to-caller” from mobiles. Contributing factors to high mobile 080 call prices are likely to be consumers’ lack of price awareness, which weakens competitive constraints on pricing, and the vertical and horizontal externalities discussed in Annex 2.
- A separate issue relates to the level of origination payments. For example, it could be a concern if the reason for 080 calls not being free from mobiles is that origination payments are too low (for example, because they do not reflect the higher costs of mobile origination). It is, however, unclear whether this is

⁶¹⁴ Consumers are markedly more confident in the case of fixed 0800 calls than for calls to other non-geographic number ranges. 2010 Consumer research, question 35.

⁶¹⁵ The proportion of respondents that responded “don’t know” was lower for fixed 0800 calls than for fixed calls to either landlines (41%) or mobiles (55%). 2009 Consumer research, question 43.

⁶¹⁶ 2010 Consumer research, question 36.

⁶¹⁷ 2009 Consumer research, question 44.

⁶¹⁸ See the 2010 Flow of Funds study for a full discussion of the caveats surrounding that analysis.

the reason, as the prices charged for 080 calls from mobile are generally significantly above the costs of mobile origination. However, we return to this issue below as part of the discussion of our current thinking on the appropriate level of origination payments if 080 calls were free.

- A7.37 In terms of service quality, variety and innovation, the uncertainty created by the lack of consumer price awareness is likely to reduce the demand for 080 calls. This in turn is likely to reduce service availability and innovation.
- A7.38 Access to socially important services: low income mobile-only callers are disproportionately impacted by the prices of 080 calls. We are potentially concerned about the ability of these households to access some of the socially important services available on 080 numbers.
- A7.39 We do not have concerns about consumer protection from fraud in relation to this number range. This is because SPs make payments to OCPs in order to receive the vast majority of 080 calls, which nullifies opportunities for fraudulent services.

Policy objectives and regulatory options

- A7.40 Based on the above concerns, we consider that all four of the policy objectives are relevant for the 080 number range:
- To improve consumer price awareness for 080;
 - To ensure that the identified concerns related to externalities are addressed;
 - Promoting service quality, variety and innovation; and
 - To ensure that vulnerable citizens and consumers who rely on 080 calls to access socially important services are not deterred from doing so.
- A7.41 Having regard to the analysis of our broad options set out in Annexes 4, 5 and 6, and the above policy objectives, we consider that the unbundled tariff would not be appropriate for the 080 range. This is because wholesale payments flow in an opposite direction for 080 calls (TCPs/SPs make an origination payment for most calls) compared to other non-geographic ranges (where the TCP/SP receives a termination payment). In other words, for 080 calls the SC is likely to be negative. As a result, the logic of the unbundled tariff option may not work well for 080 numbers.
- A7.42 We consider that a number of options are relevant for the 080 range:
- Maintain the *status quo* where calls are largely free to callers from fixed OCPs while they are charged for most numbers from mobile OCPs.
 - Set a maximum price to callers of zero that applies to all OCPs. To some extent the impact of this intervention depends on what happens to origination payments.
 - Set a maximum price above zero, at least for some 080 calls, such as calls from mobiles (but the maximum price would be below the current level of prices).

A7.43 Below we assess the performance of these options against the deregulated scenario. Since it forms the base case for our assessment, we briefly discuss what a deregulated scenario may look like for 080 calls. At the retail level, deregulation would involve removing the requirement on all OCPs to include a PCA if the price of 080 calls is not free⁶¹⁹.

- Removal of the PCA requirement is likely to reduce price awareness.
- Mobile OCPs are likely to continue charging for most 080 calls (as they do at present). It is not clear whether fixed OCPs would start charging for 080 calls. It is plausible that at least some fixed OCPs would experiment with charging for these calls. If those fixed OCPs found it profitable then others are likely to follow suit. This potentially worsens price awareness (since the pattern of fixed 080 prices would be less simple than at present) and potentially exacerbates the horizontal and vertical externalities.
- These effects may further reduce demand for 080 calls, which would further diminish SPs' incentives to provide services on this range

A7.44 We now consider how each of the three options for intervention fares against our assessment criteria as set out in Annex 1.

Assessment of the options

Option 1: Maintain the *status quo*

A7.45 Currently the NTNP designation applying to all OCPs defines the 080 range as: “no charge to customer (except where charges shall be notified to callers at the start of the call)”. As a result of the findings of SMP on BT in the Wholesale Narrowband Statement, BT is subject to the NTS Call Origination Condition which limits the amount it can retain when originating calls to this range.

A7.46 We consider below how this option fares against a deregulated scenario based on our assessment criteria. In particular, we also assess how callers, SPs and OCPs are likely to be impacted by the *status quo*.

Transparency and consumer price awareness

A7.47 Compared to deregulation, consumer price awareness is better given that fixed OCPs currently do not charge for 080 calls and mobile OCPs charge but have a PCA informing consumers that they will be charged (though it does not state the exact charges for the call).

A7.48 As discussed above and in Annex 2, the *status quo* is still not a very good outcome for consumers of non-geographic calls (although, at least in the case of fixed 080 calls the position is better than for other non-geographic number ranges).

A7.49 There are two factors that limit the scale of the detriment experienced by consumers:

⁶¹⁹ At the wholesale level, deregulation would involve removing the limits on BT's retention specified in the NTS Call Origination Condition.

- The provision of PCAs for chargeable calls from mobile OCPs, even though the actual price is rarely provided, mitigates the risk of bill shock and gives the caller the chance to drop the call before it is charged; and
- The availability of fixed phones in most households (85% according to our Communications Market Report 2010⁶²⁰) allows most users to make the call from a fixed line for free at the point of call.

A7.50 There is no reason to consider that maintaining the *status quo* would lead to more price transparency and greater consumer price awareness.

Prices

A7.51 As discussed above, we have concerns about the retail prices that mobile OCPs charge for most 080 calls. Above we identified two possible explanations in addition to poor consumer price awareness, namely the vertical and horizontal externalities.

A7.52 Therefore, there appear to be risks that retail charges, in the case of mobiles, may be too high and fail to reflect consumers' and SPs' preferences. As discussed in Annex 2, this may lead to under-consumption of 080 calls from mobile OCPs. For example, only 5% of calls are made from mobiles. This is far lower than the share of mobiles of all calls. According to the Communication Market Report 2010, 47% of all call minutes are generated from mobiles⁶²¹. According to the 2010 Flow of Funds study it is also the lowest percentage of mobile originated calls among non-geographic ranges: at least 10% of calls to all other ranges are originated from mobiles, with calls to 03 having the highest, with 50%⁶²² of calls originating from mobiles. Furthermore, as discussed above, it is plausible that high mobile prices may be affecting consumers' perceptions of the price of 080 calls from landlines.

A7.53 Mobile OCPs' high margins on 080 calls are likely to support lower prices for other telephony services (the tariff package effect). Mobile OCPs' total retention on 080 calls in 2009 was an estimated £78m⁶²³. This provides an upper-bound for the tariff package effect for two reasons. Firstly, OCPs incur incremental costs when originating 080 calls - the incremental profits that they currently make on these calls will be smaller. Secondly, the tariff package effect may not in any case be 100% complete.

Service quality, variety and innovation

A7.54 As discussed above, at present there are likely to be several effects on SPs' incentives to invest and innovate. Diminished demand for 080 calls will discourage service availability and innovation. SPs' difficulties in influencing the retail price of calls from mobiles are also likely to have a negative effect on availability. There is also some anecdotal evidence that in some specific cases the lack of "free-to-caller" access on Freephone numbers might be adversely affecting innovation, for example services which are supported by advertising. The Number (118118) has suggested that it might have offered free search services on 080, had the number been free from mobiles.

⁶²⁰ Figure relates to Q1 2010. Communication Market Report, 19 August 2010, Figure 5.63 on page 335.

⁶²¹ Communication Market Report, 19 August 2010, Figure 5.1 on page 279.

⁶²² 2010 Flow of Funds study, Figure 1.5 on page 6.

⁶²³ Ofcom calculations using data underlying 2010 Flow of Funds study.

Access to socially important services

A7.55 Typically, with most fixed line OCPs not charging callers for 080 calls, consumers can avoid charges for calls to these numbers.

A7.56 However, an increasing number of households are now mobile-only (around 15% according to our latest data⁶²⁴) and therefore are unable to have access to alternatives, such as making calls from fixed lines. Of particular concern is a significant subset of these households who are defined as vulnerable and mobile-only. These may therefore have few alternatives to accessing certain socially important services in other ways than through a mobile call.

A7.57 In addition, as explained in Section 4, there is evidence that some citizens choose to incur extreme (and therefore costly) call avoidance strategies as a result of high call charges, such as seeking alternative access to a phone line (e.g. at a Citizens' Advice Bureau). The combination of those two issues is more likely therefore to impact citizens from mobile-only households in lower income socio-economic groups than other callers. Callers from mobile-only households wishing to get in contact with public service lines on 080 numbers are likely to suffer disproportionately more than other callers because of the prices they have to pay and their reliance on such services.

Regulatory burden

A7.58 If we were to keep the *status quo*, we would be retaining existing regulatory burdens on the industry compared to the deregulated scenario. OCPs would still have to provide PCAs where they charge for calls to 080, but the set up costs of such PCAs have been largely incurred in the past and it is our understanding that there would be no significant extra costs going forward.

Preliminary views

A7.59 Overall, we do not consider that maintaining the *status quo* would further consumers' interests in relation to calls to 080 numbers.

Option 2: Maximum price of zero

A7.60 Under this option, 080 would be designated in the NTNP as "free-to-caller" from all networks by setting a maximum price of zero. Compared to the *status quo*, originating networks would no longer be able to charge for these calls. As reflected in complaints about the 080 range to Ofcom⁶²⁵ and in our Call for Inputs, many consumers and SPs have advocated all calls to 080 numbers being free.

A7.61 Our analysis of this option is structured as follows:

- First we discuss whether it is appropriate to specify a "free-to-caller" number range.

⁶²⁴ Proportion of households without fixed telephony. Figure relates to Q1 2010. Communication Market Report, 19 August 2010, Figure 5.63 on page 335.

⁶²⁵ For some examples, see Annex 15 where we present an extract of complaints to the OAT.

- Second, we explain why the effects of intervening in this way depend on the level of origination payments that OCPs receive from TCPs⁶²⁶.
- Third, we discuss what would be an appropriate pattern of origination payments.
- Fourth, we evaluate this option against our assessment criteria.
- Fifth, we summarise the impact on different stakeholders.
- Finally, we set out our preliminary views.

Appropriateness of a “free to caller” number range

A7.62 We consider that there are strong arguments for having at least one “free to caller” number range.

- Such a number range meets the demand of those organisations which do not wish to charge callers for calling them, for example sales enquiry lines (where the SP expects revenues from future services rather than from the call itself)⁶²⁷ or SPs offering certain social or community services.
- Moreover, a significant number of SPs appear willing to pay an appropriate amount in order to support free calls. Those SPs currently operating on the 080 number range have chosen to support an origination payment to the OCP (at least on the majority of 080 calls). As discussed below, there is the question of whether the appropriate level of origination payments should be slightly higher than at present, to reflect the higher costs of mobile call origination. We consider that a significant number (albeit perhaps not all) of the SPs currently operating on the 080 number range are likely to be able to support higher origination payments to secure free 080 calls from all OCPs. In the 2010 SP survey we asked resellers of non-geographic numbers about the impact of increasing the origination payment made to OCPs in return for 080 calls being free from all OCPs. There were varied responses to this proposition: three of the respondents were in favour, two were completely against and four had mixed opinions. Two stated that for many SPs an 0800 number is merely another cost to their business, so the lower the cost the better. For those that agreed with the principle of changing the origination payment, the consensus was that the cheaper of the price points that they were asked about (2ppm) was the most acceptable, though two believed an origination payment of up to 5ppm would be reasonable.⁶²⁸
- Freephone ranges exist in many markets abroad, in some of which “free-to-caller” arrangements are prevalent – see Table A7.1 below.

⁶²⁶ An equivalent way of thinking of this issue is that it depends on the level of termination rates.

⁶²⁷ The 2010 SP survey found that the primary usage of 080 numbers was sales enquiries (page.14).

⁶²⁸ No respondents considered a 10ppm origination payment to be reasonable. However we consider that origination payments of this order of magnitude are unlikely to be appropriate (since mobile OCPs’ costs of origination are unlikely to be this high). We recognise that there is degree of uncertainty around these results – most respondents found it hard to estimate the proportion of their customers that would retain their 0800 service if origination payments increased, as they believed this would completely depend on SPs’ business models 2010 SP survey, page 29.

Table A7.1 Selected international experiences with Freephone

Country	Calls made from fixed lines	Calls made from mobiles
Australia	Free	Chargeable
France	Free	Mobile charges tend towards geographic rates
Germany	Free	Free, but may be some service limitations*
Italy	Free	Free, but may be some service limitations*
The Netherlands	Free	Free
Spain	Free	Free, but may be some service limitations*
USA	Free	Free

* There are three potential reasons we are aware of that lead to this outcome:

- 1) Ps do not want to pay more for origination from mobiles, so they ask their TCP to block access from mobiles;
- 2) Network operators and TCPs/SPs cannot agree origination rates; or
- 3) Network operators do not like the types of services offered by some SPs (services providing arbitrage opportunities; international calling cards; etc) and therefore refuse connection.

Source: NRAs

A7.63 However, we consider that a non-geographic number range which is “free to caller” from all OCPs is unlikely to arise absent regulatory intervention. This is a consequence of the (inter-related) market failures that we have identified in Annex 2.

- The vertical externality means that, even if SPs wish calls to be free, OCPs have limited incentives to take SPs’ preferences into account. This is exacerbated by consumers’ poor price awareness which weakens the competitive constraints on the price of non-geographic calls.
- If a number range had a reputation amongst consumers for being free to call, the horizontal externality means that OCPs and SPs have an incentive to free ride on that reputation. OCPs might free ride by setting higher retail prices, behaviour which is exacerbated by consumers’ poor price awareness. SPs might free ride by seeking to reduce origination payments, which puts upward pressure on retail prices.

A7.64 We have considered whether these externalities are addressed by the potential for SPs to directly negotiate with OCPs to secure free calls to their service, perhaps in return for an additional payment to the OCP. For example, in January 2010 the Department of Work and Pensions (DWP) reached agreement with O2, Orange, Tesco Mobile, T-Mobile, Virgin Mobile and Vodafone to end charges to their customers for mobile calls to around seventy of its 0800 numbers⁶²⁹. However the potential for such agreements does not change our view that a non-geographic number range which is “free to caller” from all OCPs is unlikely to arise absent regulatory intervention.

- There are transaction costs to reaching such agreements, particularly given the number of OCPs. Indeed, while the DWP’s January 2010 agreement covered

⁶²⁹ <http://webarchive.nationalarchives.gov.uk/+http://www.dwp.gov.uk/newsroom/press-releases/2010/january-2010/dwp007-150110.shtml>

six major mobile OCPs, it did not apply to all OCPs⁶³⁰. As set out in the 080 Dispute Determination, mobile OCPs' agreed that transaction costs exist⁶³¹. The DWP is a large SP⁶³² and the transaction costs for smaller SPs are likely to be significantly higher (e.g. relative to the volume of calls they expect to receive).

- OCPs may 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 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 OCP is currently making by charging for calls⁶³³. The profits an OCP could make by charging for calls are likely to be inflated since poor consumer awareness is likely to weaken competitive constraints on call prices.

Interrelationship with the level of origination payments

A7.65 The effects of setting a maximum retail price of zero for 080 calls depend on the level of origination payments. In essence there is a trade-off between:

- Lower origination payments to mobile OCPs, which might have a higher cost to consumers in terms of the prices of other telephony services. This is because reducing OCPs' profits on 080 calls is likely to result in higher prices for other telephony services (the tariff package effect). In addition, there is a risk that OCPs might have an incentive to dissuade their customers from making 080 calls, for example by refusing to originate calls to these numbers.
- Higher origination payments, which impose greater costs on SPs and so might lead to reduced quality, variety and innovation in the services available on 080 numbers, to the detriment of consumers.

A7.66 We have carried out a number of calculations in order to give an indication of the potential order of magnitude of these effects.

A7.67 In 2009 mobile OCPs earned retail revenue of £75m from 080 calls⁶³⁴. Setting a maximum price of zero would remove this revenue source. However OCPs would continue to receive an origination payment from SPs and would continue to incur the incremental costs of originating these calls. Moreover, because the retail price of fixed and mobile calls would be the same, there is likely to be some substitution

⁶³⁰ We stated in the 080 Dispute Determination that negotiations between DWP and other mobile OCPs were ongoing (paragraph 2.40).

⁶³¹ Given the large number of OCPs, T-Mobile acknowledged the potentially high overhead involved for 080 SPs to negotiate such agreements (paragraph A4.60). H3G 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 (paragraph A4.64). Similarly O2 stated that its experience of negotiating terms has been time consuming, and it expects 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 (paragraph A4.65).

⁶³² DWP receives around 4m calls per week. DWP response to the Call for Inputs.

⁶³³ 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.

⁶³⁴ This is slightly different from the £77m retail revenue shown in the 2010 Flow of Funds study, Figure 5.23 on page 45. The underlying data suggests that one fixed OCP earned £2m of retail revenue. We suspect that this £2m figure is not correct and have excluded it.

from fixed 080 calls to mobile 080 calls. Higher mobile 080 volumes will increase both the total origination payments that mobile OCPs receive and the total incremental costs that they incur. Insofar as mobile OCPs' profits on 080 calls fall (i.e. the revenue they receive minus the incremental cost) then this is likely to result in higher prices for other mobile services (the tariff package effect).

A7.68 In 2009, SPs paid TCPs £120m in relation to 080 calls (of which £61m was accounted for by origination payments to OCPs).⁶³⁵ If mobile OCPs receive a higher origination payment than fixed OCPs then this ultimately means that it is more costly for SPs to operate an 080 number. This extra cost increases if there is a larger amount of substitution from fixed 080 calls to mobile 080 calls (from which the SP does not necessarily benefit despite the higher cost it faces).

A7.69 Our analysis of these factors using the data underlying the 2010 Flow of Funds study is summarised in Table A7.2 below. This shows the impact on 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).

- For simplicity we have assumed that total 080 call volumes remain unchanged at the 2009 level of 11,188m minutes⁶³⁶. However the proportion of calls originated from mobiles is assumed to change. In 2009, only 5% of 080 calls were originated from mobiles. In order to carry out our calculations, we have assumed that requiring mobile 080 calls to be free increases the proportion of calls originated from mobiles to 10%, 20% or 50%⁶³⁷.
- In Annex 6, we suggested that mobile OCPs' incremental costs of originating non-geographic calls may be in the region of 0.5-0.7ppm. We have used the upper figure of 0.7ppm for our calculations but below we explain what the impact of using the lower 0.5ppm figure would be.
- We have assumed that origination payments to fixed OCPs do not change. In order to calculate the impact on mobile OCPs', we have assessed three different approaches to the origination payment that mobile OCPs receive.
 - First, we have assumed the mobile origination payment is the same as the average payment that fixed OCPs receive (approximately 0.5ppm). This is lower than the assumed incremental cost which implies that mobile OCPs may incur a loss on each call (although this level of origination payment is similar to the lower end of our range for the incremental cost of mobile origination).
 - Second, we have assumed that the mobile origination payment is the same as (the upper end of the range for) mobile OCPs' incremental cost (namely 0.7ppm). This means that mobile OCPs' profits from 080 calls are not affected by changes in call volumes. Higher mobile call volumes increase SPs' costs, due to the higher mobile origination payment.

⁶³⁵ 2010 Flow of Funds study, Figure 5.23 on page 45.

⁶³⁶ This assumption simplifies modelling the impact on SPs (particularly as higher origination payments may affect the attractiveness of using an 080 numbers for SPs; clearly service availability is interrelated with call volumes).

⁶³⁷ MNOs accounted for 47% of overall voice call minutes in 2009 (133bn fixed voice call minutes and 118bn mobile voice call minutes). *Communications Market Report (2010)*, Figure 5.1 on page 279.

- Third, we have assumed that the mobile origination payment is 2ppm⁶³⁸. This figure includes a contribution to mobile OCPs' network common costs. This means that higher mobile call volumes increase both the profits MNOs earn on 080 calls and SPs' costs.

Table A7.2: Impact on mobile OCPs and SPs of free 080 calls

Mobile origination payment		10% of 080 calls originated from mobiles	20% of 080 calls originated from mobiles	50% of 080 calls originated from mobiles
Same as fixed (0.5ppm)	Change in mobile OCPs' 080 profits	-£76m	-£77m	-£83m
	Change in SP costs	None	None	None
0.7ppm (incremental cost)	Change in mobile OCPs' 080 profits	-£74m	-£74m	-£74m
	Change in SP costs	+£2m (1%)	+£3m (3%)	+£9m (7%)
2ppm (includes network common costs)	Change in mobile OCPs' 080 profits	-£59m	-£45m	-£1m
	Change in SP costs	+£16m (14%)	+£32m (27%)	+£81m (68%)

Source: Ofcom calculations using data underlying 2010 Flow of Funds study

A7.70 As shown in Table A7.2, a higher mobile origination payment reduces the impact of a maximum 080 price of zero on mobile OCPs' 080 profits. This in turn will reduce the magnitude of the tariff package effect. However, higher mobile origination payments could significantly increase the costs of operating an 080 number for SPs. For example, a 2ppm mobile origination payment would increase SPs' costs by 27% if 20% of 080 calls were originated from mobiles.

A7.71 If the incremental cost of 080 call origination were 0.5ppm⁶³⁹ then an origination payment based on incremental costs is likely to be very similar to the current origination payment that fixed OCPs receive. This would mean that there is little difference between the first two options in Table A7.2. In both cases there would be a reduction in mobile OCPs' 080 profits in the region of £75m (this is largely unaffected by the proportion of calls originated from mobiles)⁶⁴⁰. A lower figure for incremental costs also means that the fall in mobile OCPs' profits is smaller from setting a maximum retail price of zero, combined with an origination payment of

⁶³⁸ This assumption is based on a retail costs figure of 0.2ppm plus a network cost figure of 1.8ppm. The retail costs figure is in line with the current NTS Retail Uplift of 0.1848ppm (080 Dispute Determination, paragraph A3.30). The network costs figure is in line with the 2010 Mobile Termination Consultation, which estimated unit costs of termination on a LRIC+ basis in the region of 1.6-1.8ppm, depending on the year in question. 2010 Mobile Termination Consultation, figure 29 in annex 11.

⁶³⁹ This is the lower figure we presented for incremental costs in Annex 6.

⁶⁴⁰ Ofcom calculations using data underlying 2010 Flow of Funds study.

2ppm (the incremental profits on any additional 080 calls from mobiles would be larger).

The appropriate level of origination payments

A7.72 A cost-based origination payment for mobile OCPs is likely to be higher than for fixed networks, because of the larger traffic-sensitive costs of mobile networks. We consider that there are three leading candidates for setting the 080 origination payment for mobile OCPs:

- The same origination payment as for fixed calls i.e. based on the costs of fixed call origination and approximately 0.5ppm.
- A higher mobile origination payment reflecting the long run incremental cost of originating mobile 080 calls. We have not conducted a detailed analysis of the level of incremental origination costs but, to give an indication of the order of magnitude, this may be in the region of 0.5ppm to 0.7ppm (as noted above)⁶⁴¹.
- A higher mobile origination payment that includes a contribution to mobile OCPs' network common costs. We have not estimated the level of origination costs but, to give an indication of the order of magnitude, this may be in the region of 1.8ppm to 2.0ppm⁶⁴².

A7.73 The choice between these options involves trading off higher costs for SPs (which ultimately affects consumers through service quality, variety and innovation) against higher prices for other telephony services (via the tariff package effect).

A7.74 In terms of SPs:

- Some SPs might be willing to pay the higher cost of origination payments to mobile OCPs. But it could lead other SPs to migrate to alternative number ranges, or to reduce other elements of their cost such as investment in the quality of their service or to become less innovative. As explained above, responses to the 2010 SPs survey were varied, suggesting that some, but not all, SPs may be willing to pay slightly higher origination payments.
- Higher origination payments could lead some SPs to block the receipt of calls from mobile OCPs in order to avoid the higher origination payment and receive calls from fixed OCPs (for which the origination payment is lower).
- Clearly an increase in overall demand for 080 calls will tend to benefit SPs. However simply diverting calls which would happen anyway from fixed OCPs to mobile OCPs is less likely to benefit SPs. Setting a higher origination payment for mobile OCPs than for fixed OCPs would mean that these diverted calls tend to increase SPs' costs while yielding few benefits for the SP.

A7.75 In terms of consumers, in the 2010 Consumer research we asked about the tariff package effect:

- We asked "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 mobile, even if other calls (or line rental) became

⁶⁴¹ See Annex 6 for further details.

⁶⁴² See above for further details.

more expensive?" Overall, 16% of respondents would like this change, 14% responded "maybe" and 59% were against this change⁶⁴³.

- We also asked "Which would you prefer? To keep the costs for these 08 and 09 calls the same as they are now, or reduce the costs of these calls and increase the costs of local and national calls?" 9% of respondents preferred to rebalance retail prices in this way. 70% of respondents said they preferred to keep prices the same as they are now⁶⁴⁴.
- These survey responses suggest that the majority of consumers are against a rebalancing of retail prices, which points towards allowing a higher origination payment. However, we have placed relatively little weight upon these survey responses. This is because the qualitative responses suggest that some respondents believed that the increase in the price of other telephony services would outweigh the reduction in the price of 080 calls⁶⁴⁵. In other words, responses may have been shaped by a view that overall prices would increase. Insofar as this is the case, respondents were not commenting on the likely outcome of zero rating 080 calls, since the tariff package effect will be no larger than the decrease in OCPs' profits on 080 calls⁶⁴⁶.

A7.76 Moreover, the lower the origination payment, the more likely it is that mobile OCPs have an incentive to dissuade their customers from making Freephone calls. This is likely to be a particular issue if the origination payment is lower than the incremental cost of 080 calls. Where mobile OCPs are making a loss on 080 calls they might wish to block calls being made to these numbers.

A7.77 In order to determine the appropriate level of origination payments, we would consider the magnitude between the three approaches set out above⁶⁴⁷ and weigh up the impact on callers and SPs. Currently we have not yet formed a clear preference between these options and we welcome comments from respondents.

A7.78 There is also the issue of what level of origination payments would actually arise if we were to specify a maximum retail price of zero for 080 calls. In practice, absent further regulation, these origination payments are likely to be determined by commercial negotiations between OCPs and TCPs⁶⁴⁸. In the light of the analysis in Annex 3, it is not clear whether commercial negotiations would result in an appropriate level of origination payments.

A7.79 As discussed in Annex 6, if we were to set maximum prices for 080 calls and concerns about the level of origination payments did subsequently materialise, then

⁶⁴³ For mobile only households, 19% were in favour of rebalancing retail prices in this way, 14% said "maybe" and 49% were against. 2010 Consumer research, question 39.

⁶⁴⁴ 2010 Consumer research, question 42.

⁶⁴⁵ Question 39 in our survey included the qualifying sentence "If your total bill stayed the same..." but some respondents do not appear to have believed it. For example, one respondent stated that "How can my bills be the same if I don't call 0800 very often – it doesn't make sense". 2010 Consumer research, page 22.

⁶⁴⁶ This is because the tariff package effect results from OCPs recovering the foregone profits on 080 calls from other sources. See Annex 2 for further details of this effect.

⁶⁴⁷ Namely the same origination payment for fixed and mobile calls or higher origination payments for mobile calls that reflects either the incremental costs of mobile origination or include a some network common costs.

⁶⁴⁸ With the exception of calls originated on BT's network, to which the NTS Call Origination Condition applies.

it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate in the circumstances.

Evaluation against our assessment criteria

A7.80 Below we set out our evaluation of free 080 calls against our assessment criteria.

Impact on transparency and consumer price awareness

A7.81 This option would simplify the pricing of 080 calls. SPs would also be able to provide and market their services as true “free-to-caller” in their advertising, brochures etc. This is likely to lead to greater price awareness and confidence among consumers.

Impact on prices

A7.82 As explained above, absent regulatory intervention all OCPs are unlikely to offer 080 calls free of charge. In contrast, setting a retail price of zero addresses the horizontal and vertical externalities.

A7.83 Currently mobile OCPs charge for most 080 calls. As a consequence, callers may make fewer 080 calls from their mobiles. Mobile OCPs only originated around 5% of total 080 traffic in 2009. This is lower than for other non-geographic number ranges and, in particular, the 03 range (around 50%) where the pricing guidance is adhered to by mobile operators⁶⁴⁹. Mobile OCPs’ share of all traffic (including geographic calls) is also much higher share than their share of 080 traffic⁶⁵⁰. This suggests that mobile OCPs’ current pricing could be significantly reducing demand for mobile 080 calls.

A7.84 Setting a maximum retail price of zero for 080 calls, may increase the price of other telephony services (the tariff package effect). As explained above, one of the important influences on the magnitude of this effect is the level of origination payments (the lower the origination payment, the larger this effect may be).

Access to socially important services

A7.85 Under the *status quo* mobile-only vulnerable households that wish to access socially important services might be penalised disproportionately by the current level of mobile charges for 080 calls. These citizens and consumers could benefit from this option as all calls to 080 become “free-to-caller”.

A7.86 This impact needs to be weighed against the increase in other telephony charges as a result of the tariff package effect. However we do not believe that the increase in other telephony charges would be material for these consumers. As they are likely to be price sensitive, it seems unlikely that mobile OCPs will try to recover the lost retail revenues from 080 from them⁶⁵¹.

⁶⁴⁹ 2010 Flow of Funds study, Figure 1.5 on page 6. Note that the calculations underlying this figure exclude certain OCPs (designated as “other OCPs” in the underlying model). If these all OCPs are included the proportions do not change significantly, with the exception of the 118 number range (where the proportion of mobile calls is 32% rather than the 42% shown in Figure 1.5).

⁶⁵⁰ MNOs accounted for 47% of overall voice call minutes in 2009 (133bn fixed voice call minutes and 118bn mobile voice call minutes). *Communications Market Report (2010)*, Figure 5.1 on page 279.

⁶⁵¹ This seems in line with new empirical research related to the tariff package effect from reductions in mobile terminations. Recent research discussed in Annex 2 suggests that mobile OCPs have

A7.87 Mobile-only vulnerable households may also be negatively affected if higher origination payments to OCPs lead to some SPs migrating to other (charged for) number ranges or ceasing provision altogether. The magnitude of this effect depends on the level of origination payments (the lower the origination payment, the smaller this effect may be).

Impact on regulatory burden

A7.88 Mandating “free-to-caller” pricing for all 080 numbers is unlikely to impose any significant additional direct regulatory costs on OCPs in terms of compliance.

How the various parties could be affected

A7.89 All three main stakeholders – OCPs, SPs and consumers – in this number range may be affected by setting a maximum price of zero for 080 calls.

A7.90 Callers would be affected in a number of ways.

- Callers will benefit from free mobile calls to 080 numbers. This could result in an increase in calls to 080 from mobile OCPs. This may come at the expense of some fixed originated 080 calls (because some consumers find it more convenient to originate calls from a mobile rather than their landline). But it seems likely that the overall volumes could expand (e.g. reflecting increased consumer price awareness and confidence due to improved reputation of the 080 number range).
- OCPs are likely to at least partially recover the lost retail profits on 080 calls from other charges (via the tariff package effect). The magnitude of this effect depends on the level of origination payments – as explained above there is a trade off between this effect and the impact on SPs. We would not expect any impact on mobile ownership to be material⁶⁵².
- Higher origination payments will reduce the magnitude of the tariff package effect but will increase costs for SPs. Depending on the level of origination payments, some SPs, may exit or choose not to be accessible from mobile OCPs. This is likely to harm both fixed and mobile consumers (assuming they preferred to make the calls despite the high mobile call charges). Other SPs may migrate to other number ranges which would not be free at the point of call.

A7.91 In terms of SPs:

- SPs which continue to remain in this range are likely to receive more calls from consumers. This effect will make SPs better off.

generally recovered the lost revenues from increases in the fixed components of contract subscribers rather than from call charges and to a lesser extent from prepay subscribers. As vulnerable consumers are often on pre-pay contracts it seems unlikely that they will suffer large price increases. Genakos, C. and Valletti, T. (2010), “Seesaw in the Air: Interconnection Regulation and the Structure of Mobile Tariffs”.

⁶⁵² Firstly, the maximum size of the tariff package effect is still small relative to the mobile market as a whole, e.g. £81m or less (see Table A7.2) compared to total mobile revenue of £14,900m in 2009 (see Communications Market Report 2010, Figure 5.1). This means that the average size of any increase in prices is small. Secondly, the recent empirical research discussed in footnote 651 suggests that the pattern of recovery will come disproportionately from post-pay rather than pre-pay consumers.

- However, SPs may pay more for each mobile originated call. The impact of this depends on the magnitude of any increase in origination payments and the extent to which callers switch from making 080 calls on their landline to making these calls using their mobile. However, there is the possibility that at least some SPs seek to migrate away from 080.
- It is possible that some migration is not necessarily an adverse outcome, although this depends on the level of origination payments that is appropriate (on which we have not yet formed a clear view, as set out above). On the one hand, some SPs may free-ride on the Freephone concept by failing to make an appropriate contribution to the costs of origination (the horizontal externality). As stated at the outset, our central aim in this review is to put the consumer interest at the heart of NGCS policy. If addressing the problem of pricing transparency leads to SPs migrating from the range, then this might well be necessary to achieve a numbering scheme that works well for users. However, on the other hand, migration caused by increase in costs to SPs from which they gain little benefit (because of calls from mobile OCPs simply displacing calls from fixed OCPs) may not be desirable.

A7.92 Mobile OCPs will be forced to reduce their retail charges to zero and would lose the retail revenues associated with 080 calls (some £75m in 2009)⁶⁵³. They are likely to be able to recover some of this foregone revenue through higher origination fees, higher charges for other retail services or both. As we have argued that the tariff package effect is likely to be incomplete, mobile OCPs may face a profit and revenue reduction overall. However, insofar as the reputation of the 080 number range as a whole improves, this is likely to benefit mobile OCPs (through increased call volumes, if the origination payment at least exceeds their incremental origination cost).

A7.93 Fixed OCPs may be worse off as some of their traffic may be diverted to being originated by mobile OCPs. They would lose revenues from these calls. However they may benefit insofar as the reputation of the 080 number range as a whole improves and the total volume of 080 calls grows.

Preliminary views

A7.94 In summary, we believe there would be merit in setting a maximum price of zero for 080 numbers:

- As explained above, we consider that there are strong arguments for having at least one “free to caller” number range. Such a number range is unlikely to arise absent regulatory intervention due to the (inter-related) market failures that we have identified in Annex 2. In contrast, setting a maximum price of zero would address the externalities that we have identified.
- In addition, setting a maximum price of zero from all OCPs is likely to further improve consumer price awareness (particularly in the case of mobile 080 calls). SPs will be able to clearly advertise the price of calling them.
- These benefits need to be weighed against possible increases in the price of other telephony services and/or higher costs for SPs. The balance between these effects depends on the level of origination payments (on which we have

⁶⁵³ Data underlying 2010 Flow of Funds study.

not yet formed a clear preference and would welcome comments from respondents).

Option 3: Setting a maximum price above zero for mobile calls to 080

- A7.95 There are likely to be differences between mobile OCPs' efficient costs of originating and retailing 080 calls (including relevant fixed and common costs) and fixed OCPs' costs. As explained in Annex 6, this is potentially a legitimate reason for setting different retail price maxima. We have thus considered whether it is appropriate to set a maximum retail price of zero for 080 calls from fixed OCPs but a slightly higher maximum price for 080 calls from mobile OCPs, reflecting their higher costs. This could result in a maximum price for mobile 080 calls of the order of 1ppm to 2ppm⁶⁵⁴.
- A7.96 Under this option, the origination payment to fixed and mobile OCPs could be the same (since the higher retail price of mobile calls would cover the additional costs of mobile 080 origination). As a result SPs' costs are unlikely to increase. This option would be well suited to the needs of those SPs that are concerned about mobile OCPs' current high margins on 080 calls and desire calls to their number to be cheap but that are not willing to fund higher origination payments. This option is less well suited to those SPs that want calls to their number to be free and that are willing to pay higher origination payments to support free calls.

Impact on transparency and consumer price awareness

- A7.97 This option is likely to improve price transparency relative to the *status quo* (and deregulation). It would allow SPs to provide a clearer indication of the likely price in advertising or promotional material, for example "calls are free from landlines and cost no more than X pence per minute from mobiles". However we recognise that this pricing message and the identity of the number range is not as clear and distinct as if all 080 calls were free.

Impact on prices

- A7.98 Prices for 080 calls from mobiles would fall significantly. As with Option 2, this option is likely to address the horizontal and vertical externalities. Moreover this approach sends price signals to consumers by encouraging them to take the difference in the cost of fixed and mobile calls into account when choosing how to originate an 080 call.
- A7.99 Note that this option would not eliminate the tariff package effect. Lower margins on 080 calls for mobile OCPs would still be likely to result in higher prices for other telephony services (similar to Option 2, as discussed above).

Service quality, variety and innovation

- A7.100 SPs are likely to receive more calls from consumers. This effect will make SPs better off. Further, as explained above, this option means that origination payments would not need to increase to reflect the costs of mobile 080 origination. This option thus potentially has less of an impact on service availability than Option 2.

⁶⁵⁴ Our indicative figure set out above is 1.8ppm to 2.0ppm including a contribution to mobile OCPs' network common costs. The current origination payment of 0.5ppm reflects fixed OCPs' costs. This suggests that the difference between fixed and mobile OCPs' costs may be 1-2ppm, if network common cost contributions are included.

Access to socially important services

A7.101 The maximum price of mobile 080 calls is likely to be a few pence per minute. We consider that prices at this level would address our concerns about the high price of calls to socially important service for vulnerable households (similar to Option 2 above).

Regulatory burden

A7.102 Under this option we would have to determine the appropriate (cost reflective) maximum price for mobile calls and potentially periodically review that maximum. This regulatory process is likely to impose some costs on us and stakeholders.

Preliminary views

A7.103 There are strong similarities between this option and Option 2 (setting a maximum price of zero for all 080 calls). The main differences are that this option potentially has less of an impact on service availability and sends price signals to consumers to take the higher costs of mobile call origination into account when selecting which device to use to call an 080 number. However, the pricing message and the identity of the number range is not as clear and distinct as if all 080 calls were free.

Preliminary views on the best option for the 080 range

A7.104 In the past we have stated our preference for having prices of calls to 080 numbers free or as close to free as possible⁶⁵⁵. We have revisited whether this should remain our position in the future.

A7.105 We consider that maintaining the *status quo* is unlikely to further the interest of citizens and consumers. This option would do little to address our existing concerns. We believe therefore that intervention could improve matters for citizens and consumers.

A7.106 We have thus considered whether it is appropriate to set a maximum retail price of zero for 080 calls from fixed OCPs but a slightly higher maximum price for 080 calls from mobile OCPs (Option 3). Option 3 has some attractive features. However, we consider that Option 3 risks failing to create a clear identity and pricing message for 080 calls.

A7.107 As explained above, we consider that there are strong arguments for having at least one “free to caller” number range. Setting a maximum price of zero from all OCPs (Option 2) would address the externalities that we have identified and is likely to further improve consumer price awareness. We consider that these benefits are likely to outweigh the other consequences of this approach, namely potential increases in the price of other telephony services and/or higher costs for SPs. We recognise that the level of origination payments affects the attractiveness of this option. If we were to set maximum prices for 080 calls and concerns about the level of origination payments did subsequently materialise, then it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate.

⁶⁵⁵ 080 Dispute Determination, paragraph 2.32.

0500

Introduction

- A7.108 050 numbers are classified as Freephone similar to 080. This number range originated from services hosted by Mercury Communications (now part of Cable&Wireless Worldwide).
- A7.109 As of August 2007, approximately 45,000 numbers were live, of which 6,000 are actively used. Active users include the BBC (e.g. BBC Five Live's 0500 909 693) and Missing People (0500 700 700). Approximately 70 million minutes of traffic are carried on this range, a small proportion compared with 080 (11.2 billion minutes). The range is currently closed to new allocations, although existing end-users of 0500 numbers are permitted to continue using them⁶⁵⁶.
- A7.110 In terms of retail prices, like 080, most fixed OCPs do not charge for 050 calls. In contrast most mobile OCPs do charge positive prices for these calls, and often at a different rate to 080.

Responses to Call for Inputs

- A7.111 Among those responding to our Call for Inputs, only C&W commented on the 050 range. In its response, it considered that there were no issues with calls to 050 and, therefore, no intervention was required.

Specific issues relating to 050

- A7.112 Calls to 050 numbers are subject to the same designation and guidance in the NTNP as 080 numbers: free of charge except where a PCA is in place to notify callers the call is chargeable.
- A7.113 This range therefore shares similar issues to 080. However, we rarely receive complaints about 050 calls. Arguably the lower utilisation of 0500 numbers (0.6% of 080 minutes) may lead to lower recognition of the number range by consumers, thereby leading to potentially greater confusion over prices.

Policy objectives and regulatory options

- A7.114 Given the common characteristics that 050 numbers share with 080 numbers, our objectives for 050 are the same as discussed for the 080 range.
- A7.115 Having regard to the similarities of the two ranges, and the broad options discussed in Annexes 4, 5 and 6, we consider there are three options for the 050 number range that we need to consider:
- Maintain the *status quo*;
 - The same policy approach as for 080 calls; and
 - Closing down this number range.
- A7.116 In the paragraphs that follow, we consider how these options would meet our assessment criteria.

⁶⁵⁶ http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/numbering/free798.htm

Assessment of options

Option 1: *Status quo*

A7.117 Under this option, we would maintain the current regime for the 050 number range. For the reasons discussed in relation to the 080 range above, we do not consider that maintaining the *status quo* will meet our objectives. There is an additional concern for the 050 range about consumer price awareness simply due to the infrequency with which callers dial 050 numbers. We believe that consumers' awareness of prices is likely to be worse than for 080 calls, although we do not have direct evidence on this point.

Option 2: Implement the same policy option as for 080 calls

A7.118 We consider that the remedies proposed for 080 will deliver a better outcome to consumers and SPs than the *status quo* on that range. We consider that since the same issues exist for 050 and 080, and both share the Freephone designation, that the proposed policy approach set out for the 080 range should also apply to 050.

Option 3: Closing down the range

A7.119 We have also considered the option of closing the 050 number range. This would improve consumers awareness by simplifying the number ranges. However, in closing down a range, existing services would need to migrate to another number range. The cost of migration need to be weighed against the limited evidence of detriment associated with 050 calls (and in particular the absence of complaints about calls to this number range). Accordingly, our current view is closure of 050 is likely to be less attractive than Option 2.

Preliminary views on the best option for 0500

A7.120 Given the similarities that the 080 and 050 ranges share, we propose to treat 050 in the same way as 080. This option is attractive as we will be able to maintain consistency in regulation for the two Freephone ranges.

116

Introduction

A7.121 Harmonised European numbers for services of social value⁶⁵⁷ are an initiative of the Commission to introduce 'same number – same service' memorability for certain services of social value across Europe. The Commission issued a decision on 15 February 2007⁶⁵⁸ requiring all Member States to harmonise their national numbering range beginning with 116 for this purpose. The Commission reserves

⁶⁵⁷ The Decision defines a harmonised service of social value in Article 2 as "a service meeting a common description to be accessed by individuals via a Freephone number, which is potentially of value to visitors from other countries and which answers a specific social need, in particular which contributes to the well-being or safety of citizens, or particular groups of citizens or helps citizens in difficulty."

⁶⁵⁸ Commission decision of 15 February 2007

<http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:049:0030:0033:EN:PDF>

116 numbers for specified services and requires Member States to take the necessary action to make these numbers available for allocation⁶⁵⁹.

A7.122 In the 116 February 2009 Statement⁶⁶⁰, we decided that 116 numbers in the UK could be either “Freephone” (which is the Commission’s minimum charging requirement) or “free to caller”. These charging arrangements are explained below. The intention underlying these charging arrangements is that consumers should not be deterred from contacting the service. The cost of conveyance and supply of information is covered by the provider of the service. The OCP may receive an origination payment, although OCPs are not obliged to carry calls to 116 numbers at their own expense.

A7.123 Charging arrangements form part of each 116 number’s service designation⁶⁶¹ in the NTNP and are attached as rights of use of the number in the form of Additional Specific Service Conditions⁶⁶². This ensures that OCPs comply with the charging designation⁶⁶³ and, as a consequence, SP(s) operating on that number cannot change the charging arrangement.

A7.124 At present, four of the five numbers available for use in the 116 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;
- 116 111: Child helpline;
- 116 123: Emotional support helpline; and
- 116 117: Non-emergency medical on-call service.

A7.125 However, we have allocated a number to one future service (victims of crime on 116 006) that would be provided on the same basis as current Freephone calls (i.e. that networks would be able to charge for such calls as long as a PCA was in place to warn the caller)⁶⁶⁴.

A7.126 Due to the recent introduction of these services, we do not have traffic data. However, we understand usage to be very low.

Responses to Call for Inputs

A7.127 There were no comments on the 116 range from respondents to our Call for Inputs.

⁶⁵⁹ Further Commission information on 116 numbers is available at:

http://ec.europa.eu/information_society/policy/ecomm/current/pan_european/index_en.htm

⁶⁶⁰ See <http://www.ofcom.org.uk/consult/condocs/116/116statement/>

⁶⁶¹ The service designation is Ofcom’s description of the service. It is set out in Part A1 of the Numbering Plan.

⁶⁶² 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.

⁶⁶³ Compliance with the charging arrangement is a requirement in accordance with paragraph 17.12 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.

⁶⁶⁴ <http://stakeholders.ofcom.org.uk/telecoms/numbering/guidance-tele-no/116-euro-numbers>

Review of concerns for the 116 range

A7.128 As this range has been recently opened and numbers assigned, the range is not yet well known and little used. The onus of publicising the numbers rests with the SPs that have those numbers allocated. Many have so far been able to negotiate “free-to-caller” origination agreements with originating networks.

A7.129 However, there is already evidence that this might change. We are also aware of one SP agreeing for some calls to be charged where a PCA is provided, similar to what happens today for calls to 080.

A7.130 Other SPs might find it difficult to pay high origination fees in order for 116 to be “free-to-caller” from all OCPs in the future.

A7.131 This leaves us with the possibility of similar issues appearing on this range, as it becomes more popular, that are similar to those that currently affect the 080 range:

- Poor consumer price awareness, with calls to some 116 numbers being “free-to-caller” and others incurring charges;
- Prices: differently from most 080, callers to these services are likely to be in distress or in an emergency, with calls that could last many minutes. We would be particularly concerned if a pattern of high prices for some calls to 116 was to emerge as the range becomes more utilised. The risk is that the reputation of this entire number range is damaged if some OCPs charge high prices for calls to some 116 numbers (the horizontal externality); and
- Service availability: few numbers in this range have been allocated. However, looking forward, there is the risk that uncertainty about retail call prices may deter SPs from using this range.

Policy objectives and regulatory options

A7.132 In view of these concerns, we think considering intervention at this stage is warranted, also to align with any change in regime for other ranges, particularly 080.

A7.133 The policy objectives in relation to consumers for 116 are largely those discussed for 080. For 116, the issue of service availability is of particular importance given it has recently been opened to services.

A7.134 Based on the above, we think the following policy options are relevant for 116:

- Maintain the *status quo*, which allows different pricing regimes; and
- Apply the same policy approach as for 080 calls.

Assessment of options

Option 1: Status quo

A7.135 Under this option, we would maintain the current regime for the 116 number range. Some of these numbers would be “free-to-caller” from all OCPs but others could be charged for, provided that the OCP provides a PCA. Our current view is that there is likely to be very little detriment for this range at present (although there could be

some). Accordingly, we could choose not to intervene on this number range, particularly with small volumes currently on the range.

- A7.136 We are concerned that if we did not provide a clearer pricing framework for 116 calls, the same problems affecting other Freephone ranges discussed earlier would also emerge in this range. This would lead to consumer detriment as discussed above for 080. This could be worse given that callers to these services may be in a distressed state.

Option 2: Apply the same policy approach as for 080 calls

- A7.137 For the reasons set out above in the case of 080, there are advantages to setting a maximum price of zero for 116 calls. We have also previously expressed a preference for 116 services to be free in most cases⁶⁶⁵.
- A7.138 In line with the preliminary views for 080 outlined earlier, our preference would be to make calls to 116 “free-to-caller”. For callers, this would remove any confusion in the way 116 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 transparency, particularly as use of the number range grows. It also removes any distributional impacts associated with calls by low income mobile only households to services of social value. However, it would potentially impact on the provision of future 116 services and the one existing service for which OCPs charge a retail price. We would need to consider the cost impact of this option on current and future SPs.

Preliminary views on the best option for the 116 range

- A7.139 As set out for 080, we prefer an approach based on true “free-to-caller”. The costs associated with mandating “free-to-caller” means that origination costs will need to be recovered from SPs, the caller, prices for other services offered by the OCP, or some combination of these three.
- A7.140 At present, there is little evidence of consumer detriment in relation to 116 calls arising from poor price awareness or the level of prices, as these services have recently been launched and will require time to become more known with promotion by the service providers.
- A7.141 A “free-to-caller” arrangement already exists for most services, meaning that these SPs will not be affected by any change. However, Ofcom is aware of some difficulty in setting origination fees for these providers, as in some cases negotiations on the level of payments to some mobile OCPs are protracted.
- A7.142 In the case of 116 006 calls, the provider, Victim Support, has informed Ofcom that in the event that its service is made “free-to-caller”, it would not seek to actively promote its allocated 116 number. We recognise that this is a drawback of setting a maximum price of zero for 116 calls.
- A7.143 This is interlinked with the discussion above about the appropriate level of origination payments. We note that there is some scope for the origination payment for 116 numbers to be lower than other Freephone numbers. As 116 numbers are limited in distribution to clearly defined services of known public service benefit and therefore there is no risk of the service being used to undermine services otherwise

⁶⁶⁵ <http://stakeholders.ofcom.org.uk/binaries/consultations/116/statement/116statement.pdf>

provided by mobile operators (i.e. an arbitrage risk) it may be possible for 116 operators to negotiate an origination charge set at a low level.

- A7.144 In the future, some SPs may be deterred from using this range, especially if demand for their services increases as a result of origination payments associated with calls to them being made free.
- A7.145 Adopting “free-to-caller” for 116 has some clear benefits for consumers, including removing the distributional impact on more vulnerable households that use these social services. However, their welfare also depends on services being available. There is a clear possibility that adopting “free-to-caller” for all calls to 116 might deter some service providers, hence harm consumers with reduced service availability. However, this depends on the origination payment and clear pricing from the inception could boost the adoption of the range and strengthen its brand, boosting service availability in the future. The impact on future service availability is therefore uncertain at present.
- A7.146 Since the 116 number range is still new, we consider that, all in all, there is an opportunity for us to promote clearer pricing and true “free-to-caller”. Importantly, it would allow us to implement a consistent policy towards true “free-to-caller” Freephone ranges, removing the potential for any confusion over charges.

Group 2: Geographically priced numbers (03, 0845, 0870)

Overview

- A7.147 We now consider a group of ranges that the NTNP designates for allocation to services where calls prices are linked to the prices of geographic calls: 03, 0845 and 0870.
- A7.148 Currently, the extent to which the price of calls to these numbers mirrors the price of calls to geographic numbers varies:
- Currently, all OCPs price 03 identically to geographic calls. Some consumers purchase fixed packages that allow unlimited geographic calls at certain times and some consumers purchase mobile packages that include bundles of inclusive minutes. We understand that, where such special arrangements apply to geographic calls they also apply to 03 calls.
 - Currently mobile OCPs generally set higher prices for 0845 and 0870 calls than for calls to geographic numbers. Generally 0845 and 0870 calls are not included within bundles of inclusive minutes, even if geographic calls are⁶⁶⁶.
 - Currently some fixed OCPs (e.g. BT) price 0870 and/or 0845 calls identically to calls to geographic numbers. Other fixed OCPs (e.g. Virgin Media) set higher prices for these calls.
- A7.149 The discussion of these number ranges is structured as follows:
- We explain why it is appropriate to have at least one universally available non-geographic range for which calls are charged identically to geographic prices.

⁶⁶⁶ There are some exceptions, such as the Vodafone bolt-on discussed in Annex 5. See also Annex 2.

However, as a result of the market failures that we identify in Annex 2, this outcome is unlikely to occur without regulatory intervention.

- We then discuss the 03, the 0845 and the 0870 number ranges in turn.

A7.150 For the reasons explained below, our view at present is that the current set of number ranges linked to geographic calling rates should be rationalised. Our preference is to have the 03 range as the only geographically rated non-geographic number range. While current use of 03 is low, it aligns well with the geographic ranges, 01/02. The current situation where potentially very different prices apply to 0845 and 0870 calls as compared to 0844 and 0871 calls is confusing. We would therefore be building upon consumer knowledge of the 01/02 ranges and removing existing causes of confusion in the 08 ranges. This would be consistent with our vision for rationalisation set out in Section 6.

A7.151 Our current view is that the unbundled tariff approach (as explained in Annex 5) represents an attractive option for the 0845 number range. Since (as explained later in this Annex) we are also proposing the unbundled tariff for 0844 calls, there are advantages to aligning the approach for these adjacent number ranges.

A7.152 For 0870, there appear to be three possible options: adopting the unbundled tariff (which would align this number range with our proposed approach to 0871), requiring 0870 calls to be priced in the same way as geographic calls, or closing this number range. Closure of the 0870 number range would help simplify the overall system of non-geographic numbers but migration potentially results in significant costs for SPs and consumers. We would welcome stakeholders' views on which of these three options is the most attractive.

Regulation is necessary to support retail prices that are linked to geographic calls

A7.153 We consider that it is appropriate to have at least one universally available non-geographic range for which calls are charged identically to geographic prices.

- Such a number range meets the demand of those organisations which want a non-geographic number because they require a national presence, rather than because they wish to generate revenue from incoming calls⁶⁶⁷. The 2010 SP Survey found that the reasons for selecting a specific number range focused mainly on the perception that is created. This was in terms of the perceived size and location of the SP (e.g. one SP selected a number that gave the impression of being a larger company that was based in London)⁶⁶⁸.
- There is demand for the existence of such a range from SPs. The termination rates for 0870 calls are cost based (as for geographic calls, taking into account differences such as the point at which calls are handed over)⁶⁶⁹. This suggests

⁶⁶⁷ A point that we made in the statement establishing the 03 number range. *Telephone Numbering: safeguarding the future of numbering*, Ofcom, 27 July 2006, paragraphs 5.41-5.44. Available at: <http://stakeholders.ofcom.org.uk/binaries/consultations/numberingreview/statement/statement.pdf>

⁶⁶⁸ 2010 SP Survey, page 16.

⁶⁶⁹ Specifically in the 0870 Dispute Determination Ofcom set rates on the basis of the cost of termination of 0870 calls, i.e. geographic call termination charges plus relevant additional costs of termination for 0870 calls on a fully allocated cost basis. These additional costs reflected the different way in which geographic and non-geographic calls are routed and consisted in additional conveyance and switch costs which are incurred by the TCP in the case of 0870 calls and saved by the OCP (whereas the reverse holds true for a geographic call).

that those SPs currently operating on the 0870 range would also like calls to be available at geographic rates (even if that preference is not reflected by all OCPs in the price of calls). This is because 0870 SPs have chosen not to locate on other number ranges associated with higher termination rates.

- Similar reasoning applies in the case of SPs operating on the 03 range, where retail prices are set at the same level as for geographic calls and termination rates are currently set at the same level as for 0870 calls.

A7.154 However, we consider that a non-geographic number range for which all OCPs charge calls identically to geographic prices is unlikely to arise absent regulatory intervention. This is a consequence of the (inter-related) market failures that we have identified in Annex 2:

- The vertical externality means that, even if SPs wish to price calls at geographic rates, OCPs have an incentive to set higher retail prices. This is exacerbated by consumers' poor price awareness which weakens the competitive constraints on the price of non-geographic calls; and
- If a number range had a reputation amongst consumers for being priced identically to geographic calls, the horizontal externality means that OCPs and SPs have an incentive to free ride on that reputation. OCPs might free ride by setting higher retail prices, behaviour which is exacerbated by consumers' poor price awareness. SPs might free ride by selecting higher termination rates which put upward pressure on retail prices.

A7.155 Our view is supported by the differing outcomes on the 03 and 0870 number ranges. In the case of 03 calls, the NTNP designates that all OCPs should price these at no more than geographic rates. In contrast, for 0870 calls, OCPs are simply required to publish call charges if they differ from geographic rates. Thus, in the absence of a regulatory requirement to price calls at geographic rates, mobile OCPs and a number of fixed OCPs have chosen to set higher prices for 0870 calls than for geographic calls.

03

Introduction

A7.156 We first consider the 03 number range. This range was opened for allocation in 2007⁶⁷⁰ for public sector and not-for-profit bodies to be able to offer national access to their services at geographic call prices with callers being able to use their in-bundle minutes. The first sub-range to be opened was 030. Later, two further sub-ranges were opened to enable services wishing to migrate from other 08 numbers (034x for 084x and 037x for 087x). As of July 2010 2,072 blocks of 10,000 numbers had been allocated, the third highest after 09 and 084/087.

A7.157 The designation in the NTNP in relation to 03 numbers⁶⁷¹ currently reads: *“UK-wide Numbers at a geographic rate: calls charged at up to the same rate the customer would pay to call a UK Geographic Number, with calls to 03X numbers counting*

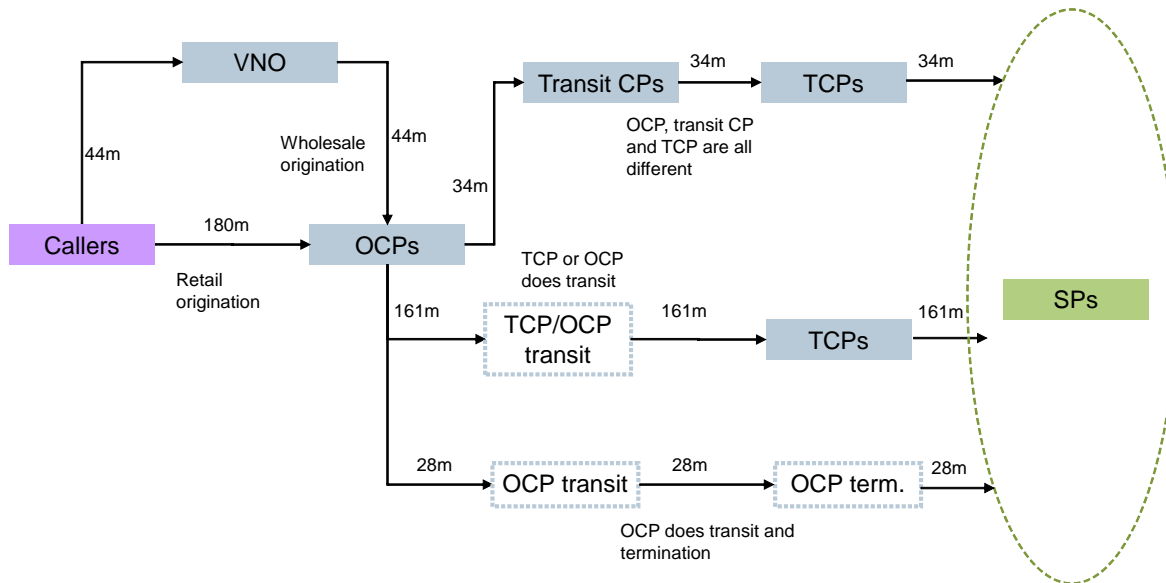
⁶⁷⁰ Ofcom press release, 13 February 2007 available at: <http://media.ofcom.org.uk/2007/02/13/ofcom-introduces-uk-wide-03-numbers/>

⁶⁷¹ This extract from the NTNP summarises the content of the four individual entries for 030, 033, 034 and 037 numbers as the specific functions of each sub-range differ slightly. See: <http://stakeholders.ofcom.org.uk/binaries/telecoms/numbering/numplan280710.pdf>.

towards inclusive call minutes if the customer has remaining inclusive minutes to UK Geographic Numbers, and included in any discount structures that apply to UK Geographic Numbers". Currently all fixed and mobile OCPs treat 03 calls in the same way as calls to geographic numbers. Revenue sharing with the SP is not allowed⁶⁷².

A7.158 Usage levels are currently low. According to the 2010 Flow of Funds study⁶⁷³, there were 223 million minutes on the 03 range in 2009, accounting for less than 1% of total non-geographic calls.

Figure A7.3 Flow of volumes for 03 calls, 2009



Source: The 2010 Flow of Funds study

A7.159 According to the same study, total revenues for the 03 range were £4.3m in 2009⁶⁷⁴. Note that in this study, where a call is part of a bundle of inclusive minutes, no revenue was attributed to that call⁶⁷⁵. OCPs retained £3.3m, or 76% of retail call revenues. TCPs received total payments of £1m for termination. An additional £0.2m in payments to TCPs came from SPs⁶⁷⁶.

⁶⁷² Extract from the NTNP Section B3.6.1: "Those who adopt or otherwise use 03 numbers shall not share with any End-User any revenue obtained from providing a service on those numbers."

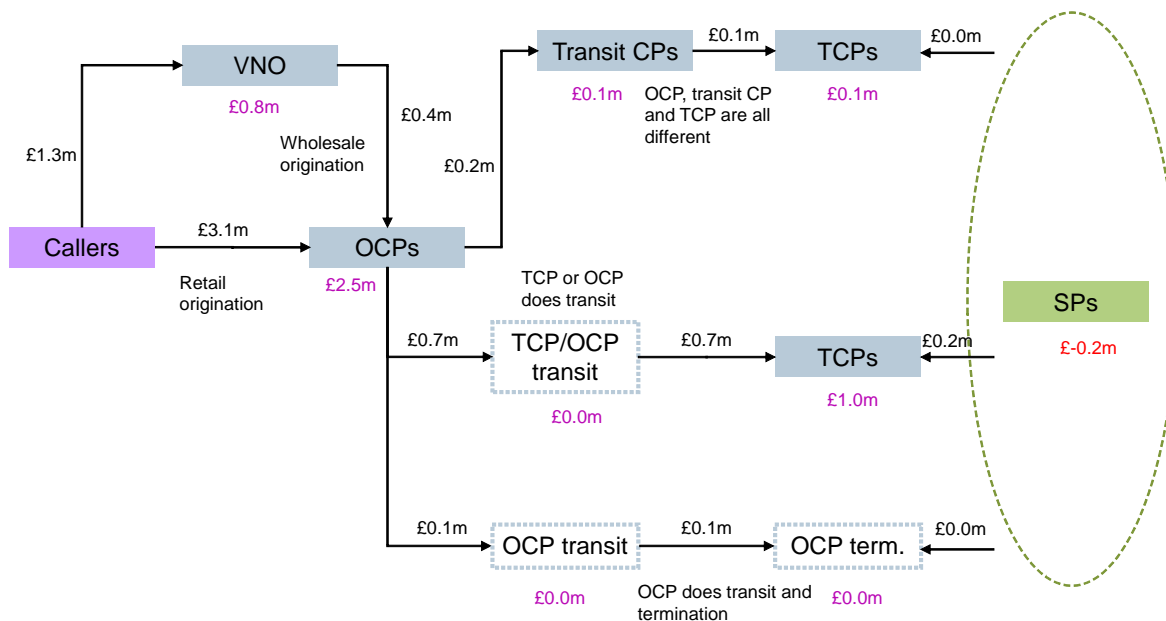
⁶⁷³ 2010 Flow of Funds study, page 29 and Figure 5.5.

⁶⁷⁴ 2010 Flow of Funds study, pages 42-43 and Figure 5.21.

⁶⁷⁵ 2010 Flow of Funds study, page 38. This means that dividing total retail revenues by total volumes will not give an accurate reflection of the price of chargeable calls.

⁶⁷⁶ 2010 Flow of Funds study, pages 42-43 and Figure 5.21.

Figure A7.4 Flow of revenues for 03 calls, 2009



Source: The 2010 Flow of Funds study

A7.160 Ofcom has recently opened an investigation into a dispute lodged by Everything Everywhere (“EE”) in regard to BT’s 03 wholesale termination rates. On 3 August 2009 BT notified an increase to its 03 termination rates, with effect from 1 September 2009, to bring them into line with the determined 0870 rates⁶⁷⁷. Ofcom is currently considering the dispute and will give its decision in early 2011⁶⁷⁸.

Review of responses to the Call for Inputs

A7.161 Respondents to our Call for Inputs raised the following issues in relation to the 03 range:

- Alternative Networks, a service provider/reseller, argued that consumers were largely unable to differentiate between the 03 and 08 ranges. As a result of this confusion, Alternative Networks argued that consumers had little idea of what 03 calls actually cost. It also argued that uncertainty about the future of 03 and 08 is undermining innovation;
- Consumer Focus argued that there is a low awareness around the rules that apply and the cost of calls to non-geographic calls, citing 03 as an example;
- TalkTalk asked Ofcom to reassess the value of 03 numbers; and
- One individual respondent was confused as to the reason for having 0300 and 0800 numbers for Freephone instead of only one range. Another individual respondent welcomed the introduction of 03 but argued that Ofcom should do more to push its use.

⁶⁷⁷ As determined in the 0870 Dispute Determination.

⁶⁷⁸ We published a draft determination in this dispute on 8 December 2010 which is available at: http://stakeholders.ofcom.org.uk/binaries/consultations/draft-everything-bt-termination/summary/draft_determination.pdf

Review of concerns for the 03 range

A7.162 Having regard to our evidence and the issues raised by respondents, our concerns for the 03 range are as follows.

A7.163 As explained in Annex 2, we consider that there is poor consumer price awareness in relation to 03 calls (notwithstanding the current link to geographic call prices)⁶⁷⁹. We suspect that part of the reason why consumers' awareness of the price of 03 calls is low is because this number range has only been in use for a short period (it was only opened for number allocation in 2007) combined with the low volumes of calls, which means that consumers have little experience of 03 numbers⁶⁸⁰.

A7.164 In terms of service availability and innovation, the range of services available so far on 03 is largely limited to mainly Government sponsored services although other bodies are beginning to use the range. The number of 03 number blocks allocated has risen in recent years, and it now represents double those allocated for 080. The low usage may therefore be mainly driven by consumers' lack of price awareness – put simply, consumer recognition of the number range is poor. This provides little incentive for development or innovation through new, cheap to call, services.

A7.165 We consider that the current requirement to price 03 calls at geographic rates addresses the vertical and horizontal externalities. This current requirement also addresses our concerns about the price of 03 calls. The link with geographic prices means that callers benefit from the competitive constraints that are likely to exist in relation to geographic call pricing.

A7.166 Given the current pricing trends and the fact that the range is not yet widely used, we consider that currently the likely detriment for consumers is not significant.

Policy objectives and assessment of regulatory options

A7.167 Based on the above concerns, we consider that the key policy objectives we want to focus on for the 03 range are:

- To promote consumer awareness and confidence in 03;
- To ensure consumer protection from the level of charges; and
- To promote service availability and the sustainability of the 03 range.

A7.168 We consider that it is appropriate to have at least one universally available non-geographic range for which calls are charged identically to geographic prices. Moreover, as explained above, this outcome is unlikely to result without regulatory intervention. Deregulation of the 03 number range is likely to result in a similar outcome to that experienced on 0870, namely some OCPs increasing the price of non-geographic calls. This would harm service availability and innovation since retail prices would no longer reflect SPs' preferences. It would make it harder for SPs operating on the 03 range to advertise the price of calling them (in the same

⁶⁷⁹ For example, when asked the price of landline calls to 03 numbers, 72% of respondents to the 2009 Consumer research responded "don't know". In the case of mobile calls to 03 numbers, 71% responded "don't know". The mean expected price amongst those that did provide a price estimate was 11ppm for fixed calls and 23ppm for mobile calls. 2009 Consumer research, questions 43 and 44.

⁶⁸⁰ 03 calls account for only a tiny fraction of non-geographic calls. 2010 Flow of Funds study, page 28 and Figure 5.4.

way that the variations in 0870 prices between OCPs means that SPs cannot convey a clear pricing message for 0870 calls). Consumers' understanding of 03 call pricing is likely to further worsen. These effects would tend to depress 03 call volumes.

- A7.169 Given our objectives, and the desirability of having a non-geographic range for which calls are charged identically to geographic price, we consider that the most appropriate approach for 03 is maintaining the *status quo*. While current use of 03 is low, it aligns well with the geographic ranges, 01/02.
- A7.170 As explained above, we suspect that part of the reason why consumers' awareness of the price of 03 calls is low is because of the relative youth of this number range combined with the low volumes of calls. Provided these calls continue to be priced at geographic rates, over time we would expect price awareness to improve.

0845

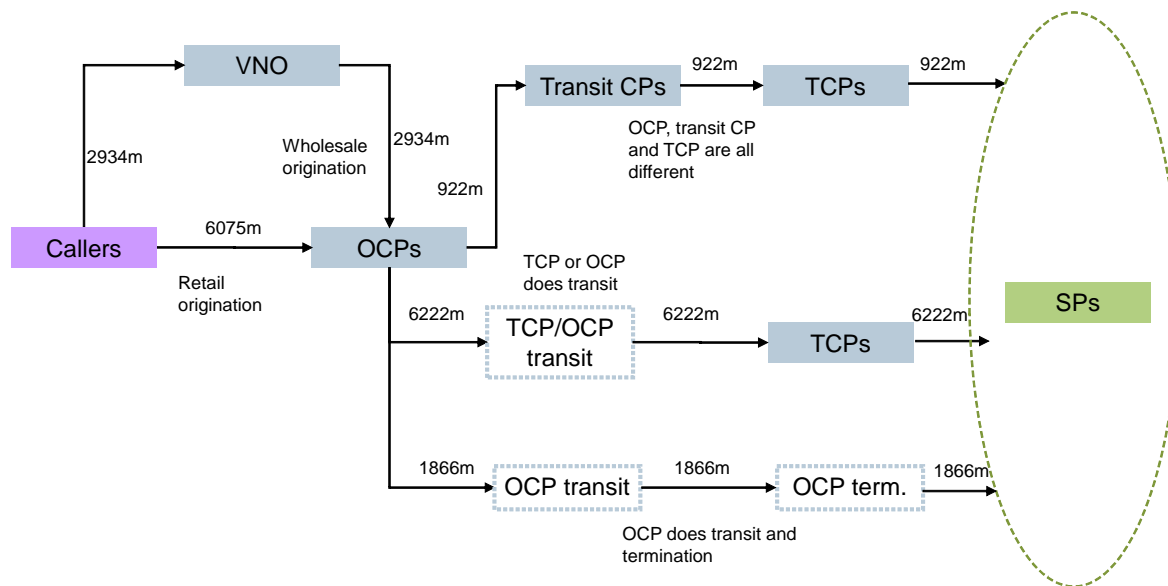
Introduction

- A7.171 Unlike 03, 0845 numbers have been around for a long time and have a more complex history. This has shaped the current experience of callers and industry players alike.
- A7.172 0845 is one of two original NTS ranges established by Oftel in 1996 to facilitate revenue sharing on calls costing less than premium rate prices. 0845 was initially used for voice services such as National Rail Enquiries and single national number access to local services such as Interflora, where calling the same number from anywhere in the country routed callers to their nearest florist. In 1998 the first dial-up internet services were launched and 0845 became the range of choice for pay-as-you-go internet access at 'local' rates.
- A7.173 These services have now largely been superseded by the popularity of broadband but significant levels of non-voice traffic remain. Some services have migrated away from 0845 following BT's inclusion of calls in bundles, which reduced the effective retail price of these calls and (via the NTS Call Origination Condition) led to a corresponding fall in termination rates and hence SPs' revenue. More recently we have seen some migration to 0845 following the 2009 changes to 0870 regulation.
- A7.174 0845 remains the second most heavily used non-geographic number range after 080. Call volumes, driven by the rapid rise in internet traffic, grew to very high levels and by 2004 it was the most popular non-geographic number. Even though the volumes of dial-up internet traffic have reduced to much lower levels, in 2009 calls to 0845 still accounted for 29% of all non-geographic call minutes⁶⁸¹. A total of around 9 billion minutes of calls were made in 2009. Figure A7.5 below shows the flow of volumes across the value chain for 0845 calls according to the 2010 Flow of Funds study⁶⁸².

⁶⁸¹ 2010 Flow of Funds study. Total non-geographic call volumes were 30,792m minutes (Figure 1.4 on page 5) of which 0845 calls accounted for 9,009m minutes (Figure 5.9 on page 32).

⁶⁸² 2010 Flow of Funds study, Figure 5.9 on page 32.

Figure A7.5 Flow of volumes for 0845 calls, 2009



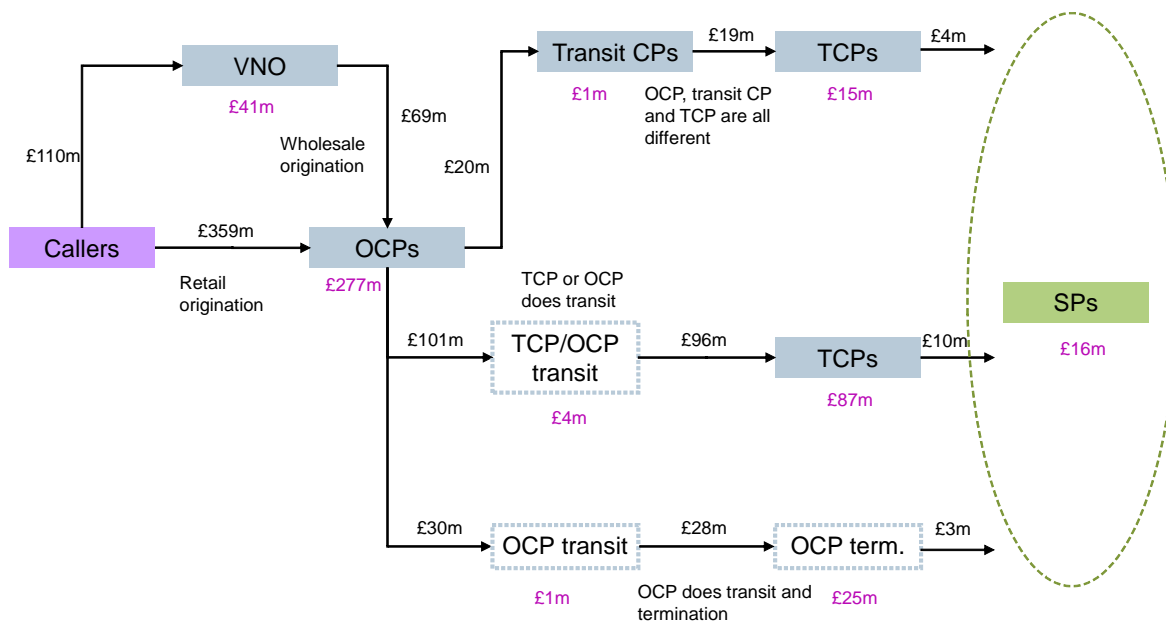
Source: the 2010 Flow of funds study

- A7.175 Call prices were initially pegged to BT's regulated 'local' call rate. Before, there were several local rate non-geographic number ranges that were later consolidated into 0845. These were all priced in the same way as local calls to geographic numbers at the time – at around 5ppm. Over the years that followed, geographic call prices fell rapidly under BT's retail price controls (removed in 2006) with competitors following suit. NTS call prices did not fall as quickly at first but BT did progressively discount its 0845 calls to a greater extent and by 2002 0845 discounts stood at 14.8%.
- A7.176 BT offers retail packages that include free inclusive calls to geographic (and 03) numbers at certain times. Since February 2009, both 0845 and 0870 have also been part of these inclusive calls⁶⁸³. As a consequence, the aggregate level of discounts BT now applies to 0845 calls stands at 31%.
- A7.177 As with other NTS ranges, 0845 charges from other networks vary widely and calls are seldom included in bundles. As a result, consumer disquiet has emerged at having to pay more to access services via calls advertised as 'local rate' but which are not charged in that way.
- A7.178 Today 0845 remains a revenue sharing range albeit rates have been falling in recent years. Termination payments have fallen to a maximum of 1.7ppm in the daytime and 0.4ppm at weekends for 0845 calls handed over at the local exchange. TCPs have become exercised about having calls to their hosted services discounted by BT who then passed this through as reduced termination payments. As a consequence Ofcom, and then Ofcom have since been called to resolve a series of disputes about BT's wholesale NTS charging policies.
- A7.179 According to the 2010 Flow of Funds study, calls to 0845 generated a total of £469m in 2009, the most from any non-geographic number range. £16 million, or 4%, was paid to SPs. TCPs retained around 27%, while OCPs retained 68% of all

⁶⁸³ For example, the "Unlimited Weekend" plan offers inclusive calls to 01, 02, 03, 0845 and 0870 numbers at the weekend. At other times, these calls attract an additional charge. The "Unlimited Anytime" plan offers inclusive calls to these numbers at any time.

the revenue for this number range⁶⁸⁴. Note that, where a call is part of a bundle of inclusive minutes, no revenue was attributed to that call⁶⁸⁵.

Figure A7.6 Flow of revenues for 0845 calls, 2009



Source: the 2010 Flow of funds study

Review of responses to Call for Inputs

A7.180 The following comments were made by respondents in relation to the 0845 range:

- C&W was concerned at the lack of revenue certainty for calls to 0845; this concern was echoed by two other TCPs;
- Consumer Focus stated that many essential services are provided over 0845. It also considered that prices from mobiles were much higher than landline prices for 0845, particularly as traffic originated on mobiles is increasing. It was concerned that if prices acted as a barrier then the downstream impact could be high. It was particularly concerned about the impact this might have on mobile only low income households;
- The DWP believes the market to be inconsistent with respect to 0845, claiming that sometimes 0845 calls are more expensive than geographic calls and sometimes they are cheaper. It has a strong preference for 0845 calls to be charged the same as geographical calls and be part of any inclusive call plan minutes. The DWP also complained of poor price transparency especially for 0845 calls from mobiles; and
- One individual respondent considered that the system is unnecessarily opaque, with smokescreens obscuring the cost differentials between 0845 and 0844. Another individual respondent echoed this comment and stated that it was impossible to keep track of the cost of calling different numbers. Another

⁶⁸⁴ 2010 Flow of Funds study, pages 46-47 and Figure 5.25.

⁶⁸⁵ 2010 Flow of Funds study, page 38. As shown in Annex 2, the data underlying the 2010 Flow of Funds study suggests that 20% of fixed 0845 calls and 3% of mobile 0845 calls were made using inclusive minutes.

individual respondent complained that calls to 0845 were not in-bundle from its provider.

Review of concerns for the 0845 range

A7.181 Today's market for calls to 0845 has evolved into a complex web of services and prices on offer. The range is still very widely used, but it has increasingly suffered from consumers' poor price awareness and a lack of price transparency. At the wholesale level, there is also uncertainty over the future of revenue share and the level of termination rates. We therefore have some important concerns in relation to this range.

A7.182 First, poor consumer awareness and transparency. Originally 0845 had a clear brand and price association for callers, who had a very high awareness of the 'local' call designation, thanks also to the early years' success of dial up internet services on 0845. However, as explained in Annex 2, today callers have a poor confidence in the cost of 0845 calls. For example, only 27% of respondents to the 2010 Consumer research were confident that they knew the price of fixed calls to 0845/0870 numbers; 58% stated that they were not confident. For mobile calls to 0845/0870 numbers, only 21% were confident that they knew the price of calls and 66% were not confident⁶⁸⁶. Also, we also consider that consumers are likely to be confused about the difference between the price of 0844 and 0845 calls⁶⁸⁷.

A7.183 Second, the level of prices:

- Poor consumer price awareness and lack of price transparency have the effect of weakening competitive constraints on the price of 0845 calls. This also exacerbates both the horizontal and vertical externalities.
- As explained above, mobile 0845 call prices are generally higher than for geographic calls. Very few mobile 0845 calls form part of a bundle of inclusive minutes⁶⁸⁸. While for fixed OCPs the picture is mixed, a number of fixed OCPs set prices that are higher than for geographic calls⁶⁸⁹.
- High margins on 0845 calls are likely to be used to support lower prices for other telephony services, such as geographic calls (the tariff package effect). Given the size of the 0845 range, this effect on the price of other calls may be material⁶⁹⁰.

A7.184 Third, service availability and innovation are harmed. High retail prices for some 0845 calls (including retail prices that do not reflect SPs' preferences), combined with the effects of poor consumer price awareness are likely to reduce demand for 0845 calls. High prices by some OCPs are also marring the 0845 brand (the horizontal externality). These effects damage SPs' incentives to provide services and to invest which, in the long term, is likely to harm consumers. These effects

⁶⁸⁶ 2010 Consumer research, questions 35 and 36.

⁶⁸⁷ Vodafone raised concerns about consumers' practical ability to distinguish subtle differences between NTS numbers at a 3 or 4 digit level in its response to the Call for Inputs, paragraph 14.

⁶⁸⁸ See Annex 2.

⁶⁸⁹ See Annex 2.

⁶⁹⁰ Ofcom calculations based on the data 2010 Flow of Funds study suggest that total retention by OCPs (including virtual operators) was £906m in 2009. Of this, £318m (35%) was retained on 0845 calls. We recognise that OCPs' profits from 0845 calls will be lower than this figure (once OCPs' costs of originating and retailing calls are taken into account).

may be exacerbated by the current operation of the wholesale level, specifically uncertainty over the future of revenue share and termination rates.

A7.185 In terms of our distributional concerns, a number of socially valuable services use 0845 numbers, including public bodies such as NHS Direct, the Child Support Agency, HM Revenue & Customs, some local councils and some doctors' surgeries. There is a risk that vulnerable consumers and citizens who rely on essential services provided via 0845 numbers have to pay high prices to access these services, particularly from mobile phones. For example, as shown in Annex 2, the price of an 0845 call from a mobile phone is 25ppm from Vodafone and O2 and 40ppm from T-Mobile, Orange and Virgin Mobile. In its response to the Call for Inputs, Consumer Focus stressed that many essential services are provided over 0845 numbers and that low income mobile only customers are particularly harmed by current mobile call prices⁶⁹¹.

Policy objectives and regulatory options

A7.186 Having regard to the concerns we have for 0845 numbers, we focus particularly on the following policy objectives:

- To promote consumer awareness and confidence in 0845;
- To ensure greater consumer protection from the level of charges; and
- To promote service availability and the sustainability of the 0845 range.

A7.187 To achieve these objectives, we have a number of options available, as discussed in Annexes 4-6. In the case of calls to the 0845 range these options are:

- Maintaining the *status quo*;
- Tariff principle requiring tariffs to be unbundled into an AC and SC ('unbundled tariff'); or
- Tariff principle: calls to be priced at geographic prices and count towards use of in bundle minutes.

A7.188 These options are assessed relative to the outcome under deregulation. Retail deregulation is likely to be similar to the *status quo* but would remove the maximum retail price specified for BT in the NTNP. However, as shown in Table A7.3 below, BT's current prices for 0845 calls are either equal or lower than those for geographic calls. It is thus unclear whether BT's 0845 call prices would increase in the event of deregulation, given that the NTNP limits do not appear to be constraining BT⁶⁹².

⁶⁹¹ Consumer Focus stated that many essential services are accessed via 0800 and 0845 numbers including the administration of pensions and benefits. For example, an individual that wished to contact HM Revenue & Customs to discuss problems with child tax credits would need to call an 0845 number. Consumer Focus response dated May 2010 to the Call for Inputs.

⁶⁹² This issue is interrelated with the operation of the wholesale level. As explained in Annex 3, deregulation at the wholesale level (removal of the NTS Call Origination Condition) is likely to result in changes in the way in which termination rates are determined. We discussed the consequences of this in Annex 3 and those consequences apply equally to 0845. Moreover, removal of the NTS Call Origination Condition would mean that a reduction in BT's retail prices no longer automatically results

Table A7.3: Call prices from BT landline

Calling plan		Weekday daytime price	Weekday evening price	Weekend price
Unlimited weekend	Geographic calls	6.4ppm	1.5ppm	0ppm
	0845 calls	2ppm	0.5ppm	0ppm
Unlimited evening and weekends	Geographic calls	6.4ppm	0ppm	0ppm
	0845 calls	2ppm	0ppm	0ppm
Unlimited anytime	Geographic calls	0ppm	0ppm	0ppm
	0845 calls	0ppm	0ppm	0ppm

Note: all chargeable calls attract a call set up fee of 10.9p. Calls lasting over 1 hour attract a higher ppm charge (which the consumer can avoid by redialling)

Source: BT Tariff Guide for Residential Customers, pages 5-7 viewed 3 December 2010⁶⁹³

A7.189 We have not considered in detail the option of closing the 0845 number range and migrating SPs using that range elsewhere⁶⁹⁴. In terms of call volumes, 0845 is the second largest non-geographic number range. There are a large number of services hosted on 0845 and closing it down could have significant costs for service providers, who would have to migrate to other ranges⁶⁹⁵. Our current view, taking this and other factors into account, is that this approach is not proportionate for 0845.

Assessment of the options

Option 1: Maintaining the *status quo*

A7.190 Under this option, we would keep the current NTNP designation applying to calls from BT landlines phones. We would also maintain the NTS Call Origination Condition that applies to BT.

Impact on transparency and consumer price awareness

A7.191 The 0845 range has been widely used for a long time to provide access to services. However, as discussed in Annex 2, there is evidence that consumers are today confused about the prices for 0845 calls and are not clear about the differences

in a corresponding fall in the termination rate. This would strengthen BT's incentive to increase retail prices, relative to the *status quo*.

⁶⁹³

<http://www.productsandservices.bt.com/consumer/consumerProducts/pdf/UKInternationalprices.pdf>

⁶⁹⁴ We also note that the 0845 range cannot sustain demand for new numbers indefinitely and so closing the range to new allocations will have to be considered at some point unless we change the way we allocate numbers.

⁶⁹⁵ We have not estimated the costs of closing the 0845 number range. However, in Annex 8 we set out some initial calculations of the cost of closing the 0870 number range. Given that 0845 call volumes in 2009 were more than 3½ times as large as 0870 call volumes, this suggests that the costs of 0845 closure are likely to be several times larger than those for 0870 closure. Call volumes taken from 2010 Flow of Funds study, Figures 5.8 and 5.9.

between adjacent ranges, such as 0845 and 0843/4. Prices vary across networks, making it hard for SPs to inform consumers about the price of calls. Callers often resent the high perceived charges for calls. This leads callers to over-estimate the actual price of calls which, in turn, affects how many calls they make. As explained in Annex 2 and Section 4, these effects lead to consumer detriment.

Impact on prices

A7.192 As shown in Annex 2, we recognise that some OCPs (such as BT and TalkTalk) price 0845 calls at geographic rates or lower. However, poor consumer price awareness allows some OCPs to increase the price of calls to 0845 numbers. This exacerbates the vertical and horizontal externalities. As illustrated by the complaints that we receive (see Annex 15), 0845 prices are a source of irritation for a number of consumers. Further, as discussed in Annex 2, higher prices for 0845 calls are likely to support lower prices for other telephony services (the tariff package effect).

Impact on service quality and variety

A7.193 The deterioration of the 0845 brand among callers, uncertainty about the price of calls and the high price of 0845 calls from some OCPs reduce demand. Moreover, the price charged by some OCPs for 0845 calls is unlikely to reflect SPs' preferences for the cost of calling their services (the vertical externality). As a result, SPs' income is reduced which harms service availability and innovation.

A7.194 In addition, the operation of the NTS Call Origination Condition means that, if BT reduces its retail price for 0845 calls then this leads to a corresponding fall in the termination rate. Given SPs' lack of control over BT's retail prices, this creates uncertainty about the amount of revenue that SPs will receive. Some TCPs responding to our Call for Inputs were specifically concerned about the future of revenue share on 0845. This uncertainty may also harm service quality and innovation.

Access to socially important services

A7.195 As discussed when reviewing our concerns for the 0845 range, some vulnerable mobile-only low income users currently incur high charges when calling socially important services located on 0845 numbers. Keeping the *status quo* would do nothing to improve their experience.

Impact on regulatory burden

A7.196 Maintaining the *status quo* would leave the regulatory burden on providers unaltered.

Preliminary views

A7.197 Having considered the impact that maintaining the *status quo* would have on callers and industry players, we think that this option would not serve our policy objectives well. In particular, doing nothing would not help to restore callers' confidence and to promote greater awareness, it would leave callers exposed to the level of charges from some fixed and mobile networks and it would not promote service availability.

Option 2: Unbundled tariff

- A7.198 One approach could be to recognise that many SPs on the 0845 number range, as with the adjacent 0844 number range, rely on the revenue share that they receive from calls. As explained below, our current view is that the unbundled tariff should be adopted for 0844 calls. We could treat 0845 in the same way as the 0844 range and also adopt the unbundled tariff for this number range.
- A7.199 The unbundled tariff is described and analysed in Annex 5. We summarise the implications of that general analysis for the 0845 number range below.
- A7.200 Including 0845 calls within the unbundled tariff is likely to improve the operation of that remedy. 0845 is the second largest number range (by volume of calls). By including this number range, it means that the unbundled tariff thus applies to a significantly greater number of calls. Since the AC applies to more calls, this means that consumers are more likely to pay attention to this element of the price and are more likely to take it into account when selecting which OCP to subscribe to. In other words, because the AC applies to a greater number of calls, its importance to consumers is likely to be higher and thus competitive constraints on the AC are likely to be stronger⁶⁹⁶.

Impact on transparency and consumer price awareness

- A7.201 As discussed in Annex 5, we consider that the unbundled tariff has the potential to deliver greater clarity for callers. By reducing the complexity of call prices, it would facilitate competition between both OCPs and SPs. In particular, it would be much easier for SPs to give a clear indication of the cost of calling their service.
- A7.202 In addition, adopting the same regulatory approach for both 0844 and 0845 calls is likely to be less confusing for consumers. As explained above, consumers may find it difficult to distinguish between numbers based on the fourth dialled digit.

Impact on prices

- A7.203 Under the unbundled tariff, prices are determined by competition between OCPs and between SPs. In Annex 5, we explained why the unbundled tariff is likely to increase competitive pressures on both the OCP and the SP. Annex 5 also explains why this remedy is likely to mitigate the vertical externality and help address the horizontal externality. Insofar as the unbundled tariff results in lower OCP margins on 0845 calls, this is likely to result in higher prices for other services (the tariff package effect). However, it is important to recognise that the magnitude of that effect is being shaped by competition and is thus likely to result in a pattern of retail prices that better reflects consumers' underlying preferences.
- A7.204 We recognise that there is a risk that the price of 0845 calls increases for some consumers as a result of the restrictions on the structure of the AC that we are proposing. In particular, the increase in charges could be felt by those callers that

⁶⁹⁶ In 2009, total fixed voice calls were 135bn minutes and total mobile voice calls were 113bn minutes (source: 2010 Flow of Funds study, pages 2 and 4). Our current view is that 03, 080 and 0870 calls should be excluded from the unbundled tariff. This would mean that the unbundled tariff applies to number ranges that accounted for 14,595m minutes of fixed calls and 2,308m minutes of mobile calls in 2009 i.e. this remedy would apply to approximately 11% of fixed calls and 2% of mobile calls. If 0845 calls were also excluded, the unbundled tariff would apply to just 6,803m minutes of fixed calls and 1,090m minutes of mobile calls i.e. just 5% of fixed calls and 1% of mobile calls. Source: Ofcom calculations based on the data underlying the 2010 Flow of Funds study.

today pay an incremental price of zero for 0845 calls (because these calls are inclusive), including some BT customers. Under the unbundled tariff, these consumers would need to pay both the standard AC (which applies to all calls covered by the unbundled tariff) as well as whatever SC the SP selects.

Impact on service variety and quality

A7.205 As explained in Annex 5, the unbundled tariff promotes service availability. By increasing transparency, it would also in the long term boost callers' confidence, leading to higher usage of services. Moreover, SPs would have greater control over both the retail price of their service and over the termination rate that they receive. The unbundled tariff would thus safeguard revenue certainty and the long term viability of services on 0845 by allowing TCPs/SPs to set their part of the retail price.

Access to socially important services

A7.206 We consider that vulnerable users are more likely to be better off under this option than under deregulation or the *status quo*. As discussed above, the unbundled tariff would increase competitive constraints on the price of 0845 calls. In particular, in the case of socially important services, the portion of the price set by the SP would be explicit (namely the SC). As a result, SPs supplying socially important services risk adverse publicity if they choose to set a relatively high SC. Nonetheless, it is important to recognise that the effect on retail prices depends on the strength of competition.

Impact on regulatory burden

A7.207 In Annex 5 we discuss the changes (e.g. to billing systems and software) that would be required to adopt the unbundled tariff. As explained in the Annex, we consider that the scale of billing systems upgrades faced by OCPs to adopt an unbundled tariff structure do not suggest that we should not pursue this option. Although we recognise that OCPs might face implementation costs, we are of the view that these costs could be minimised by restricting the level of disaggregated information presented in the bills to consumers. Therefore, we consider that the unbundled tariff remedy should not be discarded purely on the grounds of implementation considerations if it could be an effective remedy.

Preliminary views

A7.208 Having considered the likely impact that applying the unbundled tariff to 0845 calls would have on the market, we think that this option potentially delivers a better outcome for callers and SPs than the *status quo*. It would help address the market failures that we have identified, by introducing more price transparency, improving consumers' awareness of prices and increasing competition. By improving the operation of the retail level and providing SPs with greater stability of revenues it would improve service availability and innovation. Depending on the extent to which competition increases, it could also make mobile-only low income users better off. We recognise that this approach may increase the price of 0845 calls for some consumers (specifically those that currently pay an incremental price of zero for these calls). However, we consider that this effect is outweighed by the benefits of the unbundled tariff.

Option 3: Tariff principle: calls to be priced at geographic prices

- A7.209 Currently the NTNP states that BT should not charge more for 0845 calls than its local (geographic) call price. Our current policy position (prior to this current review) is that all calls to 0845 numbers should be treated in the same way as calls to geographic numbers⁶⁹⁷. It is natural to consider whether this should continue to be our policy position and thus whether we should require all OCPs to link 0845 call prices to geographic call prices, for example by requiring them to treat them equivalently to geographic calls or by setting a maximum price equal to the price of geographic calls from that OCP.
- A7.210 Termination rates for 0845 calls are currently higher than those for 03 calls. As explained above, 0845 termination rates currently support some revenue sharing with SPs. The effect of setting maximum retail prices depends on the level of termination rates. To illustrate:
- Consider the case where termination rates do not change. Suppose that linking the price of 0845 calls to geographic call prices reduces the profits that OCPs make on 0845 calls. As a result of the tariff package effect, there is a rebalancing of the retail prices paid by consumers i.e. lower 0845 call prices but increases in the price of other telephony services. The impact of this rebalancing of prices on consumer welfare depends on their preferences for different telephony services.
 - In contrast, suppose that the negative impact on OCPs' profits from the price of 0845 calls being linked to geographic call rates is offset by a fall in termination rates. Since there is no change in the profitability of 0845 calls for OCPs, there may not be a tariff package effect. In other words, the price of other telephony services remains unchanged. However, the reduction in termination rates imposes a cost on SPs, either in terms of reduced revenue share or in terms of higher hosting costs.
 - Between these two extremes, there is a range of intermediate outcomes, in which termination rates fall but not by enough to offset the impact on the profitability of 0845 calls of lower 0845 call prices. Essentially there is a trade off between the tariff package effect (i.e. an increase in the price of other telephony services) and the impact on SPs' revenue from termination.
- A7.211 In the 0870 Dispute Determination we set cost based termination rates with a zero allowance for revenue share with the SP. We explicitly stated that outpayments to SPs should not be recovered through termination charges. This was on the basis that enabling the TCP to recover outpayments to SPs through the termination charge would undermine the policy objective of aligning such charges with geographic calls⁶⁹⁸. This reasoning suggests that, were OCPs required to charge 0845 calls at geographic rates, there is a strong case for 0845 termination charges to be cost based. This would eliminate (or at least significantly reduce) the revenue share that SPs have historically enjoyed on these calls.
- A7.212 In the event that 0845 call prices were linked to the price of geographic calls and in the absence of further regulation, the termination rate would depend on the outcome of commercial negotiations between the OCP and the TCP. The exception would be calls originated on BT's network, for which the termination rate would

⁶⁹⁷ 0845/0870 Dispute Determination, paragraphs 2.2 and 2.39-2.46.

⁶⁹⁸ 0870 Dispute Determination, paragraph 6.59.

(absent further regulatory changes) continue to be determined by the NTS Call Origination Condition. There is thus uncertainty about what termination rates would arise. Moreover, given the wholesale concerns expressed in Annex 3, there is the possibility that some termination rates may have detrimental effects. We explained in Annex 6 that if these concerns did subsequently materialise, then it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate in the circumstances

Impact on transparency and consumer price awareness

A7.213 As explained in Annex 6, linking 0845 calls to geographic rates is likely to improve price transparency. SPs would be able to advertise the price of their services from all OCPs.

A7.214 However, this would result in two number ranges that are linked to geographic prices, namely 03 and 0845. Moreover, there is the risk that some consumers are confused between geographically rated 0845 number ranges and 0844 numbers, to which the unbundled tariff applies.

Impact on prices

A7.215 It is important to consider both the impact on 0845 call prices and on the price of other telephony services.

A7.216 Linking 0845 call prices to geographic rates would help protect callers from high 0845 prices. In particular, competition between OCPs when setting geographic call prices would protect 0845 callers.

A7.217 However, as explained above, some OCPs' current 0845 call prices are higher than their prices for geographic calls. This is particularly likely to be the case for mobile OCPs. For these OCPs a reduction in the price of 0845 calls is likely to reduce OCPs' profits on these calls⁶⁹⁹. Lower 0845 profits are likely to result in higher prices for other telephony services such as geographic calls (the tariff package effect). We have not attempted to quantify this effect⁷⁰⁰.

A7.218 In the 2010 Consumer research we asked consumers whether they would like 0845/0870 calls to be priced at geographic rates, if the consequence was higher prices for other calls⁷⁰¹. 14% of respondents would like prices to be rebalanced in this way, 14% responded "maybe" and 60% would not like prices to be rebalanced. Amongst respondents that only had a mobile phone, the corresponding figures are 17%, 14% and 56% respectively. However, as explained above in the context of

⁶⁹⁹ Even if termination rates for 0845 calls fell to a cost-based level (as for geographic calls), mobile OCPs' profits from 0845 calls are likely to fall. The 2010 Flow of Funds study suggests that average mobile retention on 0845 calls was 13.4ppm. This is far higher than mobile OCPs' retention on 03 calls, even if the proportion of 03 calls within bundles of inclusive minutes were lower (as explained below in our analysis of 0870, the headline estimate of mobile OCPs' retention on 03 calls is likely to understate the actual amounts that would be retained if other number ranges were geographically rated).

⁷⁰⁰ This is due to the uncertainty about termination rates and because the precise size of this effect is not crucial to our evaluation of the most appropriate remedy for 0845 (for the other reasons discussed in this sub-section, our current view is that 0845 prices should not be linked to geographic calls).

⁷⁰¹ 2010 Consumer research, Q40: "If all calls to 0845 and 0870 numbers cost the same as a call to a standard geographic number, there would be a cost to the operator. If your total bill stayed the same, would you like 0845 and 0870 numbers to be priced in this way, even if other calls (or line rental) became more expensive?" See also 2010 Consumer research Q41.

080 calls, there are reasons to treat these survey responses with caution and have placed relatively little weight on them.

Impact on service variety and quality

- A7.219 As explained above, linking 0845 call prices to geographic rates is likely to improve both price transparency and consumers' awareness of prices. This is likely to increase demand for 0845 calls, which improves incentives for SPs to make services available and to innovate.
- A7.220 However, as discussed above, linking 0845 call prices to geographic rates may also reduce the termination rate that SPs receive for these calls. To illustrate, the 2010 Flow of Funds study indicates that 0845 SPs received a net income of £16m in 2009 (an average of just under 0.2ppm). If termination rates for 0845 calls fell to a similar level to 03 calls, then (assuming no change in 0845 call volumes) 0845 SPs might have to make a net payment of £7m to TCPs (a fall of £23m relative to the *status quo*)⁷⁰².
- A7.221 Lower termination rates are (depending on the magnitude of the fall) likely to diminish incentives for service provision. Some SPs may migrate to other ranges. We saw an example of this following our changes to 0870 in 2009. In particular, the 0870 Dispute Determination reduced 0870 termination rates to a cost-based level (as for geographic calls). Over the period from 2007/8 to 2009/10, volumes of 0870 calls made by BT customers declined by more than [X] compared to less than [X] for all other NGCS ranges. Similarly the 2010 Flow of Funds study stated that 0870 call volumes in 2009 were around 35% lower than in 2008⁷⁰³. This supports the view that a significant proportion of services migrated away from 0870 as a result of lower termination rates. Depending on the impact on 0845 termination rates, a similar effect could occur if prices on this number range were linked to those for geographic calls.

Access to socially important services

- A7.222 As explained above, current charges for calls to 0845 numbers using pre-pay mobile phones are higher than for geographic calls. Mobile-only low income callers would be better off if prices for calls to socially important services were to be linked to geographic rates from all networks.

Impact on regulatory burden

- A7.223 Under this option, the regulatory burden would increase for the industry as all networks would have to comply with the designation of this range, compared to only BT at present.

Preliminary views

- A7.224 Linking the retail price of 0845 calls to geographic numbers is likely to improve both price transparency and consumer price awareness. The price of 0845 calls is likely

⁷⁰² Figures calculated by assuming that average payments by 0845 SP to TCPs are the same (on a ppm basis) as the payments that 03 SPs make to TCPs. In 2009, 03 SPs paid £0.2m to TCPs (an average of just under 0.1ppm). Ofcom calculations based on the data underlying the 2010 Flow of Funds study.

⁷⁰³ This estimate excludes minutes where a network provides wholesale origination to a third party virtual operator. 2010 Flow of Funds study, page 32.

to fall from some OCPs, particularly mobile OCPs. However this is likely to be accompanied by higher prices for other telephony services (the tariff package effect).

- A7.225 In addition, termination rates for 0845 calls may fall. Currently 0845 SPs receive a small net payment from TCPs. If termination rates for 0845 calls were set at a cost-based level as for geographic termination rates (which is already the case for 0870 calls) then this situation is likely to reverse, with SPs making a net payment to TCPs. This is likely to encourage many 0845 SPs to migrate elsewhere.

Preliminary views on the best option for the 0845 range

- A7.226 In the past, we have stated a policy preference that *“...all calls to 0845 and 0870 numbers should be treated in the same way as calls to geographic numbers. This means that where an OCP includes geographic calls in bundles, 0845 and 0870 calls should also be included, and where geographic calls are not included in bundles, that 0845 and 0870 calls are priced in the same way as calls to geographic numbers.”*⁷⁰⁴
- A7.227 We have now reconsidered this policy position in the light of the current market conditions and evidence, and our current policy objectives for the 0845 range.
- A7.228 The existing problems are unlikely to be resolved if we do nothing or deregulate. This leaves us with two options, either to impose an unbundled tariff or to require prices to be linked to geographic call rates. The former would result in common regulatory approaches for 0844 and 0845 calls; the latter would result in 0845 becoming more like the 03 number range.
- A7.229 Linking 0845 call prices to geographic prices has some positive features. However it is no longer the only attractive option. It is likely to rebalance retail prices (the tariff package effect). Further, an uncertainty associated with this option is the potential impact on termination rates. Lower termination rates create the potential for costly mass migration by SPs to other ranges⁷⁰⁵. If termination rates are essentially unchanged (so that SPs continue to enjoy the current extent of revenue sharing on this number range) then this is likely to reduce the profitability of 0845 calls for OCPs and exacerbate the tariff package effect.
- A7.230 We also see significant advantages in the clarity of having a single non-geographic number range that offers prices which are linked to geographic rates. As discussed above, we consider that 03 provides a better prospect of restoring consumer confidence in geographically rated calls and achieving improved price awareness than 0845, which in this respect is tainted (from the perspective of many consumers) by its chequered history and would continue to suffer from ongoing consumer confusion given the similarity of the digits to nearby number ranges such as 0844.
- A7.231 The unbundled tariff and alignment with 0844 offers strong prospects of safeguarding service availability and could increase competition between both OCPs and SPs. Inclusion of 0845 is also likely to increase the effectiveness of the

⁷⁰⁴ 0845/0870 Dispute Determination, paragraph 2.2.

⁷⁰⁵ For example, if the consequence of geographic retail pricing of 0845 calls were cost-based termination rates (as for the 0870 number range), many 0845 SPs may prefer to retain the current level of revenue sharing and migrate elsewhere.

unbundled remedy on other number ranges, given the volume of 0845 calls, by increasing the importance of the AC to consumers.

A7.232 As discussed in Annex 5, before we adopt the unbundled tariff there are issues we want to investigate further. However, we think this represents an attractive option for the 0845 range. This option carries some risk of higher prices for those callers that current enjoy inclusive 0845 calls. However, we think that the unbundled tariff and alignment with 0844 is capable of delivering more long term benefits than restoring the link to geographic prices by both putting pressure on prices and safeguarding revenues for SPs.

0870

Introduction

A7.233 0870 was introduced to consolidate a variety of number ranges used initially for 'national' rate NTS calls launched by Oftel in 1996. It enabled revenue sharing from calls to numbers priced at the national geographic rate that applied at the time i.e. around 10ppm in the daytime, from BT and most fixed networks.

A7.234 Over time, geographic call prices fell under BT's retail price controls which were removed in 2006. However, NTS call prices did not initially fall by as much since they were not subject to price controls. For a long time, BT retained a distinction between local and national rate calls at the headline level for consumers who did not take up its calling plans or bundles. 0870 call prices thus remained relatively high and continued to provide a relatively large revenue share.

A7.235 The 0870 range became increasingly unpopular with consumers as more organisations substituted their geographic numbers for 0870 numbers. Consumer groups believed that 0870 was being used to obtain a revenue share from calls to services that offered little perceived added value. Services such as banks, customer service, complaints lines, after sales support and help desks, which consumers needed to call, moved to 0870 numbers. In 2005 we found that 45-55% of 0870 numbers were 'locked in' i.e. the caller could not realistically switch to another SP⁷⁰⁶.

A7.236 Whilst consumers were aware that 0870 calls were more expensive, the lack of clarity of actual prices was compounded by advertisements for services claiming calls were charged at national rate when the prices charged were often far more than an equivalent national geographic call. This led to widespread criticism of 0870 and the emergence of groups such as "saynoto0870"⁷⁰⁷ which identifies and publishes geographic alternative numbers for companies that use 0870.

A7.237 This concern coupled with the high level of disputes between BT and other networks over wholesale charges led Ofcom to open a review of the regime underpinning NTS in 2004. A series of consultations followed covering a wide range of NTS related issues.

A7.238 These led, in the case of 0870, to the 0870 Statement published in April 2009⁷⁰⁸. This set out our new policy position, namely that calls should be charged at geographic rates and included in bundles. However, unlike 03, OCPs who choose

⁷⁰⁶ 2005 NTS Consultation, paragraph 5.74.

⁷⁰⁷ www.saynoto0870.com

⁷⁰⁸ <http://stakeholders.ofcom.org.uk/consultations/0870calls/statement/>

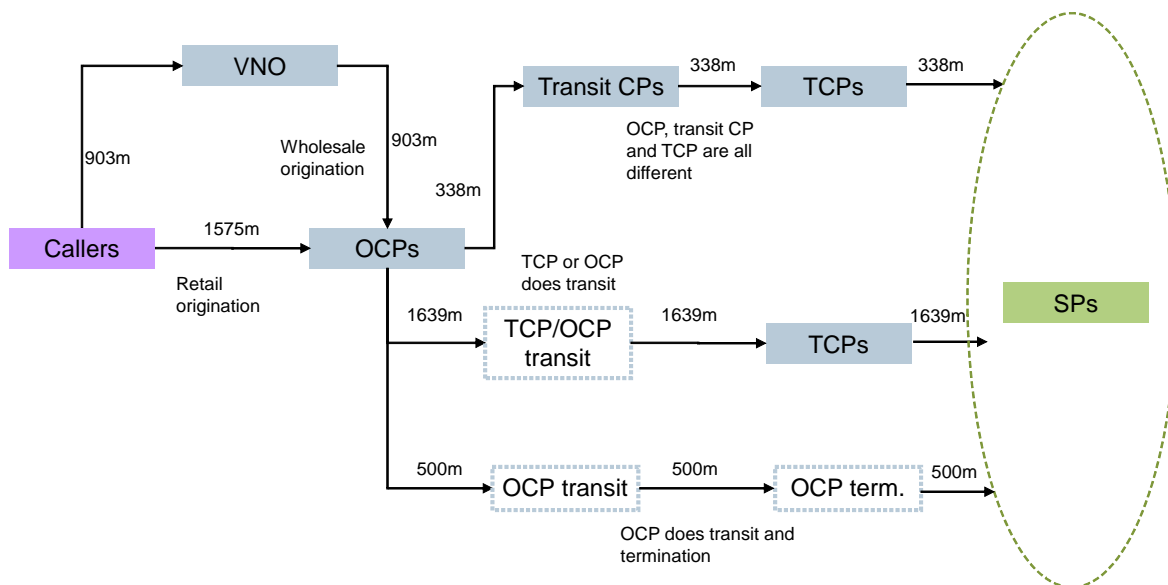
not to charge their geographic prices may do so but must make this clear in all pricing materials and on websites. These regulatory changes took effect from 1 August 2009.

A7.239 Meanwhile in June 2009, we also published the 0870 Dispute Determination. Taken together these decisions were designed to enable OCPs to adopt our revised policy by reducing termination rates to a cost-based level (as for termination of geographic calls).

A7.240 Later in 2009, BT introduced variable termination charges in the form of termination rate charging ladders where the charge paid to BT increased in line with the retail prices charged by each originating network to its customers. These moves were disputed by the mobile OCPs where we decided in the 0845/0870 Dispute Determination that BT's particular charges were not fair and reasonable. That determination has subsequently been appealed to the Competition Appeals Tribunal ('CAT').

A7.241 Despite a decline in popularity in recent years, there were still around 2.5 billion minutes of calls to 0870 numbers in 2009. Of these, around 1.6 billion were retail originated minutes, although in 2008 there had been around 2.3 billion retail originated minutes showing a decline of around 35%. This is likely to be a reflection of the reduction in 0870 termination rates as a result of the 0870 Dispute Determination and subsequent migration of SPs to other ranges, such as 0844 and 0871⁷⁰⁹.

Figure A7.7 Flow of volumes for 0870 calls, 2009



Source: the 2010 flow of funds study

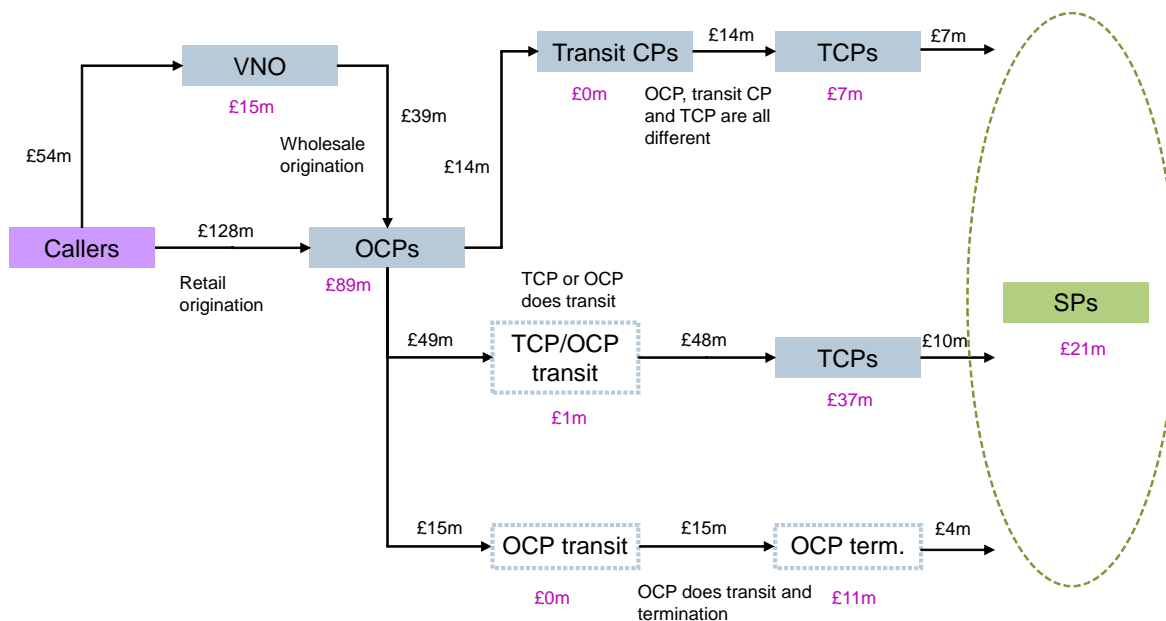
A7.242 Calls to 0870 generated £182 million of revenues in 2009. The pattern of revenue retention for 0870 numbers is very similar to that of 0845 numbers with SPs only retaining £21 million, or 12% of total revenues. This is well below the average over all ranges and is made mostly up by the OCPs, which retain 57% of revenues⁷¹⁰.

⁷⁰⁹ 2010 Flow of Funds study, pages 32-33 and Figure 5.10.

⁷¹⁰ 2010 Flow of Funds study, pages 47-48 and Figure 5.26.

Note that, for the purpose of these calculations, where a call is part of a bundle of inclusive minutes, no revenue is attributed to that call⁷¹¹.

Figure A7.8 Flow of funds for 0870 calls, 2009



Source: the 2010 Flow of funds study

Review of responses to Call for Inputs

A7.243 A number of respondents to the Call for Inputs, particularly TCPs, were unhappy about the recent change to 0870 regulation, which took effect in August 2009, and in some cases called for the regulatory changes to be reversed:

- Alternative Networks commented that recent changes to 0870 have damaged all aspects of this range;
- The Federation of Communications Services (FCS) argued that regulatory action has added confusions to 0870 and resulted in mass migration to other numbers; it further added that Ofcom needs to evaluate the effectiveness of the recent changes and tougher enforcement;
- Flextel argued that Ofcom should reverse the 0870 policy “fiasco” and align all 087 prices; it added that Ofcom should test the effect of the 0870 changes on the MNOs’ pricing after 12 months;
- IPV6 believed that recent 0870 changes have made the range unusable but not necessarily addressed concerns about mobile OCPs’ pricing;
- TalkTalk called for revoking all recent 0870 regulation as it considered it was ineffective and unnecessary;

⁷¹¹ 2010 Flow of Funds study, page 38. As shown in Annex 2, the data underlying the 2010 Flow of Funds study suggests that 20% of fixed 0870 calls and 1% of mobile 0870 calls were made using inclusive minutes.

- TelIXI's view was that NTS issues have been caused by OCP pricing yet Ofcom concentrated on termination leading to mass migration from 0870 with little improvement in consumers' awareness and understanding; and
- One individual respondent also argued for the recent regulatory changes to 0870 to be scrapped;

A7.244 Two individual respondents had concerns about the pricing for calls to 0870:

- One complained that his OCP did not include calls to 0870 in bundles; and
- Another individual complained about the opacity of the system for, among others, calls to 0870 and 0871 making it difficult to distinguish the cost differential.

Review of concerns for the 0870 range

A7.245 Concerns for the 0870 range are broadly similar to those for the 0845 range and we thus discuss them relatively briefly:

- Consumer awareness and transparency: as explained in Annex 2, both price transparency and consumers' awareness of prices is poor. Further, callers are likely to find the distinction between 0870 calls and 0871 calls confusing. Although we do not have any specific survey evidence on this point, we consider it plausible that consumers are particularly alienated from the 0870 number range as a result the way that calls to this number range have been priced over the last few years.
- The level of prices: some OCPs (particularly mobile OCPs) set higher prices for 0870 calls than for geographic calls, although others (such as BT and TalkTalk) do price these calls at geographic rates. As in the case of 0845, poor consumer price awareness is likely to weaken competitive constraints on the price of 0870 calls and exacerbate the vertical and horizontal externalities. Higher margins on 0870 calls may also support reduced prices for other telephony services (the tariff package effect), although this effect is likely to be smaller than for 0845 given the smaller size of the number range.
- Service availability and innovation: poor consumer price awareness combined with alienation has acted as a barrier to service expansion.
- Distributional concerns: the 0870 range has been mainly used by businesses operating call centre operations that used the revenue share to offset their costs. This contrasts with 03 and 0845 which are more widely used by public sector and not-for-profit organisations. There is little evidence that essential or socially desirable services use the 0870 range although this may change over time now given the reduction in 0870 termination rates. As a result this number range may not give rise to particular distributional concerns.

A7.246 In the past, there have been complaints of fraud on the 0870 range. However, now that termination rates are much lower the incentives for fraud have been removed and this is no longer an issue for calls to 0870.

Policy objectives and regulatory options

A7.247 The 0870 range shares many characteristic and problems with 0845, albeit they are different in popularity and number of services offered. Our policy objective for 0870 will therefore be broadly similar to those for the 0845 range, namely:

- Promote consumer awareness and confidence in 0870;
- Ensure greater consumer protection from the level of charges; and
- Promote service availability.

A7.248 We think that the closure of this range is a potential option we need to consider carefully. In particular, migration costs are likely to be lower (since there are likely to be fewer SPs operating on the 0870 number range than on 0845). Further, we suspect that consumer alienation with this range is particularly high. Dissatisfaction with 0870 may be having a negative effect on the perception of other non-geographic number ranges as well.

A7.249 Therefore, in the case of calls to the 0870 range the relevant options to consider are:

- Maintaining the *status quo*;
- Tariff principle requiring tariffs to be unbundled into an AC and SC ('unbundled tariff');
- Tariff principle: calls to be priced at geographic prices; or
- Close the 0870 range.

A7.250 These options are assessed relative to the outcome under deregulation. Retail deregulation would remove the requirement in the NTNP for OCPs to publish call charges where they do not price these calls at geographic rates. While this might slightly increase the incentives for OCPs to raise retail prices and might slightly worsen price transparency,⁷¹² the situation is likely to be similar to the *status quo*⁷¹³.

A7.251 We consider below how each option fares against our assessment criteria.

Assessment of the options

Option 1: The *status quo*

A7.252 Under the *status quo*, we would keep the current NTNP designation for the 0870 range. We consider below how this would impact the market.

⁷¹² For example, 82% of respondents said that they had never looked up pricing information on the cost of a call. This supports our view that the impact of deregulation on transparency is not large. 2009 Consumer research, question 33.

⁷¹³ Note that the NTS Call Origination Condition does not apply to 0870 calls. At the wholesale level, deregulation would thus be the same as the *status quo*.

Impact on transparency and consumer price awareness

A7.253 As discussed in Annex 2, there is evidence that consumers are today confused about the prices for 0870 calls and are not clear about the differences between adjacent ranges, such as 0870 and 0871. Prices vary across networks, making it hard for SPs to inform consumers about the price of calls. Callers often resent the high perceived charges for calls. This leads callers to over-estimate the actual price of calls which, in turn, affects how many calls they make. As explained in Annex 2 and Section 4, these effects lead to consumer detriment. As explained above, it is plausible that consumers are particularly alienated from the 0870 number range as a result of the way that calls to this number range have been priced over the last few years

Impact on prices

A7.254 In introducing the changes to 0870 pricing in 2009, Ofcom's aim was for the major networks to adopt the new policy which would put pressure on others to follow suit. As shown in Annex 2, we recognise that some OCPs (such as BT and TalkTalk) price 0870 calls at geographic rates or lower. However, poor consumer price awareness allows some OCPs to set a higher price for calls to 0870 numbers. This reflects the vertical and horizontal externalities and exacerbates the detriment to consumers. Further, as discussed in Annex 2, higher prices for 0870 calls are likely to support lower prices for other telephony services (the tariff package effect).

Impact on service variety and quality

A7.255 The deterioration of the 0870 brand among callers, uncertainty about the price of calls and the high price of 0870 calls from some OCPs reduce demand. Moreover, the price charged by some OCPs for 0870 calls is unlikely to reflect SPs' preferences for the cost of calling their services (the vertical externality). As a result, SPs' income is reduced which harms service availability and innovation.

Access to socially important services

A7.256 There is currently little evidence that essential or socially desirable services use this range and new services are unlikely to be attracted to this range due to its problems. We have therefore no particular distributional concern under the *status quo*.

Impact on regulatory burden

A7.257 Maintaining the *status quo* would have no impact on the regulatory burden on the industry.

Preliminary views

A7.258 Having reviewed the likely impact of maintaining the *status quo*, we consider this option does not deliver well on our policy objectives. The poor awareness and confidence is likely to continue, and service availability is likely to continue to be adversely affected.

A7.259 We therefore need to consider some intervention to rectify the current problems.

Option 2: Unbundled tariff

A7.260 Under this option, we would require tariffs to be unbundled, allowing OCPs and SPs to set their respective tariffs for the AC and the SC. As explained later in this Section, our current view is that the unbundled tariff is the most appropriate approach for 0871 calls. Adopting the same approach for 0870 would avoid the risk of consumer confusion between the two ranges.

A7.261 Including 0870 calls within the unbundled tariff is likely to improve the operation of that remedy since it means that the unbundled tariff thus applies to a significantly greater number of calls. Since the AC applies to a greater number of calls, its importance to consumers is likely to be higher and thus competitive constraints on the AC are likely to be stronger (see the similar discussion above in the case of 0845 for more details). However this effect is likely to be much weaker in the case of 0870 than 0845, given the smaller size of this number range⁷¹⁴.

A7.262 Below we consider how this option fares against our assessment criteria.

Impact on transparency and consumer price awareness

A7.263 We have discussed earlier how the unbundled tariff could deliver greater transparency than the *status quo* for 0845 and improve consumers' price awareness, and the same reasoning applies here.

A7.264 Alignment with 0871 would also remove the confusion among callers between these two ranges, which is also source of alienation.

Impact on prices

A7.265 The greater transparency under the unbundled tariff is likely to improve competitive constraints on prices. However, there is a risk of price increases for those callers that currently enjoy free 0870 calls or for whom 0870 calls count towards bundles of inclusive minutes.

Impact on service variety and quality

A7.266 Again, similar reasoning to that for 0845 calls applies here. SPs would have control over the final price, and would benefit from greater certainty over their revenues. This would remove the current barriers to service availability and ensure those services that operate on 0870 can continue to do so.

A7.267 However, those SPs that currently operate an 0870 number may prefer for the price of calls to be aligned with geographic rates. In particular, these SPs have chosen to locate their service on a number range on which the termination rate is cost-based as for geographic termination (rather than on a number range offering a higher

⁷¹⁴ In 2009, total fixed voice calls were 135bn minutes and total mobile voice calls were 113bn minutes (source: 2010 Flow of Funds study, pages 2 and 4). Suppose that 03, 080 and 0870 calls should be excluded from the unbundled tariff. This would mean that the unbundled tariff applies to number ranges that accounted for 14,595m minutes of fixed calls and 2,308m minutes of mobile calls in 2009 i.e. this remedy would apply to approximately 11% of fixed calls and 2% of mobile calls. If the unbundled tariff also applied to 0870 calls then these figures would increase slightly. Using 2009 data (which may be an overestimate, given the migration away from that number range that occurred over the course of 2009) including 0870 would mean that the unbundled tariff would apply to 16,685m minutes of fixed calls and 2,695m minutes of mobile calls i.e. 12% of fixed calls and 2% of mobile calls. Source: Ofcom calculations based on the data underlying the 2010 Flow of Funds study.

termination rate that would support a larger revenue share). If these SPs would prefer retail prices to be linked to geographic levels then the unbundled tariff will not deliver this. Insofar as retail prices do not accord with SPs' preferences, this may harm service variety and innovation or may encourage them to migrate elsewhere (e.g. to 03).

Access to socially important services

A7.268 Our distributional concerns centre on the use of essential services by some callers, particularly low income mobile-only households. We do not have significant distributional concerns for the 0870 range. In any case, as discussed above, the unbundled tariff is likely to increase competitive constraints on the price of 0870 calls.

A7.269 It is therefore unlikely that under the proposed unbundled tariff approach we would have distributional concerns.

Impact on regulatory burden

A7.270 As explained in Annex 5, we consider that the scale of billing systems upgrades faced by OCPs to adopt an unbundled tariff structure do not suggest that we should not pursue this option. Although we recognise that they might face implementation costs, we are of the view that these costs could be minimised by restricting the level of disaggregated information presented in the bills to consumers.

Preliminary views

A7.271 Having considered the likely impact that applying the unbundled tariff to 0870 calls would have on the market, we think that this option potentially delivers a better outcome for callers and SPs than the *status quo*. It would help address the market failures that we have identified, by introducing more price transparency, improving consumers' awareness of prices and increasing competition. By improving the operation of the retail level and providing SPs with greater stability of revenues it would improve service availability and innovation. We recognise that this approach may increase the price of 0870 calls for some consumers (specifically those that currently pay an incremental price of zero for these calls). However we consider that this effect is outweighed by the benefits of the unbundled tariff.

Option 3: Tariff principle: calls to be priced at geographic prices

A7.272 Our current policy position (prior to this current review) is that all calls to 0870 numbers should be treated in the same way as calls to geographic numbers⁷¹⁵. It is natural to consider whether this should continue to be our policy position and thus whether we should require all OCPs to link 0845 call prices to geographic call prices. Under this option, we would make 0870 much like 03.

A7.273 Currently 0870 termination rates are cost based (as for geographic calls – see discussion above). This suggests those SPs that remain on the 0870 number range have a preference for calls to them being priced at geographic levels and that those SPs are willing to bear the consequences of that choice (namely the absence of revenue sharing).

A7.274 Below we consider this option, relative to our assessment criteria.

⁷¹⁵ 0845/0870 Dispute Determination, paragraphs 2.2 and 2.39-2.50.

Impact on transparency and consumer price awareness

A7.275 As explained in Annex 6, linking 0870 calls to geographic rates is likely to improve price transparency. SPs would be able to advertise the price of their services from all OCPs.

A7.276 However, this would result in two number ranges that are linked to geographic prices, namely 03 and 0870. Moreover, there is the risk that some consumers are confused between geographically rated 0870 number ranges and 0871 numbers, to which the unbundled tariff applies.

Impact on prices

A7.277 It is important to consider both the impact on 0870 call prices and on the price of other telephony services.

A7.278 Linking 0870 call prices to geographic rates would help protect callers from high 0870 prices. In particular, competition between OCPs when setting geographic call prices would protect 0870 callers.

A7.279 However, as explained above, some OCPs' current 0870 call prices are higher than their prices for geographic calls. This is particularly likely to be the case for mobile OCPs. For these OCPs a reduction in the price of 0870 calls is likely to reduce OCPs' profits on these calls (depending on what happens to call volumes). Lower 0870 profits are likely to result in higher prices for other telephony services such as geographic calls (the tariff package effect).

A7.280 We have attempted to estimate the broad magnitude of the tariff package effect, using the data underlying the 2010 Flow of Funds study. These estimates were calculated as follows:

- We calculated OCPs' average retention on 0870 calls in 2009 (i.e. the retail price minus outpayments to TCPs/SPs and transit providers). From this we deducted an estimate of OCPs' incremental costs of retailing and originating 0870 calls. We assumed that fixed OCPs' incremental costs were 0.4ppm and mobile OCPs' incremental costs were 0.7ppm⁷¹⁶. This gave us an estimate of OCPs' incremental profits on 0870 and 0845 calls in 2009. This forms the counterfactual (or baseline) for our calculations.
- We assumed that requiring OCPs to price 0870 calls at no more than geographic rates reduces their retention. In the case of fixed OCPs their average retention is reduced to approximately 2.6ppm (the estimate of fixed OCPs' average retention on 03 calls from the 2010 Flow of Funds study). In the case of mobile OCPs, we have assumed their average retention falls to 4ppm⁷¹⁷.

⁷¹⁶ In Annex 6 we suggested that mobile OCPs' incremental costs of originating non-geographic calls may be in the region of 0.5-0.7ppm and fixed OCPs' may be in the region of 0.2-0.4ppm. We have used the upper figures for our calculations but below we explain what the impact of using the lower figures would be.

⁷¹⁷ We have not used the estimate of mobile OCPs' retention from 03 calls for the purposes of calculating their retention if 0870 calls were priced at geographic rates. As explained above, the data underlying the 2010 Flow of Funds study suggests that 92% of mobile 03 calls were made using inclusive minutes. Since that study does not attribute any revenue to these calls, this produces a low figure for mobile OCPs' average retention on 03 calls. We consider that this figure is unduly low for

- We have also modelled a number of assumptions about the effect of pricing 0870 calls at geographic rates on call volumes. We have considered two for total 0870 call volumes: no change from the 2009 level and a 10% increase on the 2009 level. In order to carry out our calculations, we have assumed that geographically rating 0870 calls increases the proportion of calls originated from mobiles rises to either 20%, 30% or 40%⁷¹⁸.
- Given these assumptions about 0870 retention and call volumes, plus the incremental cost assumptions set out above, it is possible to calculate the change in OCPs' profits on 0870 calls as a result of requiring these calls to be geographically rated. These figures are set out in Table A7.4 below and provide an indication of the possible size of the tariff package effect.

Table A7.4: Change in OCP profits on 0870 calls as a result of geographic rating

Change in total 0870 call volumes	Proportion of 0870 calls made from mobiles	Change in fixed OCPs' 0870 profits	Change in mobile OCPs' 0870 profits
0%	20%	-£10m	-£22m
	30%	-£16m	-£14m
	40%	-£21m	-£6m
10%	20%	-£6m	-£20m
	30%	-£12m	-£11m
	40%	-£18m	-£2m

Source: Ofcom calculations using data underlying the 2010 Flow of Funds study

A7.281 Table A7.4 suggests that the overall reduction in OCPs' profits on 0870 calls may be in the region of £20m-£32m. The relative impact on fixed and mobile OCPs depends on the extent to which callers switch to making 0870 calls from their mobile rather than their landline⁷¹⁹. These figures provide an indication of the size of the tariff effect. Overall, reflecting the comparatively small size of the 0870 number

the purposes of our 0870 calculation. First, it seems questionable whether such a high proportion of calls would continue to be made using inclusive minutes. For example, the 92% figure suggests that few of these calls would be made by pre-pay mobile customers. Pre-pay accounted for 29% of overall call volumes at the end of 2009 (source: Communications Market Report, 19 August 2010, page 319). Second, for consumers that are close to using up their monthly allowance of inclusive call minutes, the inclusion of 0870 calls may tip them over their monthly limit, resulting in that consumer making chargeable calls. The 2010 Flow of Funds study suggests that mobile OCPs' retention on chargeable (out of bundle) 03 calls is just under 11ppm. We thus consider that a 4ppm figure is a reasonable assumption of the average incremental revenue from 0870 calls for the purposes of this calculation.

⁷¹⁸ In 2009, 16% of 0870 calls were made from mobiles. 2010 Flow of Funds study, Figure 1.5 on page 6.

⁷¹⁹ If we use the lower assumptions for incremental costs from Annex 6 (namely 0.5ppm for mobile origination and 0.2ppm for fixed origination) then the impact of any change in volumes is increased. This is because lower incremental costs means that the incremental profits on 0870 calls are larger. If total 0870 volumes increase then the fall in both fixed and mobile OCPs' profits from geographic rating is smaller. Relative to the figures in Table A7.4, fixed to mobile substitution will tend to worsen the impact on fixed OCPs' profits and lessen the impact on mobile OCPs' profits.

range, the extent of the tariff package effect is likely to be relatively small, compared to fixed and mobile OCPs' total revenues⁷²⁰.

A7.282 In the 2010 consumer research we asked consumers whether they would like 0845/0870 calls to be priced at geographic rates, if the consequence was higher prices for other calls, assuming that the callers total bill remained the same⁷²¹. 14% of respondents would like prices to be rebalanced in this way, 14% responded "maybe" and 60% would not like prices to be rebalanced. Amongst respondents that only had a mobile phone, the corresponding figures are 17%, 14% and 56% respectively. However, as explained above, in the context of 080 and 0845 calls there are reasons to treat these survey responses with caution. We have thus placed relatively little weight on them.

Impact on service variety and quality

A7.283 As explained above, linking 0870 call prices to geographic rates is likely to improve both price transparency and consumers' awareness of prices. This is likely to increase demand for 0870 calls. Currently termination rates for 0870 calls are cost-based as for geographic calls. Accordingly, if 0870 calls were priced at geographic rates, we see no reason why termination rates would change. As a result, given the likely increase in 0870 call volumes, the impact on SPs is likely to be positive, which improves incentives for SPs to make services available and to innovate.

Access to socially important services

A7.284 There is currently little evidence that essential or socially desirable services use this range. This factor is of limited relevance to the assessment of this option.

Impact on regulatory burden

A7.285 Under this option, the regulatory burden would increase for the industry as all OCPs would have to comply with the designation of this range, compared to only BT at present.

Preliminary views

A7.286 Linking the retail price of 0845 calls to the price of calls to geographic numbers is likely to improve both price transparency and consumer price awareness. The price of 0870 calls is likely to decline (particularly from mobile OCPs) while the price of other telephony services is likely to rise slightly. Service availability and innovation are likely to improve.

A7.287 However, the proximity to the 0871 range (where our current view is that the unbundled tariff should apply) is likely to be a source of ongoing confusion for consumers. Also, having more than one non-geographic number range with prices linked to geographic calls may also be a source of confusion and reduce the clarity of the numbering arrangements.

⁷²⁰ Fixed access and call revenues were £8.8bn in 2009. Mobile retail revenues were £14.9bn in 2009. Source: Communications Market Report, 19 August 2010, page 279.

⁷²¹ 2010 Consumer research, Q40: "If all calls to 0845 and 0870 numbers cost the same as a call to a standard geographic number, there would be a cost to the operator. If your total bill stayed the same, would you like 0845 and 0870 numbers to be priced in this way, even if other calls (or line rental) became more expensive?" See also Q41.

Option 4: Closing the number range

- A7.288 Another option is to consider closing down this range. This would mean that SPs operating on this number range would need to migrate elsewhere. Closure would need to happen over a reasonable period of time in order to allow orderly and cost effective migration.
- A7.289 However, closure of the 0870 range could be beneficial for consumer awareness and the transparency of the whole non-geographic regime. This much maligned range would be removed, as would confusion with 0871 numbers. If accompanied by the alignment of 0845 with 0844, this option would also further boost the clarity and transparency of non-geographic prices more generally by leaving 03 as the only range priced at geographic prices.
- A7.290 The downside is the obvious need for SPs to migrate to other ranges and the additional costs that this creates. These costs could be reduced by allowing SPs a transition period over which they would migrate. Ofcom has already made the 037X range available for migration from 087x, allowing providers, where possible, to change only one digit of their current numbers. We consider that the majority of providers would want to migrate to 0370, where calls would be priced at geographic rates. A small number of SPs might migrate to the revenue share ranges such as 0844 or 0871, although given the current cost-based termination rates (and consequential absence of support for revenue share) for 0870 calls we suspect that the majority of SPs that have a strong interest in receiving a share of call revenues have already migrated away from 0870. It is less likely that services would migrate to 09, given the strong association with Premium Rate Services.
- A7.291 In Annex 8, we have considered what the migration costs could be if SPs would have to migrate to different ranges. We have also carried out a preliminary estimation of the cost of migration for the remaining 0870 providers to provide a focal point for a debate on this issue with industry. Our estimates of the cost for SPs ranged from £9.6m to £106m depending on the length of the transition period and how many SPs use 0870 numbers. In addition, the cost to consumers of misdialled calls was estimated to be no more than £24m. According to the above estimations, the one-off costs could range between £34m and £130m. We note that the upper range depends largely on not allowing any transition period. In summary, in Annex 8 we conclude that:
- First, there are considerable uncertainties around our preliminary estimates. They are particularly sensitive to assumptions about how many 0870 numbers each SP uses. We welcome comments by stakeholders on our figures.
 - Second, some of our overall cost estimates are relatively large. In order to determine whether or not it is proportionate to close the 0870 number range we will refine our migration cost estimates as part of our implementation projects.
 - Third, a longer transition period is likely to reduce the cost for SPs, by allowing them to integrate migration with the normal replacement cycle for stationery, advertising material and signage. However even a three year transition period only reduces the estimated costs for SPs by 50-60%. In addition, a longer transition period might not reduce the costs for callers (namely misdialled calls).
- A7.292 On average, OCPs' current retention on 0870 calls is higher than on geographic calls. Given that the majority of SPs operating on 0870 would be likely to migrate to the, geographically rated, 03 range this implies that closure of 0870 is likely to

reduce OCPs' margins. This is likely to result in the tariff package effect in a similar way to geographically rating 0870 calls. This effect, including its potential magnitude, was discussed above.

A7.293 We discuss the issue of closing the 0870 number range further in the section on our preliminary views below.

Preliminary views on the best option for the 0870 range

A7.294 Having set out the various options, we have set out how we consider that doing nothing or deregulating the range would not achieve our policy objectives. We therefore think that intervention is required.

A7.295 There are three attractive options for the 0870 number range:

- The option to align 0870 with 0871 and adopt an unbundled tariff is likely to improve price transparency and increase competitive constraints on calls to 0870 numbers. This should in turn boost confidence in the range and its usage, which ultimately encourages service provision.
- The option of restoring the historic link of 0870 with geographic prices would also provide more certainty over prices, which should boost confidence in the range and usage. However confusion with the 0871 range is also likely to continue, as the two would co-exist with different pricing arrangements.
- Closing this number range has the advantage of simplifying the system of non-geographic numbering more generally. In combination with the remedies that we are consulting for the other number ranges, this would mean that 03 is the only range priced a geographic prices while 08 calls are either free (for 080) or charged based on the unbundled tariff (other 08 calls). However it potentially results in significant migration costs.

A7.296 We would welcome consultation respondents' views on which of these three options is the most attractive.

Group 3: Revenue sharing ranges

0844 (0844/3)

Introduction

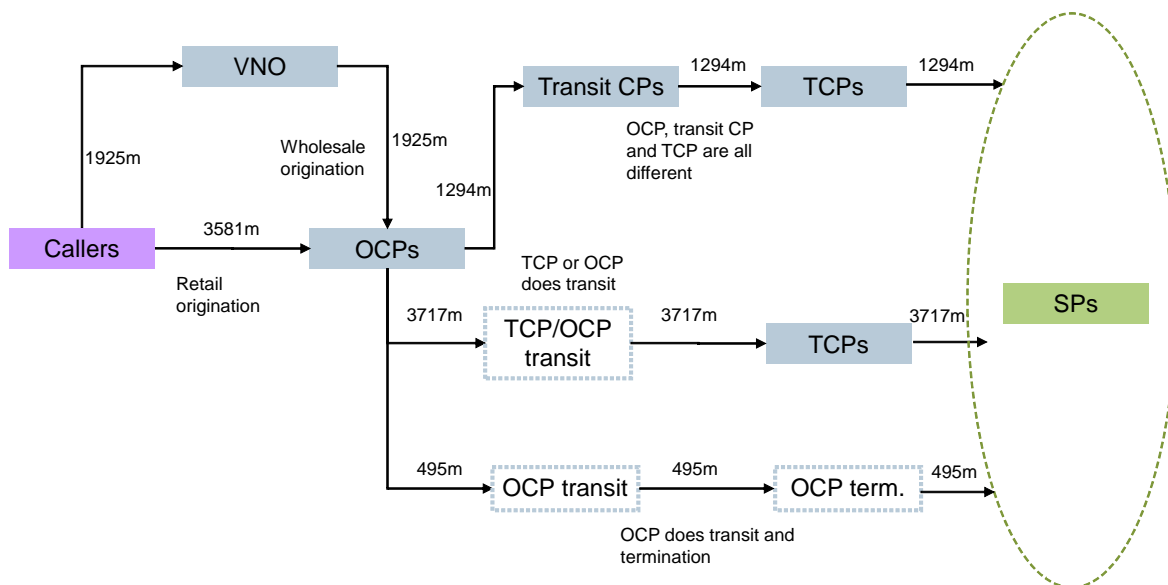
A7.297 The discussion of Group 3 ranges below looks at the potential options for intervention for those ranges where revenue from termination is available to be shared between the TCP and the SP. These are: 0844/3⁷²² ('the 0844 range'), 0871/2/3⁷²³ ('the 0871 range') and 09.

⁷²² 0843 numbers were first allocated on the 8th November 2007 to host 0844 services that could not find a suitable free 0844 number for allocation.

⁷²³ 0872 numbers were first allocated on the 3rd May 2007 to 0871 services that could not find a suitable free 0871 number for allocation. We have also made the 0873 range available for such services, but have not yet allocated any number as of 19 November 2010.

- A7.298 The 0844 range was opened for allocation in January 2000⁷²⁴. At that time, Oftel wanted to enable more price differentiation between services, especially for internet services, from the 0845 local call rate and 0870 national call rate already available. It also reserved some sub ranges within 0844 for internet services. The overall goal of the policy was to foster competition through price differentiation, especially for internet services.
- A7.299 These original policy objectives have been superseded by market developments. The growth of broadband has relegated dial up internet access to a niche. Meanwhile, new services have come to this range and have contributed to its growth, including those migrated from the 0870 range following its inclusion within the scope of PRS regulation in September 2009.
- A7.300 Today, this range appears to be particularly attractive to organisations that want some revenue share but are attracted by the low ppm callers pay (compared to Premium Rate Services) and can support large calls volumes. The range is used to provide access to a variety of services such as pre and post sales enquiry lines, customer support lines, and information lines. These services are provided by both private companies and public sector bodies.
- A7.301 Call volumes have been declining steadily in recent years. According to BT's own traffic data, minutes of calls in 2010 were almost [X] those in 2007. However, this range remains one of the most called non-geographic ranges. According to the 2010 Flow of Funds study⁷²⁵, consumers generated around 5.5 billion minutes of calls to these numbers in 2009 which accounted for around 18% of the total calls to non-geographic numbers, making it the third most called range of non-geographic numbers after 080 and 0845.

Figure A7.9 flow of volumes for 0844 calls, 2009



Source: the 2010 Flow of Funds study

- A7.302 Spending on these calls was £330 million which accounted for around 18% of the total spending for calls to non-geographic numbers, making it the second highest

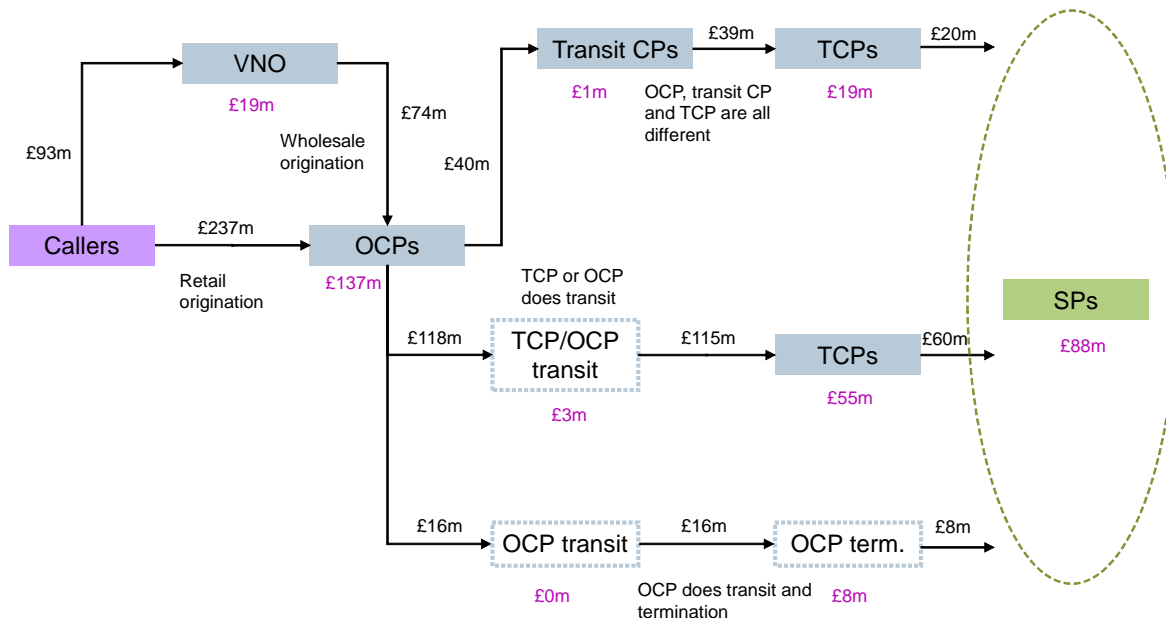
⁷²⁴ Oftel's Statement on the Relationship between Interconnection Charges and Retail Prices for Number Translation Services, December 1999, paragraph S3. Available at:

<http://www.ofcom.org.uk/static/archive/oftel/publications/1999/consumer/nts1299.htm>

⁷²⁵ 2010 Flow of Funds study, page 31.

grossing range after 0845. The average revenue from these calls was 6.0 ppm. 28.8% of all revenues went to SPs, which grossed on average 1.6ppm. Of the remaining revenues 42.7% went to originating networks (on average 2.3 ppm) and 18.2% to terminating networks (on average 1ppm)⁷²⁶.

Figure A7.10 Flow of funds for 0844 calls, 2009



Source: the 2010 Flow of Funds study

A7.303 In the rest of the 0844 sub Section, we first review the responses to the Call for Inputs specific to the 0844 range. We then set out our concerns, review the policy objectives and set out the relevant options, then assess their ability to meet our objectives using our assessment criteria as set out in Annex 1. We then complete our assessment of options for the 0844 range by setting out our preliminary views.

Review of responses to the Call for Inputs

A7.304 The following specific comments were made on the 0844 range:

- Alternative Networks considered that poor planning of the issuing of numbers meant that too many ranges have had to be opened adding to consumer confusion citing as an example the 0843 and 0844 ranges;
- Viavox, a TCP that operates 0844 numbers, made a number of points:
 - It was concerned about consumer price confusion and high MNO charges; it felt that as NTS calls are not price sensitive they enable exploitative pricing; it considered that Ofcom should impose standard pricing and consider the French system of colour banding;
 - It argued that OCPs should be able to retain a 'cost-plus' fee set at less than 1ppm; Alternatively, it argued for TCP payments to reflect retail prices charged to reduce incentive to overcharge; and
 - It commented that overseas access remains problematic;

⁷²⁶ 2010 Flow of Funds study, page 45 and Figure 5.24 on page 46.

- Two individual respondents were concerned with the opacity of the system which does not allow distinguishing charges between 0844/3 and 0845.

Review of concerns

A7.305 Our concerns for the 0844 range are linked to the way the current policy frameworks works for consumers and SPs. Most of these concerns are common across all ranges, and have been analysed in Annex 2 and 3. Having regard to the analysis of the market carried out in those annexes, and the responses to the Call for Inputs, we have identified the following specific concerns for the 0844 range:

- i) Poor consumer awareness and transparency: callers are confused about the 0844 range, as also evidenced by some responses to the Call for Inputs and the extract of complaints to the OAT set out in Annex 15.

Some callers are confused between 0844 and 0845 services and charges, others do not know what the 0844 range is for and how calls to 0844 are charged.

Some expect calls to 0844 to be treated the same as geographically rated calls, such as calls to 0845 (including being able to use their bundled minutes); the opening of the additional 0843 number blocks has increased the scope for confusion. This leads to poor confidence in the cost of calls; as evidenced by the 2010 Consumer research, only 27% of respondents were confident of the cost of an 0844/0871 call from a landline, with 21% being confident of the cost of a call from mobiles⁷²⁷. This poor awareness act as deterrent for consumers, leading to much reduced traffic, as noted earlier in the introduction to the 0844 range;

- ii) The level of charges: BT charges up to 5ppm for calls to 0844, in line with the NTNP designation; some of the other major fixed networks have similar prices, but not all of them; some charges from fixed networks can be up to 30ppm⁷²⁸. According to the data underlying the 2010 Flow of Funds study, only 1% of landline calls to 0844 are in bundles.

Charges from mobile can be up to 50ppm, with only 3% of all mobile calls to 0844 being in bundles. Unlike falling prices for geographic calls and calls to mobiles, prices for calls to 0844 have remained the same for some customers or have increased for others. The current level of charges, especially from mobile, deters consumers from calling these numbers. It therefore has resulted in a very low percentage of calls being made from mobiles (around 11%, the lowest percentage after 080);

- iii) Service quality variety and innovation: revenue share on the 0844 range, albeit smaller than on other ranges, is relatively certain, unlike the 0845 range; SPs have therefore not experienced so far the same uncertain conditions that are facing, for example, providers on 0845. However, the callers' poor awareness and understanding of the level of charges is driving traffic down, limiting service expansion and innovation by SPs on the 0844 range; and
- iv) Access to socially important services: unlike the 0845 or 03 ranges, there is currently little evidence that public bodies are choosing this range for hosting essential services. There have been no comments in this sense from

⁷²⁷ 2010 Consumer research, questions 35-36.

⁷²⁸ See Annex 2.

respondents to the Call for Inputs, unlike for other ranges; we have therefore not identified this specific concern for calls to 0844 at this stage.

A7.306 One issue we have also considered to identify potential options is the relevance and incidence of frauds on 0844. Unlike other revenue sharing ranges, there is currently no PRS regulation for services on 0844. We have at present no evidence of significant fraudulent service provision occurring on these calls.

A7.307 This might be explained in part by the low revenue per minute generated relative to other ranges, which makes it relatively less attractive for fraudsters than other ranges. We are also mindful of the impact that the extension of PRS rules has had on SPs on the 0871 range, where it has triggered migration to other services.

A7.308 Given the current traffic is already declining, and the lack of evidence of significant detriment occurring, or likely to occur, we consider that it would be disproportionate to extend PRS regulation to 0844 SPs at this stage. We think that the options considered below, and the low ppm per minute available to SPs on 0844, should in the future continue to provide a reasonable safeguard against frauds.

Policy objectives and regulatory options

A7.309 Having regard to the concerns we have for the 0844 range, and the overall policy objectives for this review, we think that we should focus on the following policy objectives:

- Promote consumer awareness of and confidence in 0844 calls' prices;
- Promote a price structure more reflective of callers' preferences; and
- Promote service quality, variety and innovation.

A7.310 The following rules currently apply:

- i) General transparency rules for all OCPs through GCs; and
- ii) Price guidance of up to 5 ppm/ 5 ppc from BT's phones.

A7.311 BT is also subject to the NTS Call Origination Condition and Retail Uplift regulation, which limit the amount it can keep when originating calls to the 0844 range.

A7.312 Having regard to these policy objectives, and the discussion of the broad options set out in Annexes 4, 5 and 6, we do not consider that deregulating and maintaining the *status quo* would deliver sufficiently on our objectives. In particular, for revenue sharing ranges it is very important that the vertical externality problem is addressed if overall confidence in non-geographic ranges is to be restored and future service availability supported. In addition given the "proximity" of 0844 to other number ranges such as 0845 that currently have very different intended purposes, is likely to make the horizontal externality an important consideration – i.e. a bad reputation for 0844 can easily spillover into 0845 (and vice versa) and potentially into all 08 number ranges. Having considered the evidence available, we have in the previous Annexes concluded that this is unlikely to be corrected if we maintain the *status quo* or deregulate.

A7.313 Instead, we think that two good candidates for intervention are the options discussed at Annexes 5 and 6, namely:

- i) Unbundled tariff; and/or
- ii) Maximum price.

A7.314 Both in our view have the potential to address the problems identified. Clearer and simpler pricing would address the consumer price awareness concerns and alleviate (although perhaps not remove) the horizontal externalities. In terms of vertical externalities, the unbundled tariff gives each party control over its part of the tariff, and the maximum price takes the decision about the (maximum) retail prices away from the parties (and gives it to the regulator).

Assessment of the options

Option 1: Unbundled tariff

A7.315 Under this option, we would require prices to be unbundled into an AC and a SC. OCPs would set the AC, while the SPs/TCPs would set the SC. OCPs would bill the callers and pass the SCs on.

A7.316 We have discussed at length the potential benefits and costs of the unbundled option in Annex 5. The arguments discussed there are very much relevant to this range. We do not therefore discuss those arguments again in full, but only provide a short overview of the key proposals, where relevant highlighting the specific impact for calls to the 0844 range.

A7.317 In particular, the unbundled tariff would have in our view the following impact on the 0844 range:

- i) Impact on transparency and consumer price awareness: the adoption of the unbundled tariff would in our view improve price awareness compared to maintaining the *status quo* or deregulating; this would have a number of positive consequences on the usage of this range and service provision, as discussed in Annex 5;
- ii) Impact on prices: the unbundled tariff would also in our view promote a more efficient price structure by increasing price transparency and awareness, whereby consumers can make more informed decisions about their pattern of consumption; it would also enable, where feasible, more competition on both components of the tariff (i.e. the AC and the SC); at the same time, it gives SPs control over their part of the tariff, addressing, at least to a large extent, the vertical externality problem; the SP would still not be able to control the AC, but the increased transparency and potential for competition between OCPs on the AC would limit the potential for the AC to be set independently of callers and SPs. It would also alleviate the potential negative horizontal externality which is likely to flow to neighbouring number ranges and possibly the whole 08 range. As discussed in Annex 5 there could be a tariff package effect from these price reductions leading to increases in the prices of other services. However it is important to recognise that the magnitude of that effect is being shaped by competition and is thus likely to result in a pattern of retail prices that better reflects consumers' underlying preferences;
- iii) Impact on service quality, variety and innovation: increased transparency and awareness is likely to stimulate demand, which, in turn, is likely to promote service availability and innovation; the unbundled tariff would also allow OCPs to

cater for the variety of callers preferences for calls to non-geographic numbers, and allow SP to invest and innovate;

- iv) Access to socially important services: as discussed above, we have not identified this as a specific concerns for calls to the 0844 range; it is however worth noting that, based on our evaluation of the potential impact of the unbundled tariff on low income mobile only vulnerable callers, the unbundled tariff, through improved transparency, is likely to minimise the risk of future distributional concerns emerging on this range; and
- v) Regulatory burden: as discussed in Annex 5, the unbundled tariff is likely to give rise to implementation costs, particularly for OCPs; we however consider that we could identify a path to implementation, including initially providing little or no disaggregated information in bills, that could minimise the negative impact of such costs on OCPs.

Preliminary views

A7.318 In summary, we consider that requiring tariffs to be unbundled could deliver a good outcome for consumers and providers.

A7.319 In addition, we have discussed earlier how aligning the 0844 range with the 0845 range would provide greater clarity and address one of the key points of confusion for users of non-geographic numbers, namely their limited understanding of the difference between the 0844 and the 0845 ranges. The implication for the 0844 range is that if we adopt the same unbundled approach to 0844 and align the two ranges there could potentially be significant benefits to callers in terms of transparency and simplicity of the regime.

Option 2: Maximum price

A7.320 Under this option, we would impose a maximum price for calls to the 0844 range. This would apply to calls from all networks.

A7.321 We have discussed in Annex 6 how the maximum price would work and its characteristics. We have also assessed against our assessment criteria and concluded that, in principle, imposing a maximum price offers a good approach to provide clarity over the price structure to callers, as well as providing a safeguard against frauds. We have also discussed how it suffers from some potential problems. As for the unbundled tariff discussed above, we do not therefore provide a full length discussion here, but only an overview of the key proposals on the impact that the maximum price would have, where appropriate reflecting any specific issue for calls to the 0844 range.

A7.322 In summary, we think that the maximum price approach would have the following impact on calls to the 0844 range:

- i) Impact on consumer price awareness: a maximum price is most likely to improve price awareness over the *status quo* or a market with no *ex-ante* regulation in that callers will only have to remember one price for the whole range (i.e. the maximum price) instead of the variety of today's prices to make their calling decisions;
- ii) Impact on prices: 0844 callers could be better off, provided the maximum price is set to a level which provides consumer protection and improves awareness of

prices. However, there is also a possibility that a maximum price, by capping OCPs' retail prices, could give rise to the tariff package effect, with callers ending up paying more for other services;

- iii) Impact on service variety and quality: SPs are likely to benefit from an increase in caller's awareness and confidence, which is likely to result from the imposition of a maximum price; however, depending on the level at which the maximum price is set, this approach could restrict revenues and inhibit price competition between SPs, assuming this would be feasible; and
- iv) Impact on regulatory burden: our current view is that there are potentially few significant systems' costs to implement the maximum price approach.

Preliminary views

- A7.323 This option does in principle provide a strong level of protection for consumers. However, it carries also some risks, as discussed above.
- A7.324 In addition to those risks, there is also the risk that the maximum price acts as a "focal point", by assisting OCPs in coordinating their pricing of non-geographic calls. Such prices can act as a signal to suppliers, encouraging them all to price very close to the level of the maximum price. Furthermore, given the difficulties in advertising prices below the maximum there would be disincentives for OCPs to reduce their prices. Given that callers are likely to have poor awareness of any prices that are set below the maximum, this seems to be a material risk.
- A7.325 There is also the risk that OCPs could react by refusing to connect calls to a particular number/service provider if they feel that their costs of origination, including an appropriate return, are not covered. A further general concern relates to the fact that this option would not address any concerns that may arise from wholesale outcomes that could not be in the interest of consumers (see Annex 3). As explained in Annex 6, if we were to set maximum prices and these concerns did subsequently materialise, then it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate in the circumstances.

Preliminary views on the best option for the 0844 range

- A7.326 We have discussed how we think that the unbundled tariff and the maximum price could under certain circumstances deliver a good outcome.
- A7.327 However, for the 0844 range we think that there are material risks in relation to unintended consequences for prices of other services and service availability associated with the maximum price. It would also be a more interventionist approach than the unbundled tariff, in that we would be setting retail prices for these calls and we have in general a preference for the least intrusive approach to regulation.
- A7.328 In addition, we have discussed earlier how there would be benefit for callers to be derived from aligning the 0844 and 0845 ranges, which would require charges to both these ranges to be unbundled.
- A7.329 We therefore have a preference for the unbundled tariff approach for the 0844 range.

0871 (0871/2/3)

Introduction

A7.330 0871, 0872, and 0873⁷²⁹ numbers ('the 0871 range') are used to provide a variety of services and also to provide micro-payment mechanisms for some of those services. Revenue from termination is typically shared between the TCPs and the SPs.

A7.331 The following rules currently apply:

- i) General transparency rules for all OCPs through GCs;
- ii) Price guidance of up to 10 ppm/ 10 ppc from BT's phones; and
- iii) PhonepayPlus regulation (previously specific to 09 only) applies to calls where the price to the end user is above 5 ppm.

A7.332 BT is also subject to the NTS Call Origination Condition and Retail Uplift regulation, which limit the amount it can keep when originating calls to the 0871 range.

A7.333 According to the 2010 Flow of Funds study⁷³⁰, consumers generated around 1.6 billion minutes of calls to these numbers in 2009 which accounted for around 5% of the total calls to non-geographic numbers, making it the fifth most called range of non-geographic numbers.

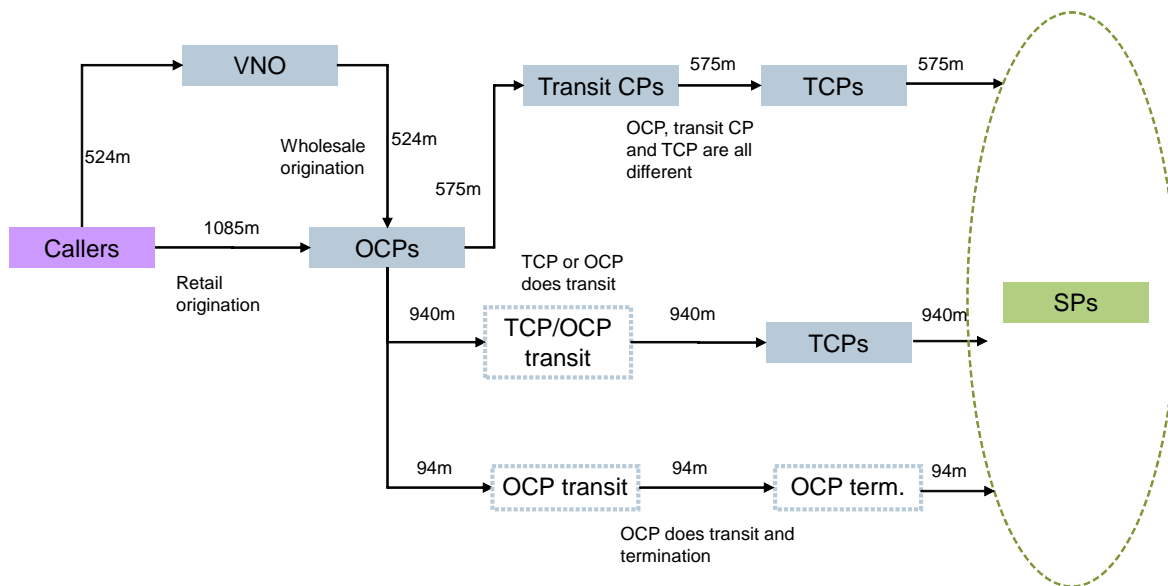
A7.334 Volumes have been growing in the recent past, also to accommodate migration from the 0870 range following its inclusion within the scope of PRS regulation in September 2009. Calls minutes in 2008 were 891 million, compared with 984 million in 2009 (a 10.4% increase), according to the 2010 Flow of Funds study⁷³¹.

⁷²⁹ The 0873 range is available for allocation for 0871 providers but we have not as yet allocated any number blocks in this range.

⁷³⁰ 2010 Flow of Funds study, Figure 5.11 on page 34.

⁷³¹ 2010 Flow of Funds study, page 33.

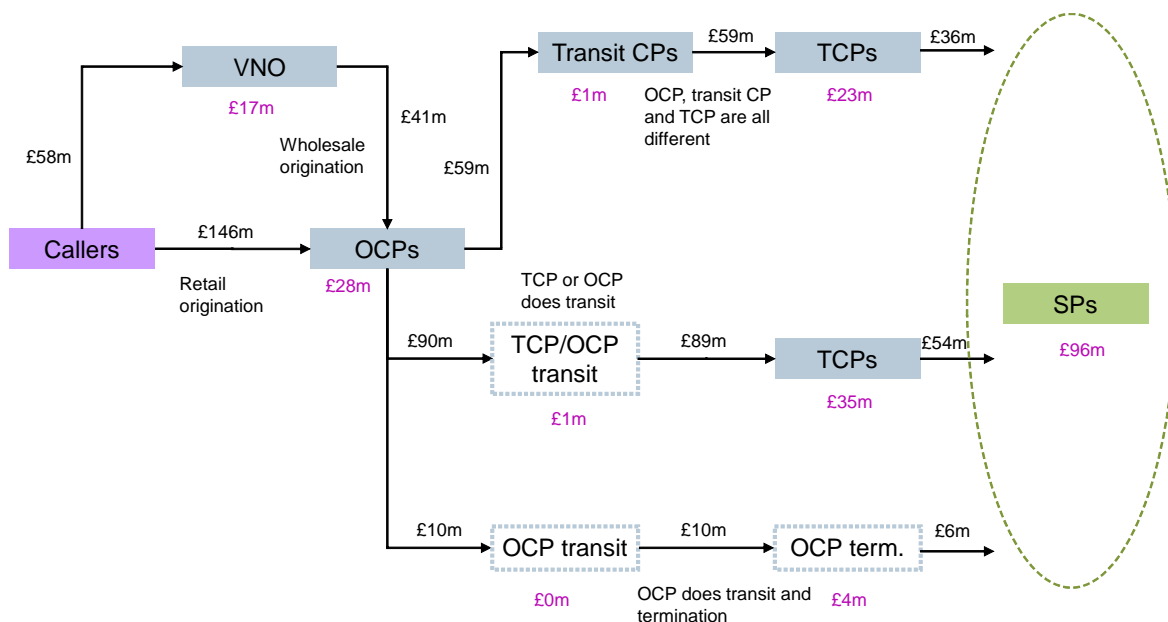
Figure A7.11 Flow of volumes for 0871/2 calls, 2009



Source: the 2010 Flow of funds study

A7.335 According to the aforementioned study, spending on these calls was £204 million in 2009 which accounted for around 11% of the total spending for calls to non-geographic numbers. The average revenue from originated calls was 12.7 ppm. 47% of all revenues went to SPs (£96m), which grossed on average 6 ppm. 22% of revenues went to originating networks (on average 1.2 ppm).

Figure A7.12 Flow of funds for 0871/2 calls, 2009



Source: the 2010 Flow of Funds study

Review of responses to the Call for Inputs

A7.336 Respondents to the Call for Inputs commenting on the 0871 range, especially TCPs and SPs, were unanimous in demanding a review of the recent changes to the regulatory framework:

- AIME asked for PRS regulation on 0871 to be revisited;

- Alternative Networks considered that the recent changes to 0870 and 0871 regulation have damaged all aspects of these ranges;
- The Federation of Communication Services (FCS) considered that regulatory action has added to 0870/71 confusion and resulted in mass migration to other numbers; it asked Ofcom to evaluate the effectiveness of the recent changes and tougher enforcement;
- Flextel asked Ofcom to reverse its 0870 policy and 0871 PRS controls and align all 087 prices; and
- The Talk Talk Group also asked Ofcom to revoke all recent 0870/71 regulation as it was ineffective and unnecessary.

Review of concerns

A7.337 Concerns for the 0871 range are broadly similar to the other number ranges, and in particular to those for the 0844 range. Both were introduced at the same time to provide opportunities for more price differentiation for the old 'local' and 'national' rate ranges, 0845 and 0870. However, both have had less success than 0845 and 0870 in attracting services and usage, partly because callers are confused between these couple of adjacent ranges with different prices and services and do not recognise the newer 0844 and 0871 numbers as readily.

A7.338 However, the way the market currently works has also been shaped by the recent changes to the regulatory framework.

A7.339 Specific concerns for this range are:

- i) Consumer price awareness and transparency: callers have a poor awareness of call prices and services for the 0871 range; 63% of respondents to the 2009 Consumer research claimed they did not know the cost of a call from a landline, with 60% not knowing the cost from mobiles⁷³²; on average those who said they knew the prices over-estimated the actual price: 41ppm vs. actual prices of up to 10ppm for calls from landlines, and 52ppm vs. actual prices of up to 40ppm⁷³³; we also suspect that callers struggle to distinguish between 0870 and 0871; this is notwithstanding the recent extension of PRS rules to calls to the 0871 range;
- ii) Prices: BT charges up to 10ppm for calls to the 0871 range, in line with the NTNP designation; other major fixed networks have similar prices, which can be up to 12ppm⁷³⁴; according to the 2010 Flow of Funds study, only 1% of landline calls to 0871 are in bundles; charges from mobile can be up to 50ppm; unlike rates for geographic calls and calls to mobiles, prices for calls to 0871 have remained the same over time for some customers or have increased for others; the current level of charges, especially from mobile, acts as a barrier to service expansion; it also distorts callers preferences and results in a very low percentage of calls being made from mobiles (around 20%);
- iii) Service quality variety and innovation: SPs and TCPs responding to our Call for Inputs have said that the PRS rules introduced in September 2009 have imposed

⁷³² Proportion of respondents stating "don't know" when asked about the price of calls. 2009 Consumer research, questions 43 and 44.

⁷³³ See Annex 2

⁷³⁴ See Annex 2

a cost of compliance on the industry that might deter new services or force current services to abandon this range; on the other hand, we have evidence that since the introduction of PRS rules, usage has increased, and the number of complaints to the OAT about calls to 0871 have decreased; both these effects are likely to support increased service availability, and counter-balance at least some of the negative impact of the extension of the PRS rules; and

- iv) Access to socially important services: our view of the potential impact of the current regime on the ability of low income mobile only callers to access socially important services is similar to that expressed in relation to the 0844 range; there is currently no significant evidence that public bodies are using 0871 numbers to host essentials services; the lack of comments from respondents on this issue seem to support this view; we have therefore not identified this as a specific concern for this range at this stage.

A7.340 In the past, we had significant concern in relation to fraud on this range, which led to the decision to extend PRS rules to calls to the 0871 range. We have some evidence that the callers' experience has improved. We have seen a steady decrease in the number of complaints for calls to 0871 since the introduction of PRS rules in September 2009, from 83 in Q2 2009 to 21 in Q1 2010. Usage has also increased, as discussed in the introduction to this range, with traffic going up by 10.4% by the beginning of 2010.

A7.341 The PRS regulator, PhonepayPlus ('PP+') in its 2009/10 Annual Report⁷³⁵, noted the following on the recent introduction of PRS rules to the 0871 range:

- *"Almost a year after we took over regulation of 0871/2/3 numbers, this sector of the market is broadly compliant and causing few problems for its customers.";*
and
- *"In the first eight months of PhonepayPlus' regulation of the 0871/2/3 number range, the market has only attracted a small number of complaints."*

A7.342 Based on the above, we have at present no residual concern in relation to fraud, and we are confident that PP+ rules will further reduce any likelihood of frauds occurring on this range in the future.

Policy objectives and regulatory options

A7.343 Having regard to our discussion of the broad options set out in Annex 4 to 6, our overall policy objectives for this review, and the concerns discussed above with their supporting evidence, we now consider the options relevant to the 0871 number range.

A7.344 There are strong similarities between the 0844 range and the 0871 range in the way the market works for consumers and providers. This is reflected in broadly similar policy objectives for the 0871 range as follows:

- Promote consumer awareness of and confidence in 0871 calls' prices;
- Promote a price structure more reflective of caller's preferences; and
- Promote service quality, variety and innovation.

⁷³⁵ http://www.phonepayplus.org.uk/upload/PPP_AR_2010.pdf

- A7.345 The arguments set out in the assessment of the different approaches conducted for 0843/4 also apply to the 0871 range. In particular, we do not consider that maintaining the *status quo* or deregulating would deliver sufficiently on our objectives.
- A7.346 Instead, we think that the two broad options discussed in Annex 5 and Annex 6 provide good candidates for intervention, namely:
- i) Option 1: Unbundled tariff; and/or
 - ii) Option 2: Maximum price.
- A7.347 In addition, we need to consider whether reversing the PRS rules introduced in September 2009 would also be an appropriate (complementary) option for this range (Option 3).
- A7.348 With respect to the unbundled tariff and maximum price options, we have discussed at length the potential benefits and costs of these two options in the previous annexes. In the following paragraph, we do not therefore set out the relevant arguments in full again, but only provide a short overview of the key proposals, where relevant highlighting the specific impact for calls to the 0871 range.

Assessment of the options

Option 1: Unbundled tariff

- A7.349 Under this option, we would require prices to be unbundled into an AC and a SC. OCPs would set the AC, which could be offered in bundles, while the SPs/TCPs would set the SC. OCPs would bill the callers and pass the SCs on.
- A7.350 Based on the assessment of the unbundled tariff set out in Annex 5, and the evaluation of how this option work for the 0844 range, we consider that requiring tariffs to be unbundled could deliver a good outcome for consumers and SPs also for calls to the 0871 range.
- A7.351 In addition, we have discussed earlier how callers are confused between the 0870 and 0871 ranges. Potentially this effect could go beyond these number ranges and affect the whole of the 08 numbers. Removing this confusion, by adopting this option for 0871 along with either the unbundled tariff for the 0870 range or closing the 0870 range would result in a clearer framework for non-geographic numbers by removing the scope for callers' confusion between these two adjacent ranges and the concerns of negative spillovers on other 08 number ranges.

Option 2: Maximum price

- A7.352 Under this option, we would impose a maximum price for calls to the 0871 range. This would apply to calls from all networks.
- A7.353 We have discussed in Annex 5 how the maximum price would work and its characteristics. We have also assessed against our assessment criteria and concluded that, in principle, imposing a maximum price offers a good approach to provide clarity over the price structure to callers, as well as providing a safeguard against frauds. We have also discussed how it suffers from some potential problems.

- A7.354 We have also discussed above how, for calls to 0844, this option does in principle provide a strong level of protection for consumers. However, it carries also some risks, as discussed above.
- A7.355 In addition to those risks, there is also the risk that the maximum price acts as a “focal point”, by assisting OCPs in coordinating their pricing of non-geographic calls. Such prices can act as a signal to suppliers, encouraging them all to price very close to the level of the maximum and discourages them to reduce their prices. Given that callers are likely to have poor awareness of any prices that are set below the maximum, this seems to be a material risk.
- A7.356 There is also the risk that OCPs could react by refusing to connect calls to a particular number/service provider if they feel that their costs of origination, including an appropriate return, are not covered. A further general concern relates to the fact that this option will not address any concerns that may arise from wholesale outcomes that could not be in the interest of consumers (see Annex 3). As explained in Annex 6, if we were to set maximum prices and these concerns did subsequently materialise, then it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate in the circumstances.

Option 3: Removing PRS rules from calls to 0871

- A7.357 We have considered whether, as some respondents to the Call for Inputs have demanded, removing the recently introduced PRS rules from the 0871 range would be conducive to a better market outcome than any of the previous options⁷³⁶.
- A7.358 We consider that removing PRS would not improve things for consumers for the following reasons:
- i) The extension of PRS rules appear so far to have increased callers’ confidence in this range and also reduced the incidence of frauds, which also acts as a barrier to greater usage by discouraging callers from making the calls. Reversing those changes is therefore a risky strategy if we are to achieve greater confidence and awareness for consumers in this range, ultimately leading to more usage;
 - ii) We had in the past significant concerns in relation to frauds on this range, which led to the recent regulatory changes. If we reverse the changes, the problem with fraud is likely to reappear, with potentially significant detriment for consumers. This likelihood is greater if we adopt measures on other ranges which remove the scope for frauds from those ranges, as there is a risk that fraudulent services would migrate to the (unregulated) 0871 range.
- A7.359 We are therefore of the view that reversing the recent introduction of PRS rules to the 0871 range would not deliver a better outcome for callers. SPs who offer legitimate services would also suffer, as the reappearance of fraud and removal of PRS rules would dent callers’ confidence in this range, and lead to decreasing usage.

⁷³⁶ The assessment of this option centres on a discrete issue, namely the risk of fraud. Accordingly we have not explicitly set out our assessment in terms of the five criteria set out in Annex 1. As explained in that Annex, the potential for unintended consequences such as increased fraud forms part of the regulatory burden assessment criteria.

Preliminary views on the best option for the 0871 range

- A7.360 We consider that the unbundled tariff and the maximum price could deliver a good outcome for consumers.
- A7.361 However, for the 0871 range we think that there are material risks in relation to unintended consequences for prices of other services and service availability associated with the maximum price which would not apply to the same extent to the unbundled tariff.
- A7.362 We therefore have a preference for the unbundled tariff approach for the 0871 range.
- A7.363 In addition, we have discussed earlier how there would be benefit for callers to be derived from aligning the 0871 and 0870 ranges, for which we proposed either to unbundle the tariff and align with 0871 or close the range. In both cases, confusion between 0870 and 0871 would be reduced.

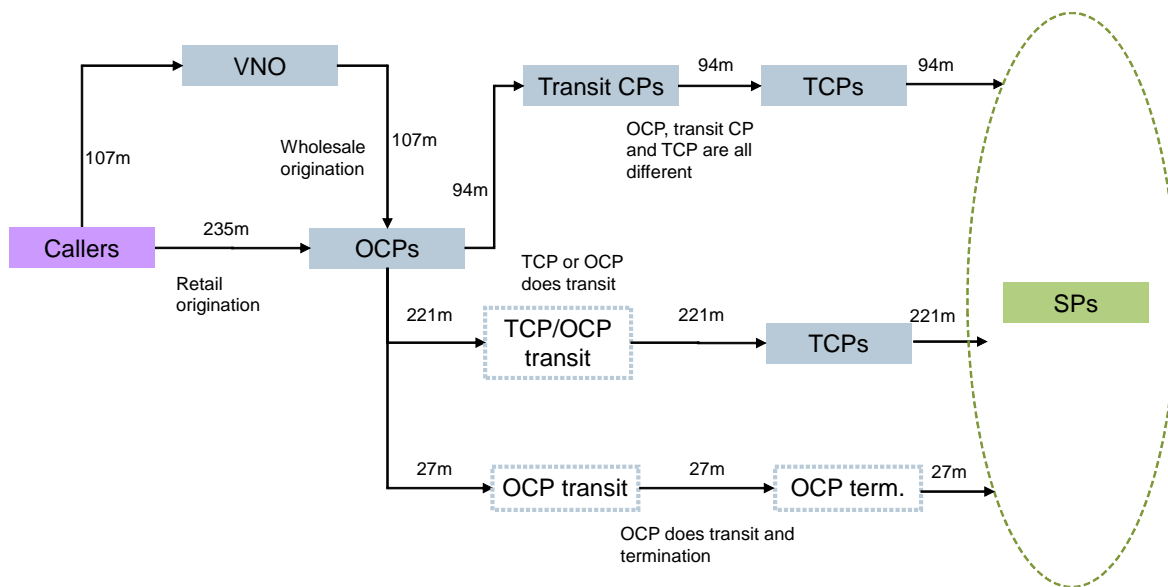
09

Introduction

- A7.364 The 09 range is designed for the provision of Premium Rate Services (PRS) and is used to provide a variety of services and also to provide micro-payment mechanisms for some of those services. Revenue from termination is shared between the TCPs, and the SPs, and content providers (termed 'Information Providers' or IPs).
- A7.365 The 09 PRS revenues have declined significantly in the recent past. PP+ notes that 09 payments made by TCPs to SPs and IPs have fallen from £559m in 2006/07 to £186m in 2009/10.
- A7.366 A key reason for this decline includes the dramatic growth of mobile phone ownership in this period, which, when coupled with the emergence of premium content tailored for mobile handsets has provided competitive challenges to traditional 09 operators. However, through the Call for Inputs stakeholders noted that the regulation of the 09 range is also contributing to this decline in revenue, in particular:
- The regulatory framework does not allow content providers to communicate the specific price that consumers will face when they make an 09 call (with providers instead publishing the BT price). It was submitted that there is poor consumer price awareness of the cost of calling any given 09 number, which leads to a general consumer reluctance to use the number range; and
 - Restrictive maximum prices on the 09 range, which places service providers at a competitive disadvantage when compared to mobile PRS providers where the same pricing restrictions do not apply.
- A7.367 According to the 2010 Flow of Funds study, consumers generated around 340 million minutes of calls to these 09 numbers in 2009 which accounted for around

1.1% of the total calls to non-geographic numbers, making it the sixth most called range of non-geographic numbers⁷³⁷.

Figure A7.13 Flow of volumes for 09 calls, 2009



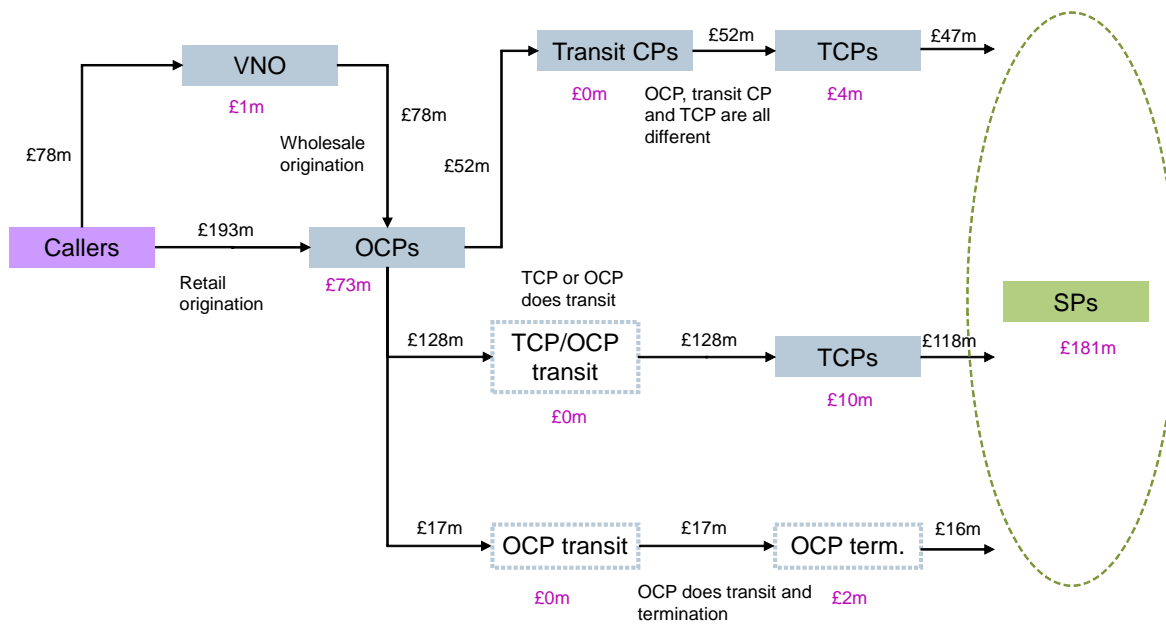
Source: the 2010 Flow of Funds study

A7.368 Spending on these calls was £271 million which accounted for around 15% of the total spending for calls to non geographic numbers. The average revenue was 79 ppm. 67% of all revenues went to SPs, which who grossed on average 52 ppm (which will have been shared further down the value chain with IPs). 27% of revenues went to originating networks (on average 21.7ppm) and 6% to terminating networks (on average 5ppm)⁷³⁸.

⁷³⁷ 2010 Flow of Funds study, page 34.

⁷³⁸ 2010 Flow of Funds study, page 49 and Figure 5.28 on page 50.

Figure A7.14 Flow of funds for 09 calls, 2009



Source: the 2010 Flow of Funds study

Review of concerns

A7.369 The concerns Ofcom has with the 09 number range include:

- i) Consumer price awareness;
- ii) Fraud; and
- iii) Prices.

Consumer Price Awareness

A7.370 The PhonepayPlus Code of Practice states that ‘Service Providers must ensure that all users of premium rate services are fully informed, clearly and straightforwardly, of the cost of using a service prior to incurring any charge.’ However, as noted by PhonepayPlus in their response to the Call for Inputs, this rule has not translated into pricing clarity as there can be dozens of different prices charged by OCPs for the same 09 service. Service Providers have instead taken to advertising the BT price for their service, with a caveat that calls from other networks may vary and that calls from mobiles may cost considerably more. The decline of BT’s retail base has reduced the effectiveness of this message over time. In 2009, BT only retailed approximately [8] of 09 call volumes⁷³⁹.

A7.371 Ofcom’s 2009 PRS Scope Review noted that ‘a lack of price transparency remains the major problem today in the PRS market’.⁷⁴⁰ Research published as part of the Scope Review indicated that 73% of consumers that reported not using PRS in the past 12 months said it was because they were worried they might be over-charged. Research published at the same time by PhonepayPlus showed that accurate pricing information was the single most important factor to consumers for improving trust in the PRS market (highlighted by 40% of consumers).

⁷³⁹ Ofcom calculations based on the data underlying the 2010 Flow of Funds study.

⁷⁴⁰ http://stakeholders.ofcom.org.uk/consultations/prs_scope/.

- A7.372 The 2010 Consumer research undertaken for this project has confirmed the continuing consumer uncertainty with the cost of 09 calls⁷⁴¹. There is a widespread understanding that calling an 09 number from a mobile is generally more expensive⁷⁴². This belief exists for a number of reasons: a legacy of the historic position where almost all calls were more expensive from mobiles, the effect of straplines such as ‘calls from mobiles may cost considerably more’ and consumers’ own experience⁷⁴³. However, awareness that calls from mobiles are generally more expensive has not improved consumer confidence about the cost of 09 calls – from either landlines or mobiles. The research shows that consumer confidence about the cost of calling an 09 number is the lowest of all non-geographic calls, with only 18% of consumers confident they know the cost of calling an 09 number from a landline or a mobile.
- A7.373 In this context, poor consumer price awareness can result in those consumers who make an 09 call facing higher prices than they expected, or consumers not trusting the price for an 09 call and refraining from using such services. Several stakeholders responding to our Call for Inputs claimed that the higher prices charged by mobile providers created a negative perception of all 09 numbers and increased consumer confusion – to the detriment of the entire PRS industry. This could be interpreted as arguing that mobile OCPs’ pricing decisions may have affected negatively perceptions for calls originated by fixed networks (horizontal externality).

Fraud / Scams

- A7.374 The 09 range is regulated by PhonepayPlus, which has the ability to investigate consumer complaints about the promotion and operation of 09 services. 09 numbers have been an obvious target for individuals wanting to scam consumers due to the higher margins that can be made on such calls – for example, by misleading consumers into ringing the number or by deliberately keeping consumers on hold. However, a no-tolerance approach to fraud and scams by PhonepayPlus, including the imposition of substantial fines on the responsible parties and those parties who could have prevented the scams taking place, has resulted in a significant reduction in scams/fraud on this number range. In 2005/06 Due to the application of PRS regulation to these ranges, the problems linked to fraud and scams have decreased. PhonepayPlus received 10,413 complaints from consumers about 09 services, a figure which fell to 1,088 in 2009/10 (with the latter figure also including complaints about 087 services).
- A7.375 While PhonepayPlus has had considerable success in reducing problems associated with the 09 range, we are aware of the submissions of several stakeholders to our Call for Inputs, who claimed that the regulatory burden from complying with PRS regulation was too onerous. The implication was that, if our changes to the Numbering Plan were successful in addressing consumer protection issues with the 09 number range then there could be a case for rolling back PRS regulation. This may indeed be the case, but it is likely to take a considerable time following the implementation of any initiatives from this project before we will be in a position to determine the impact that such changes will have on the behaviour and

⁷⁴¹ See in particular 2010 Consumer research, questions 35 and 36.

⁷⁴² In the 2010 Consumer research we asked “Leaving aside 0800 numbers, do you think the costs of calling numbers starting with 08 or 09 are different when calling from a landline to calling from a mobile?” (question 34). 77% of respondents said that mobile calls were more expensive (7% said fixed and mobile calls cost the same and 14% didn’t know).

⁷⁴³ 2010 Consumer research, page 17.

incentives of those parties who are determined to conduct scams on the 09 number range. As the Scope Review concluded, there is the need for a distinct regulatory regime for PRS – and that the proportionality of this regime is best considered as part of a regular review of the PhonepayPlus Code of Practice.

A7.376 We believe that it is important to retain a number range that works as a micropayment mechanism for higher value added services to be accessed by consumers via their phone. However, the nature of the 09 range as a high-tariff revenue raising range means it is likely to continue to remain an attractive target for scammers. It is important that any changes to the regulatory settings for this number range do not undermine the recent progress made by PhonepayPlus in combating such fraud.

Prices

A7.377 BT can charge its retail customers making calls to an 09 number at least 10ppm and up to and including £1.50pm, or a fixed fee costing over 10p up to and including £1.50 (VAT inclusive). The maximum prices are not charge controls, but were set in the interests of consumer protection by giving an unambiguous message about the maximum prices customers of BT could expect to pay for these calls.

A7.378 As explained in Annex 2, the termination rate that BT pays for 09 calls originating on its network is regulated (via the NTS Call Origination Condition). The termination rate for 09 calls that transit BT's network is typically still set at same the rates as BT originated calls. Most PRS traffic is transited by BT, and therefore most TCPs and content providers get a fixed outpayment regardless of the originator and the price paid by the consumer.

A7.379 Mobile OCPs introduced so called mobile short codes (4, 5 or 6 digit telephone numbers) for their own services and services provided by SPs in 2003 for the delivery of both voice and SMS. They are managed and allocated by the Short Code Management Group which is made up of representatives of all mobile network operators (as compared to 09 services which are allocated by Ofcom). Drop charges for mobile short codes are currently offered from 20p up to £10 and are also regulated by PhonepayPlus as premium rate.

A7.380 It has been submitted to Ofcom that not only is the £1.50 cap for 09 services out of date (not having been adjusted for 13 years), but that the substantial discrepancy between the maximum prices for premium rate calls for fixed and mobile services is putting 09 content providers at a competitive disadvantage.

A7.381 Ofcom has a duty to regulate in a consistent and technology-neutral manner. We accept there are discrepancies in the establishment of maximum prices for consumer protection measures between the fixed and mobile markets. However, it is our position that a case can continue to be made for having different maximum prices for fixed and mobile services. Mobile devices are inherently more personal to their owners than landlines, are at less risk of unauthorised usage, and through pay-as-you-go arrangements can be subjected to a form of close expenditure control by consumers. We note that landline services are also subject to risks of remote control and hacking that are not present to the same degree yet for mobile devices (e.g. internet diallers reprogrammed to call 09 numbers, or hacking of PBXs). As such, we consider that it is objectively justifiable to have a regulatory framework where a maximum price on calls to 09 numbers is lower than those to mobile shortcodes.

- A7.382 Having said that, we consider a case can be made for raising the current £1.50 maximum price for 09 calls. We recognise that the current price guidance is dated and that it is putting premium rate providers on the 09 number range at a competitive disadvantage to those providers offering services on mobile shortcodes.
- A7.383 For example, we have been made aware of charity fundraisers offering the public the option of making a one-off donation through the use of a mobile shortcode, but eschewing offering a similar 09 number due to the much lower revenue it would raise (i.e. a consumer would need to stay on the line for over 6 minutes to make a donation on an 09 number that matched texting a £10 shortcode).
- A7.384 We are conscious of the associated risks to consumers from raising the 09 maximum price and will continue to keep this to the forefront of our analysis when consider possible changes to the regulatory regime. Due to the application of PRS regulation to these ranges, the problems linked to fraud and scams have decreased.

Policy objectives and regulatory options

- A7.385 Having regard to the above concerns and our policy objectives for this review, we think that the policy objectives in relation to calls to 09 numbers are:
- i) Promoting greater transparency and consumer price awareness;
 - ii) Ensure continued protection from fraudulent services;
 - iii) Promote prices that are reflective of consumers' preferences; and
 - iv) Promote service quality, variety and innovation.
- A7.386 Currently, the following rules apply for calls to 09 numbers:
- General transparency rules for all OCPs through GCs;
 - Price guidance of up to £1.50 pm/pc from BT's phones; and
 - PhonepayPlus regulation, including price advertising obligations.
- A7.387 BT is also subject to the NTS Call Origination Condition which limits the amount it can keep when originating calls to these ranges. The PRS Bad Debt Surcharge also applies to the 09 range and allows BT to retain a percentage of revenue to compensate for the higher level of bad debt that is encountered on 09 calls. At the time of this consultation BT had notified the industry that it was setting the PRS Bad Debt Surcharge at 5.2% of 09 retail revenues (note, the PRS Bad Debt is subject to a separate Ofcom consultation).
- A7.388 We do not consider that maintaining the *status quo* or deregulating would deliver on our objectives. The lack of consumer price awareness is leading to consumer harm and confusion about the cost of calling 09 numbers is undermining the use of the number range. Removing *ex-ante* regulation would most likely lead to greater pricing confusion for consumers, higher prices, and would be likely to encourage more scams to take place on the 09 range.

A7.389 Instead, both the unbundled tariff and maximum price options could be good candidates for intervention. The options we are going to consider for this range are therefore:

- i) Unbundled tariff;
- ii) Maximum price; and/or
- iii) Informational remedies (particularly to allow higher revenue levels).

A7.390 We also consider whether some form of price ceiling might remain necessary for the service charge as part of an unbundled tariff and if so, at what level (which also applies to the maximum price option). As noted above, in this context some SPs have requested that we should relax the current cap on the price of calls to allow higher value services to be delivered or as a micro payment mechanism, for example for donations following public charity appeals. We would anticipate that any maximum SC under the unbundled tariff would be set at a comparable level to the limit that we were to set if we were to adopt the maximum retail price option⁷⁴⁴.

Assessment of the options

A7.391 We now assess the three options that we have identified above. The effects of the unbundled tariff and a maximum price are similar to those for the 0844 and 0871 number ranges, as discussed above. Thus, for brevity, rather than explicitly repeating the assessment criteria set out in Annex 1 we have highlighted any additional factors that are relevant when considering 09 calls.

Unbundled Tariff

A7.392 It is our view that an unbundled tariff on the 09 number range could deliver a good outcome for consumers and providers.

A7.393 The adoption of the unbundled tariff would improve price awareness compared to today. Consumers would know what they are paying for (the call access to the originating network and the service charge to the service provider), which is likely to improve price transparency. SPs would be required and would be able to advertise and communicate the service charge to the customers (rather than just the BT price as at present), while the AC could be easily communicated to customers by the OCP at the point of sale.

A7.394 The total price the caller would pay under the unbundled tariff would be the sum of the AC and the SC: the first would be set by the OCP, the second by the SPs. Competition among SPs would in our view increase. Greater transparency and control over the price of the SCs would enable them to compete on prices.

A7.395 However, we still consider that there is the need for maximum prices to be established on the 09 number range for consumer protection measures. Competition between OCPs is likely to address concerns about the level of the AC or if appropriate some form of maximum price could be applied (see Annex 5).

⁷⁴⁴ We would take into account the fact that a maximum retail price includes an allowance for the OCP whereas such an allowance not be included in any maximum SC. To illustrate, suppose that, if we were to adopt a maximum retail price for 09 calls, it would be set at a level of X. If instead we adopted the unbundled tariff we would set any maximum SC at a level equal to X minus an estimate of the likely AC. Thus, regardless of the overall option we select, the maximum revenue received by the SP should be broadly similar.

However, in the absence of any maximum for the SC it is likely that there will be increased incentives for fraudsters to use the 09 number range to scam consumers. While most may be tackled via the current PhonepayPlus regulation the fact that the rewards from engaging in scams would increase could provide additional incentives to scammers. Initial thoughts on the appropriate level for this cap are discussed below.

Maximum price

- A7.396 In principle, imposing a maximum price would provide clarity over the price level to callers, as well as providing a safeguard against frauds. SPs would be able to advertise the maximum price that consumers will be charged, which is likely to increase transparency for consumers.
- A7.397 However, as discussed in Annex 6, as a maximum price effectively caps the revenue for all parties in the value chain, market participants are likely to react by seeking to appropriate each other's revenues. There is also the risk that OCPs could react by refusing to connect calls to a particular number/service provider if they feel that their costs of origination, including an appropriate return, are not covered. A further general concern relates to the fact that this option will not address any concerns that may arise from wholesale outcomes that could not be in the interest of consumers (see Annex 3). As explained in Annex 6, if we were to set maximum prices and these concerns did subsequently materialise, then it may be necessary at that point to consider what (if any) further regulatory intervention is appropriate in the circumstances.
- A7.398 This option is attractive in that it would protect consumers by capping the overall price of the call. However, it could lead to unintended consequences in the wholesale market that would not be present if we were to pursue the unbundled tariff option.

Informational Remedies

- A7.399 Much of the harm associated with the 09 number range is because consumers are unaware of the cost of calling the number and therefore receive unexpectedly high bills. This lack of transparency regarding the cost of the call also creates opportunities for scams to take place.
- A7.400 The 2010 Implementation Costs study notes the feasibility of establishing PCAs where such an obligation to provide information about the cost of a call falls on the TCP. Such a PCA could be used to inform consumers of the service-charge (if the unbundled tariff option is chosen), or the maximum cost of the call (if the maximum price option is chosen). It could be used to supplement existing requirements imposed by PhonepayPlus on Service Providers to include pricing information in advertising.
- A7.401 We do not consider the scale of consumer harm under the existing regime is sufficient to impose PCAs on the industry. However, if the current cap is to be lifted from £1.50, then we consider there is a strong case to be made for requiring PCAs to be introduced for higher-rated 09 calls. Imposing such a requirement on TCP who requested such as range would limit the opportunity for scams to be undertaken by Service Providers (the TCP would be liable for not providing the PCA) and would also ensure consumers are fully informed about any new higher-rated 09 calls. We could also explore use of the PhonepayPlus Prior Permission

regime to impose transparency requirements that would ensure consumer protection.

Preliminary views on the best option for the 09 range

- A7.402 We think that on balance introducing an unbundled tariff offers the best approach going forward for callers and providers on the 09 number range. The introduction of an unbundled tariff would be complemented by maximum pricing restrictions on the Service Charge.
- A7.403 We would welcome submissions from the industry and consumer groups on what would be an appropriate level for the Service Charge. We are conscious that the £1.50 cap (which in an unbundled tariff environment represents the combined Access and Service Charges) has remained unchanged for 13 years and is considerably out of line with charges that can be levied by Service Providers operating on mobile short codes.
- A7.404 If the Service Charge (per minute and drop charge) were to be increased, we would recommend that the higher rates be subject to additional consumer protection measures to help consumers control their expenditure and to reduce the prospect of scams taking place on these more expensive numbers. This could include a requirement that the TCP provide a PCA stating the Service Charge, that higher-rated 09 calls be subject to Prior Permission by PhonepayPlus (with PhonepayPlus to explore requiring TCPs to withhold revenue from their clients for 60 days for such higher-rated PRS, an increase from the current 30 days), and/or that OCPs be required to offer their customers the ability to bar calls to 09 numbers. In 2003 we decided not to introduce a requirement for OCPs to offer 09 call-barring, noting that a number of OCPs already offered call-barring and that consumers could therefore choose an OCP who met their needs in this area. However, should the retail cap for 09 calls be increased, we consider there would be a stronger case to be made to require all OCPs to offer call-barring functionality to 09 numbers
- A7.405 As well as views on the merit of introducing an unbundled tariff for the 09 range, we would welcome views from stakeholders on:
- What would represent an appropriate per-minute maximum price for 09 calls;
 - What would represent an appropriate fixed rate maximum price for 09 calls; and
 - What, if any, additional consumer protection measures (including PCAs, call-barring obligations, and PhonepayPlus prior permission requirements) should be imposed for higher-rate 09 calls and from what price threshold they should be required.

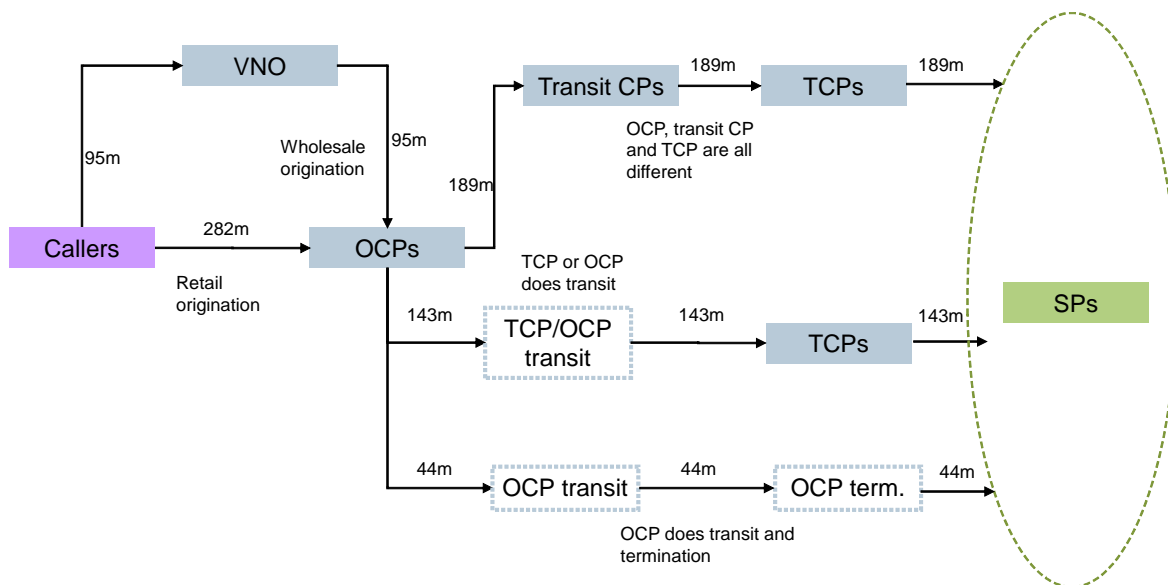
Group 4: 118

Introduction

- A7.406 Directory enquiry (DQ) services are provided on the 118 number range, following the introduction of competition for such services in September 2001. The main objective of introducing competition for DQ services was to increase choice, stimulate innovation and increase price competition.

- A7.407 There are now 429 separate DQ services listed by BT (though from a lesser number of individual companies)⁷⁴⁵. They offer a variety of new services, for example follow-on calling, identification of local services and text delivery of numbers.
- A7.408 Underlying pricing for the services is quite diverse, available on BT, ranges from relatively low flat rate prices of around 35 pence for a single number, to substantially higher prices which include both set up charges and per minute charges which can be over £1 in the first minute. Retail prices on OCPs other than BT are frequently substantially higher. Some operators also charge a single rate for all 118 numbers regardless of the underlying SP charges.
- A7.409 Market share appears to be strongly driven by marketing and the how memorable the access number is and owes little to price competitiveness, although the range of services offered undoubtedly provide some level of differentiation.
- A7.410 The market itself has declined since the introduction of the 118 number range. In 2001, there was an estimated 700 million minutes for national DQ services. In 2009, 377 million minutes were carried to 118 numbers, equating to £301 million in retail revenues. This makes 118 the third largest non-geographic number range by revenue.

Figure A7.15 Flow of volumes for 118 calls, 2009

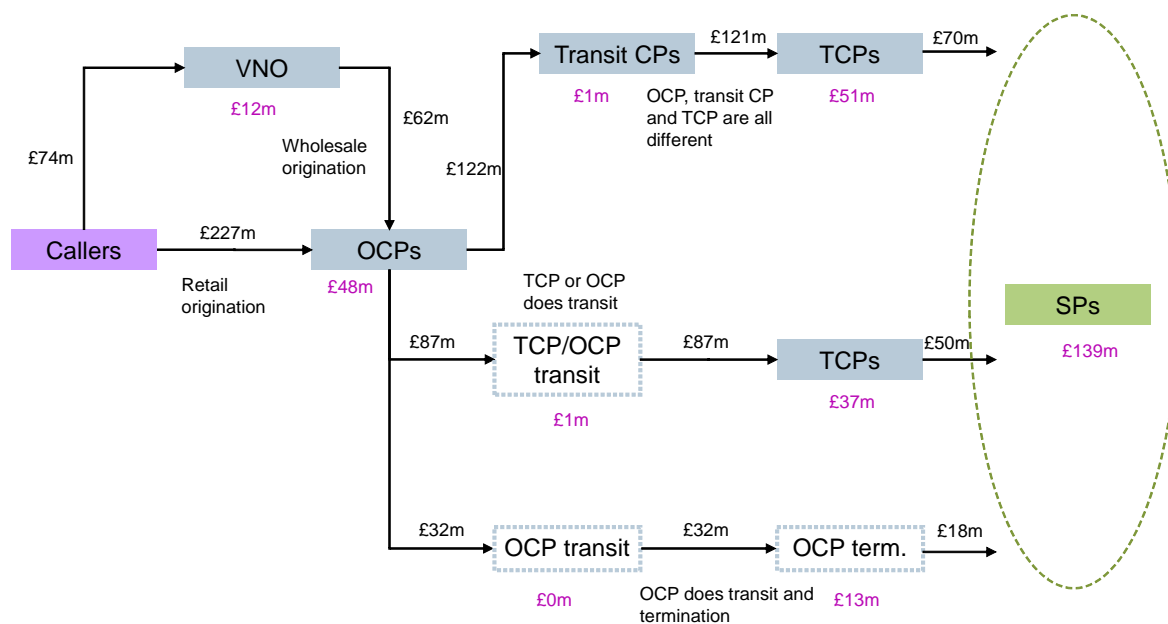


Source: the 2010 Flow of Funds study

- A7.411 Like 09 numbers, 118 numbers represent only just over 1% of total non-geographic call volumes but around GBP301 million of revenues. SPs are again able to retain a large proportion of revenues at around 46%. However, with OCPs only retaining 20% of revenues this is not as large as might be expected with TCPs retaining an above average 34% of total revenues. Figure A7.16 below shows the flow of revenues for 118 numbers.

⁷⁴⁵List of active DQ numbers and their pricing codes
http://www.bt.com/pricing/current/Call_Charges_boo/2-1634_d0e5.htm; explanation of pricing codes
http://www.bt.com/pricing/current/Call_Charges_boo/2-1584_d0e5.htm

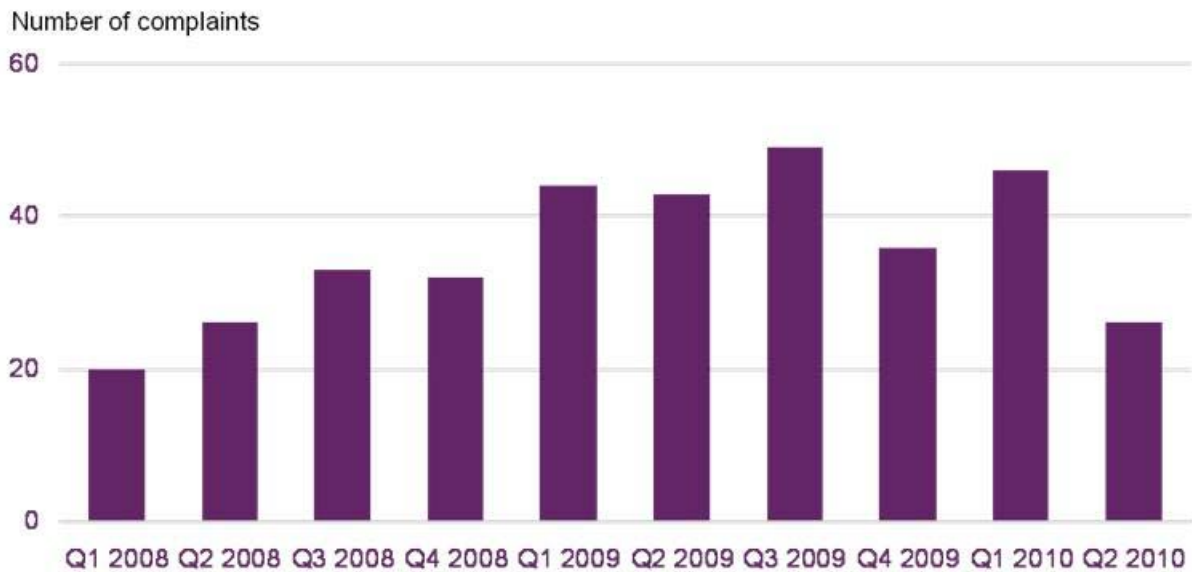
Figure A7.16 Flow of funds for 118 calls, 2009



Source: the 2010 Flow of Funds study

- A7.412 As the market has declined, the average retail price of calls has increased. For example, at the time of the change to 118, BT's retail charges were 40p per call to 192. While it is possible to find DQ services for a little as 35 pence on a BT landline (flat rate charge allowing one number to be accessed), many of the services charge in excess of £1 for the first minute with follow-on per minute charges above 40pence.
- A7.413 For calls made on non-BT networks, particularly mobile networks, the pricing is often substantially higher. One mobile operator charges £2 per minute for all 118 numbers (regardless of the underlying DQ company charge) except their own preferred provider.
- A7.414 These high charges also apply to any follow-on calls offered by the DQ company. That is if the DQ company offers to connect the caller to the number the caller will pay the full DQ per minute charge, even where the follow-on call may otherwise be low cost or free to the caller from their normal bundle.
- A7.415 In relation to complaints made by consumers to Ofcom, we receive a steady rate of calls of around 10 per month (see Figure A7.17). Most of these calls relate to bill shock, where consumers are surprised about how much a call has cost them, and in many cases, this appears to be because they have asked for a call to be connected without knowing or being informed of the price. Annex 15 provides some extracts from complaints, including for calls to 118, which illustrate this point.

Figure A7.17: Complaints made to Ofcom regarding Directory Enquiries



Source: Ofcom contact centre.

Review of responses to Call for Inputs

A7.416 There were three responses to our call for inputs on the topic of DQ.

A7.417 The Number (TNUK), who operates various DQ services including 118118 raised a number of issues with the current DQ market. These include:

- Inability for DQ providers to select retail prices for customers on different operators. In their opinion, this limits DQ providers in their ability to differentiate their services on price;
- High retail prices and mark-ups compared to BT prices from some providers (especially mobile) undermines DQ business models and competition between DQ providers;
- Discriminatory behaviour amongst some OCPs who charge favourable rates to their own DQ services;
- Problems with some OCPs refusing to provide access to all DQ providers; and
- Lack of pricing transparency leading to complaints made to the DQ provider instead of the OCP who sets the retail price.

A7.418 IRN, who operates the Maureen (118212) brand suggested that there were significant challenges to creating a clear value proposition to the consumer in light of the way MNOs and other non-BT OCPs price set flat rates for all 118 numbers. IRN was also concerned about the favourable rates charged for OCPs' own DQ service offerings.

A7.419 The Number and IRN both suggest that Ofcom implements Access Conditions on all OCPs that require them to offer access on fair, reasonable and non-discriminatory (FRND) terms.

A7.420 IRN further suggests that OCPs' own access charges are clearly advertised. It also suggested fixing a return on OCPs' actual access costs.

A7.421 IRN argued against an overall price cap for 118 calls as it believed that SPs operated in a competitive market.

A7.422 O2 expressed concern about the increase in termination rates for 118 calls.

Review of concerns

A7.423 We have concerns about the 118 number range as follows:

- Transparency and consumer price awareness;
- impact on prices from the reduced transparency and externalities identified in Annex 2;
- Diminished service availability and innovation; and
- Distributional concerns.

Transparency and consumer price awareness

A7.424 Like other non-geographic number ranges, consumer price awareness is poor. This is due to the lack of transparency when it comes to prices and is in part due to the wide range of tariffs and tariff structures for different services (see Table A7.5 below) in an environment where price information cannot be unambiguously conveyed as the same service can also vary markedly between operators (see Table A7.6 below). This can also be observed by looking at BT's price list⁷⁴⁶.

Table A7.5: Cost of different DQ services from a BT landline

Service Provider	Number	Cost from BT landline
TNUK	118 118	£1.29 call setup, followed by 39p per minute
Yell	118 247	81p call setup, followed by 30p per minute
BT	118 500	49p call setup, followed by £1.16 per minute
TNUK	11 88 11	50p fixed charge
Orange	118 800	49p for first minute, then 20p per minute

Source: BT Price List (retrieved 19 October 2010)⁷⁴⁷

Table A7.6: Cost of a typical DQ service (118 118) from different OCPs

OCP	Cost
BT	£1.29 call setup, followed by 39p per minute ⁷⁴⁸
Virgin Media	£1.29 call setup, followed by 39p per minute ⁷⁴⁹

⁷⁴⁶List of active DQ numbers and their pricing codes

http://www.bt.com/pricing/current/Call_Charges_boo/2-1634_d0e5.htm; explanation of pricing codes

http://www.bt.com/pricing/current/Call_Charges_boo/2-1584_d0e5.htm

⁷⁴⁷<http://www.productsandservices.bt.com/consumer/consumerProducts/pdf/SpecialisedNos.pdf>

⁷⁴⁸<http://www.productsandservices.bt.com/consumer/consumerProducts/pdf/SpecialisedNos.pdf>

⁷⁴⁹<http://shop.virginmedia.com/phone/calling-costs.html>

TalkTalk	£1.49 call setup, followed by 50p per minute ⁷⁵⁰
Vodafone	£2 for first minute, then £2 per minute ⁷⁵¹
O2	£1.50 per minute ⁷⁵²
Orange	£1.46 call setup, followed by 52p per minute ⁷⁵³
T-Mobile	£2 for first minute, then £2 per minute ⁷⁵⁴

Source: CPs' price lists as of 19 October 2010⁷⁵⁵

Prices

A7.425 The current level of prices is distorted by the combined effect of the lack of transparency over the charges and the vertical externality problem discussed in Annex 2. DQ providers do not set the retail price of calls to their service, with the exception of calls retailed by BT. As such, there is reduced opportunity for price differentiation and competition based on the price of the service (see Section 5).

A7.426 We have considered whether setting common prices for all DQ service increases price transparency (as it should be easier for consumers to remember a single price). Most mobile companies argued that they set prices in the interest of simplicity but there remained considerable variation between the prices they set. We do not think that this is a strong effect. For the 08 number ranges, which consumers call far more frequently from their mobiles than 118, our survey evidence found that callers' confidence that they knew of the price was low. This is notwithstanding the fact that mobile OCPs' 08 call prices were relatively simple (each mobile OCP set a single price for calls to each 08 number range)⁷⁵⁶. If setting a limited number of price points does not help a mobile OCPs' customers remember the price of 08 calls it seems unlikely that it will help them remember the price of 118 calls which they generally make less frequently.

A7.427 With limited opportunity for price differentiation, competition has focussed on the establishment of brands often linked to more easily remembered 118 numbers. DQ companies promote value-added service (e.g. restaurant search), though the key value added service identified at the time of deregulation, follow-on calling, has clearly been undermined by the relatively high charges for such services. TNUK stated that in France 60% of DQ customers request call completion (i.e. being connected the number that they have requested) compared to 35% in the UK. TNUK attributed this to French regulation that allowed for clearer pricing and lower retention by OCPs⁷⁵⁷.

⁷⁵⁰ <http://www.talktalk.co.uk/products/talk/pricing-updates.html?code=NN-HB-0282&srccode>

⁷⁵¹ http://online.vodafone.co.uk/dispatch/Portal/appmanager/vodafone/wrp?_nfpb=true&_pageLabel=template12&pageID=OS_0035

⁷⁵² http://www.o2.co.uk/assets2/PRODIImages/PDF/DirectoryEnquiries_Dec09.pdf

⁷⁵³ <http://www2.orange.co.uk/servlet/Satellite?pagename=OUKPersonal&c=OUKService&t=Service&cid=1096023563750&tab=2&mid=1137070318927>

⁷⁵⁴ http://support.t-mobile.co.uk/resources/sites/TMOBILE/content/live/DOCUMENTS/0/DO114/en_GB/NonStandard%20-%20PAYM.pdf

⁷⁵⁵ <http://www.productsandservices.bt.com/consumer/consumerProducts/pdf/SpecialisedNos.pdf>

⁷⁵⁶ See also Section 4.

⁷⁵⁷ TNUK response to the Call for Inputs, paragraph 30.

Table A7.7: Cost of different DQ services from a BT landline

Service Provider	Number	Cost from BT landline in 2003	Current cost from BT landline
TNUK	118 118	49p call setup, followed by 9p per minute	£1.29 call setup, followed by 39p per minute
Yell	118 247	40p per minute	81p call setup, followed by 30p per minute
BT	118 500	25p call setup, followed by 30p per minute	49p call setup, followed by £1.16 per minute
TNUK	11 88 11	30p fixed charge	50p fixed charge
Orange	118 800	49p for first minute, then 20p per minute	49p for first minute, then 20p per minute

Source: BBC News⁷⁵⁸; CPs' price lists

A7.428 The relatively high prices charged by some OCPs and the lack of price transparency for DQ services as a whole leave many consumers exposed to a larger risk of overcharging and subsequent bill shock than compared to other number ranges.

A7.429 This is demonstrated by complaints Ofcom receives, an extract of which is presented in Annex 15. Often in these cases, the caller was not aware of charges for onward call connection. In many cases, it appears that not all consumers are advised of this additional charge and cases of bill shock (sometimes totalling hundreds of pounds) are reported.

Service availability and innovation

A7.430 In relation to service provision and innovation, DQ providers have suggested that the current market structure restricts development and innovation. This is because of two reasons:

- i) The distribution of revenues between the OCP and the SP;
- ii) DQ providers find it difficult to reflect differentiated offerings in similarly differentiated retail prices.

A7.431 OCPs retain a relatively large amount, in pence per minute terms,⁷⁵⁹ on calls to DQ services (see below). Overall OCPs (including virtual operators) retained approximately £60m from 118 calls in 2009 (42% of this amount was retained by mobile OCPs; the remainder was retained by fixed OCPs). This represents just under 7% of OCPs' total retention from non-geographic calls.⁷⁶⁰

A7.432 Table A7.8 below shows fixed and mobile OCPs' average prices and retention, as taken from the 2010 Flow of Funds study. By way of contrast, average retention

⁷⁵⁸ http://news.bbc.co.uk/1/shared/spl/hi/business/03/directory_enquiries/html/table.stm

⁷⁵⁹ We recognise that the 2010 Flow of Funds study states (on page 50) that OCPs retain only 20% of (post VAT) retail revenues which is "not as large as might be expected". However the price of 118 calls is significantly higher than for other non-geographic number ranges (with the exception of 09). Even if the percentage of the retail price retained by the OCP is a relatively low this still equates into a relatively high mark-up on these calls.

⁷⁶⁰ Ofcom calculations using data from the 2010 Flow of Funds study.

across all non-geographic numbers is around 2ppm for fixed OCPs and 13ppm for mobile OCPs. OCP retention on 118 calls is thus relatively high.

Table A7.8: Retail prices and OCP retention on 118 calls (2009)

	Average retail price (excluding VAT)	Average OCP retention
Fixed OCP	76ppm	13ppm
Mobile OCP	91ppm	23ppm

Source: Ofcom calculations using data from the 2010 Flow of Funds study

A7.433 Figures provided by TNUK suggest that mobile OCPs' retention may be even higher than the data underlying the 2010 Flow of Funds study. It provided data on mobile OCPs' retail price of a two minute call to its DQ service less the termination payment. On a 2 minute call, BT's retention (excluding VAT and payments to TNUK) was 2.39p. Mobile OCPs' retention on a two minute call varied between 40.69p and 166.65p which equates to between 19% and 49% of the retail price (excluding VAT)⁷⁶¹.

A7.434 The impact on DQ providers is clearly a lower incentive to innovate. DQ stakeholders have indicated that they would be interested in exploring a number of options which might allow lower pricing or more sophisticated services but are constrained by the lack of control over prices and in particular the high prices charged by some OCPs (which would override any possible benefit). The situation is clearly undermining the utility of the DQ services to consumers.

Distributional issues

A7.435 In light of the submission we have received, we have considered whether high retail prices for DQ services create a particular concern because low income households (particularly mobile only households) pay high prices for accessing socially important services.

A7.436 TNUK argued that households from the C2DE socio economic group are among the heaviest users of DQ services.⁷⁶² TNUK also provided us with examples of complaints from callers such as a mobile subscriber who incurred a charge of £62 for calling NHS Direct (having been connected by the DQ provider).⁷⁶³

A7.437 TNUK also provided data that shows that the top ten most requested numbers (i.e. when calling TNUK DQ numbers) included NHS Direct and the Samaritans and other basic consumer services (particularly for transport and telecoms companies).⁷⁶⁴

A7.438 We do not have data to confirm that the position for calls to TNUK is replicated across the whole of DQ services. It is therefore difficult for us to assess the potential distributional concern on the basis of this specific issue,

⁷⁶¹ TNUK 24 August 2010 submission, Table 7 on page 17.

⁷⁶² TNUK 24 August 2010 submission, page 1.

⁷⁶³ TNUK 10 August 2010 submission, page 11.

⁷⁶⁴ TNUK 24 August 2010 submission, page 8.

A7.439 However, we accept that the relatively high cost of calls to DQ services, particularly from mobiles, means at the very least that lower income households may suffer proportionately more from such charges and often (given the higher proportion of mobile only, non broadband households in these categories) have limited alternatives.

Policy objectives and regulatory options

A7.440 As the issues considered here are similar to those for revenue share ranges, the same options are relevant, namely:

- i) Maximum price; and/or
- ii) Unbundled tariff.

A7.441 We also considered TNUK's suggestion that Ofcom imposes Access Conditions such that OCPs would be required to offer origination on fair, reasonable and non-discriminatory ('FRAND') terms. However, we have not examined this option further on the basis that we believe such conditions are unlikely to result in any benefits greater than what can be provided by the unbundled tariff. However, should we reach the view that our proposed options fail to resolve the issues identified above, we remain open to looking at the feasibility of Access Conditions at a later date subject to the potential regulation meeting the competition and consumer welfare tests associate with Access Conditions.

Assessment of the options

Option 1: Maximum price

A7.442 This option would specify a maximum price in the NTNP that would apply to all DQ services for calls from any originating network. We have discussed the general advantages and disadvantages of this remedy in Annex 6. Here, we add some considerations that are specific to DQ services.

A7.443 An overall price indication for all DQ services would have an unclear effect on consumer price awareness. In effect it gives a rough indication of the price of a call, but the benefit of a maximum price would depend on the level at which termination rates are set (the lower the headroom between the maximum price and termination rates, the more certainty of the price of a service). However, given the current wide variance of prices between different DQ services, as discussed in section 4, a large number of maximum prices would be needed to accommodate the pricing flexibility available to DQ providers currently. Moreover, in the longer term, innovation might be stifled since DQ providers may find it difficult to price in a novel way. Rather they would be largely constrained to selecting from the menu of price maxima chosen by the regulator (since even if the SP desired a retail price below that those maxima, OCPs are unlikely to actually set retail prices at the level that the SP wants).

A7.444 A maximum price does however provide a safety net whereby consumers are somewhat protected from overcharging and subsequent bill shock.

A7.445 The effect of the introduction of maximum prices on the level of prices is ambiguous. It is likely to depend on the number of price maxima that we set within the 118 range (i.e. the degree of granularity) since this affects both the extent of competition between SPs and the ability of SPs to find a price point that meets their particular needs. On the one hand, retail price competition amongst DQ services is

currently low because of SPs inability to market prices. Greater price transparency may thus put downward pressure on prices. On the other hand, there is a risk also that setting a maximum price will simply coordinate prices to that level or that a (regulated) maximum price point will not be available at a lower enough level for those SPs that wish to set low retail prices.

A7.446 As the impact on the level of prices is ambiguous, the impact in terms of service innovation and access to socially important services is also unclear.

Option 2: Unbundled Tariff

A7.447 This option would implement the unbundled tariff structure of ACs and SCs for DQ calls. We discussed the general advantages and disadvantages of this remedy in Annex 5.

A7.448 For the AC, we would expect that this would be the same AC as for all non-geographic calls to simplify the charges for consumers.

A7.449 For the SC, in the first instance we propose not to implement maximum prices for the service charge. We believe that there is a reasonable prospect, under the new regime, of sufficient competition amongst SPs to keep prices to reasonable levels. Though we would need to monitor this into the future, especially given the previous focus of competition on non-price issues, such as number recognition.

A7.450 The effect of an unbundled tariff for DQ numbers is favourable:

- Consumer price awareness would improve as DQ providers would be able to advertise the cost of calls to their service at the point of call;
- Efficiency would improve, SPs would have greater control over the retail price of calls to their services. One potential beneficial effect of increased competition may be retail prices that better reflect consumers' preferences. However, there is a risk that the downward pressure on prices may not be strong, if the competitive process in DQ services continues to focus on marketing and number recognition rather than prices;
- The structure of prices could be more efficient in that prices could more closely reflect the preferences of callers and SPs. There is the prospect that the level of prices might decrease and service availability and innovation may increase as SPs would be able to differentiate and compete on retail price; and
- The price of access to socially important services could be reduced if retail prices come down (although even so this concern is not necessarily eliminated).

Preliminary views on the best option for the 118 range

A7.451 Whilst maximum prices for individual services under Option 1 may improve price transparency somewhat, it could lead to price inflation, particularly from fixed lines as DQ providers standardise their own prices.

A7.452 Option 2 has the potential to address these issues by reducing the vertical externality that hampers price competition. With greater clarity on prices generated by a clear service charge message, DQ providers will be able to price differentiate to a greater degree.

A7.453 We therefore view unbundling the tariff as our preferred option.

Group 5: 070

Introduction

A7.454 This Annex looks at the current regulatory approach to 070 personal numbers and 076 radiopaging numbers, summarises concerns that Ofcom has with the number ranges and identifies potential options for intervention. As is made clear, our key concern is poor consumer price awareness, which is worsened by the similarity of these numbers with mobile telephone numbers starting with 07, which creates the opportunity for scams to be undertaken on these ranges.

A7.455 Numbers beginning with 070 have been designated as personal numbering services (PNS) by the NTNP. The formal definition, as set out in the Numbering Plan is 'a service based on number translation that enables endusers to be called or otherwise contacted, using a single Personal Telephone Number, and to receive those calls or other communications at almost any telephone number, including mobile numbers. Essentially they offer a number translation service that re-directs consumer calls made to an 070 number to another number chosen by the end-user (the call recipient)⁷⁶⁵.

A7.456 The key attributes of a personal numbering service include:

- i) a single contact number for family, friends and business colleagues;
- ii) network independence (the owner of a personal number can change their provider without changing telephone number);
- iii) a follow-me-anywhere service that is easy to use; and
- iv) ancillary services such as voice mail and messaging services.

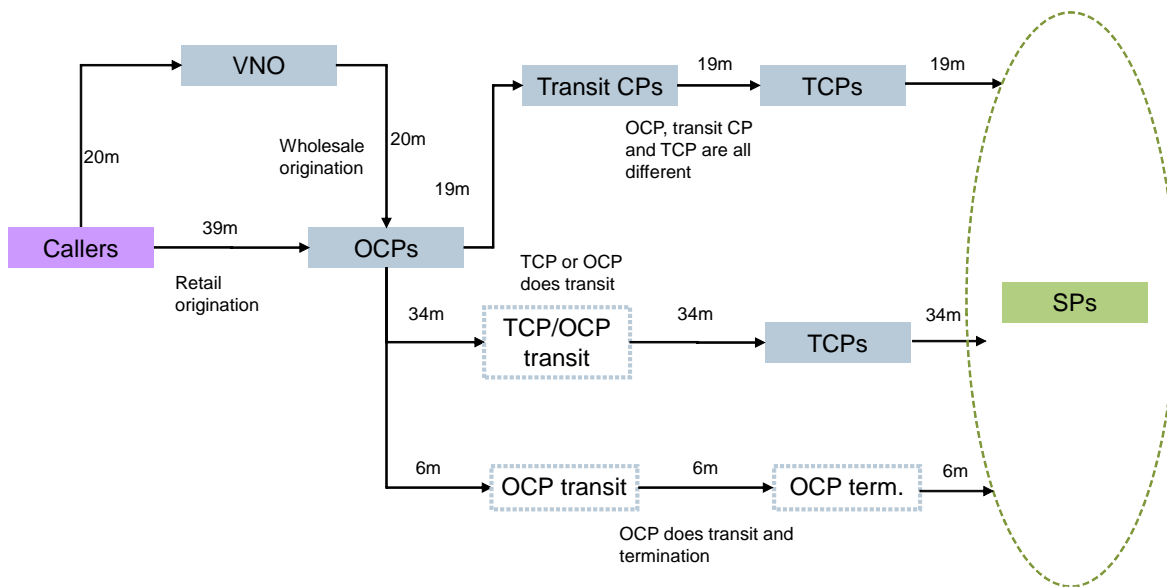
A7.457 There are a small number of larger service providers who provide specific services using 070 numbers:

- Hospedia Limited (formerly Patientline) and Premier Telesolutions are two of the largest users of 070 numbers and provide hospital patients with a telephone number in order for friends and family to contact them (mobile phones are often prohibited within hospital wards); and
- Trader Media runs advertising publications such as Auto Trader and Ad Trader and provides 070 numbers to individuals who wish to advertise in their publications. The 070 number allows the advertiser to have a temporary private number which is later returned to Trader Media.

A7.458 Volumes of calls to the 070 range are extremely small with only around 59 million minutes of calls in 2009. This generated GBP26.5 million of retail revenues, of which GBP13.8 million (or 52%) were retained by SPs, a larger proportion than the 23% average across all number ranges.

⁷⁶⁵ As explained below, a variety of other guidance and regulation also applies to 070 numbers.

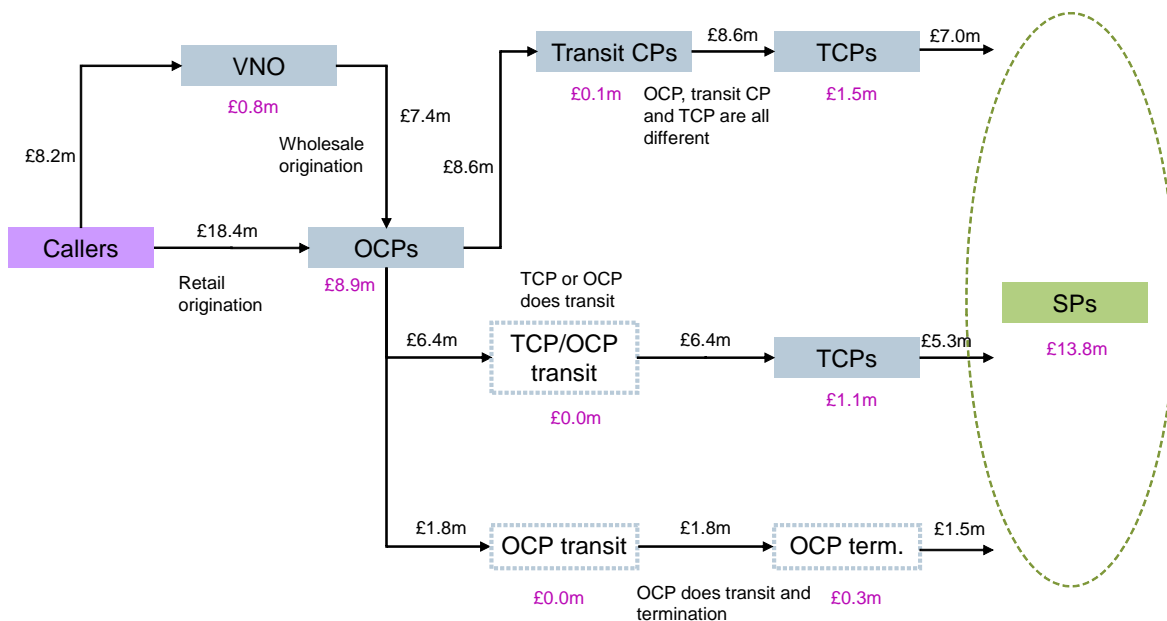
Figure A7.18 Flow of volumes for 070 calls, 2009



Source: the 2010 Flow of Funds study

A7.459 The 070 range is estimated to have generated £24.8m in retail revenue in 2009. The majority of this retail revenue (54%) went to the SPs that provided end-users with a 070 number, with the rest being allocated amongst OCPs, TCPs and transit operators.

Figure A7.19 Flow of funds for 070 calls, 2009



Source: the 2010 Flow of Funds study

A7.460 In our 2009 review of 070 numbers⁷⁶⁶ we estimated that the number of 070 numbers in active use to be around 1.25 million, based on information received from end users and Personal Numbering Service providers (“PNS providers”). We also estimated that approximately 940,000 are used by businesses and 315,000 by individuals. The average number of lines per business was five which suggests that some 190,000 businesses use personal numbers.

⁷⁶⁶ See <http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>

A7.461 In our 2009 review of personal numbers we noted that traffic to 070 numbers compared to other ranges is relatively small. We estimated from data provided by originating communications providers (OCPs) that 070 traffic was approximately 98 million minutes for 2008. The 2010 Flow of Funds study estimated that 070 traffic was approximately 58 million minutes for 2009 (therefore comprising less than 0.2% of total traffic to non-geographic numbers)⁷⁶⁷.

A7.462 As at May 2010 there were 143 CPs who have a direct allocation of 070 numbers from Ofcom. These CPs may also sub-allocate their numbers to resellers who may provide personal numbering services to end-users.

Review of responses to the Call for Inputs

A7.463 Through the Call for Inputs stakeholders expressed a range of views that have relevance for our examination of 070 numbers:

- Concern about 070 fraud (C&W);
- Concern about consumers confusing 070 with mobile numbers (C&W);
- Ofcom should designate all 070 numbers as PRS and have them regulated by PhonepayPlus (rather than just when revenue sharing occurs) (C&W);
- Ofcom should allow revenue sharing on all 070 numbers and have them regulated by PhonepayPlus (IPV6);
- The problems that are occurring on the 070 range could be addressed if Ofcom undertook its own due diligence when allocating numbers, as well as taking stronger enforcement action when a provider breaches regulations (O2 and Everything Everywhere); and
- There was a general theme that 070 pricing confusion can be addressed by PCAs, call price labelling and/or capping retail rates.

Overview of concerns

A7.464 Ofcom, and before that, Oftel, have had continuing concerns about abuses of the 070 number range and have sought to tackle the problems through enforcement and in a number of reviews.

A7.465 The concerns Ofcom has with the 070 number range include:

- i) Transparency and consumer price awareness;
- ii) Level of charges;
- iii) Fraud; and
- iv) Service availability/innovation.

⁷⁶⁷ 2010 Flow of Funds study, Figure 5.6 on page 30.

Transparency and Consumer Price Awareness

A7.466 The research confirms that only a small minority of consumers recognise that an 070 number is a personal number, indicating that there is going to be very low pricing awareness on this number range. An examination of possible retail charges for 070 shows a wide variety amongst providers, and even within a single provider – with some providers having up to 26 pricing bands.

Table A7.9 Cost of 070 calls

Cost of calls to 070 numbers from different OCPs	Prices
BT	<u>26 bands:</u> 4.6 to 46.5ppm;
Talk Talk	<u>14 bands:</u> Daytime – 16.15 to 47.5ppm; Evening – 15.2 to 47.5ppm; Weekend – 7.6 to 47.5ppm.
O2	50ppm
Orange Mobile	Pay as you go: 50ppm Pay monthly: 55ppm
T-Mobile	<u>2 bands:</u> Cost same as calls to other UK mobile operators; 75ppm.
3 UK	<u>3 bands:</u> 25ppm; 70ppm; £1 per call plus 70ppm.
Vodafone	Up to 60ppm
Virgin Mobile	Range from 35ppm - £1.50pm

Source: Operators' websites

A7.467 Much of the consumer detriment results from an inability of consumers to recognise that 070 numbers are personal numbers, rather than mobile numbers. Through our 2009 review we noted that 34% of respondents claimed to have heard of 070 numbers compared to 28% in a similar survey in 2004.⁷⁶⁸ However, when this 34% were then asked to identify the type of service associated with 070 numbers, only 8% were able to identify them as personal numbers, whereas 48% thought they were mobile numbers

The Level of Charges

A7.468 Although we are concerned there is a general lack of awareness of charges associated with 070 calls, Ofcom may not have the same concerns about a lack of pricing transparency if the costs of the calls were not so high. As the Table A7.9 shows, calls to an 070 number can cost up to £1.50 per minute. The uncertainty about pricing and the relatively high charges can lead to instances of 'bill shock' where consumers receive significantly higher than expected bills.

A7.469 In the 12 months to August 2010, Ofcom received 165 complaints from consumers about calling 070 numbers. From an examination of call notes it is apparent that

⁷⁶⁸ See <http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>, paragraph A1.63.

many consumers, expecting to be making a call to a mobile number, are extremely dissatisfied when they receive what are often quite high bills for these calls.

A7.470 High retail prices for 070 calls are likely to support lower prices for other services supplied by OCPs (the tariff package effect discussed in Section 4). However the magnitude of this effect is likely to be very small given the low volume of 070 calls. In 2009, OCPs retained an estimated £8.9m from 070 calls.⁷⁶⁹ This is a small amount in comparison with OCPs' overall revenues and thus the impact of high 070 prices on the cross-subsidisation of other services is likely to be negligible.

070 Scams

A7.471 A central concern for Ofcom is that consumers are generally unaware of the costs of calling a 070 number which, when combined with a perception that an 070 number may be a mobile number, provides an opportunity for scams to occur on the 070 range. In such scams there will inevitably be a degree of revenue sharing (although prohibited by the Numbering Plan), whereby the end-user of an 070 number encourages consumers to ring them and thereby makes revenue on each call made.

A7.472 The most common scam is known as the 'wangiri scam', where automated dialling equipment is used to make thousands of short duration calls to consumers. Many consumers who see that they have missed such a call will, out of curiosity, call the number back, mistakenly thinking that they were calling a mobile number that would be within their bundle of calls. In such circumstances the 070 number becomes a 'quasi revenue sharing' number, with revenue from the TCP or SP inevitably being shared with the 'end user' (the person encouraging the call to be made).

A7.473 Where there are allegations that revenue sharing is taking place on the 070 number range (i.e. the end-user receives revenue when people call them), then PhonepayPlus has jurisdiction as the service is viewed as a 'premium rate service'. PhonepayPlus has adopted a zero tolerance approach to such scams and has imposed substantial fines on 'providers' and network operators. In 2008, PhonepayPlus launched its first 070 investigation and we introduced the Consumer Protection Test to help prevent 070 numbers being allocated to those engaged in fraud. Since then consumer complaints to PhonepayPlus have fallen from an average of 60-80 per month from mid-2008, to an average of 10-30 per month by mid-2010.

A7.474 While recent efforts by Ofcom and PhonepayPlus have seen a reduction of scams on 070 numbers, it is readily apparent that they are still occurring. We now need to take definitive action to change the regulatory settings to remove opportunities for fraud to take place on this number range.

Promoting Service Availability and Innovation

A7.475 Another consideration for Ofcom in this review is the desirability of promoting service availability and encouraging industry innovation.

A7.476 We note that 070 numbers are being widely used as a micro-payment facility with several SPs using the number range as a primary source of revenue for their business. It is our preliminary view that consumer confusion regarding the use of 070 numbers is such that a case could be made for limiting the opportunity for this

⁷⁶⁹ 2010 Flow of Funds study, Figure 5.22.

number range to be used as a revenue raising mechanism for SPs. We have designated 08 and 09 number ranges to support micro-payments from consumers for services and consider the package of proposals in this consultation is likely to greatly improve consumer awareness of the costs and appropriate use of those number ranges. The close visual proximity of the 070 number range with mobile numbers remains an anomaly and, given the availability of alternative revenue sharing number ranges and the prevalence of scams on this range, we will place less weight on the use of micro-payments to support the availability of services on the 070 range. The potential costs of various interventions and impact on stakeholders is discussed further below.

A7.477 It is relevant in this context to note that, unlike other NGCS, 070 service providers are unlikely to compete on retail pricing. Personal numbers are for the benefit of the called party, who is unlikely to be particularly sensitive to the price that the calling party pays. In considering potential intervention on the 070 number range we will give due weight to the desirability of promoting competition at the service provider level, but are conscious that this may not necessarily be achieved simply by increasing pricing transparency at the retail level.

Previous Steps Taken by Ofcom

A7.478 A number of steps have been taken to try to address concerns about a lack of price transparency on the 070 number range (particularly the opportunity this presents for scams on this number range), including:

- In 2001 Oftel explicitly prohibited revenue sharing with an end-user on the 070 range;⁷⁷⁰
- In 2004 Ofcom published guidance on the acceptable use of 070 numbers, which reiterated the responsibilities of providers who sub-allocate 070 numbers;⁷⁷¹
- In 2006 Ofcom announced:⁷⁷²
 - The introduction of a requirement for 070 calls costing over 20ppm to have pre-call announcements (this was later withdrawn after concerns it would interfere with automated calling services); and
 - An intention to close the 070 range and to migrate users to 06 (although after further analysis it was concluded such an approach was unlikely to be proportionate).
- In 2006 ICSTIS (now PhonepayPlus) clarified that where a CP provides a premium rate service on an 070 personal number that exceeds 10ppm (or is a chatline or internet dialler) then the service will fall within the scope of the PRS Condition and will be regulated by ICSTIS.⁷⁷³
- In 2008 Ofcom introduced the Consumer Protection Test (which applies to 070 numbers) and is designed to ensure that numbers are not allocated to those companies or individuals that cause serious or repeated harm to consumers.

⁷⁷⁰ See <http://www.ofcom.org.uk/static/archive/oftel/publications/numbering/pers1001.htm>

⁷⁷¹ See http://www.ofcom.org.uk/telecoms/ioi/numbers/num_070_guide

⁷⁷² See <http://www.ofcom.org.uk/consult/condocs/numberingreview>

⁷⁷³ <http://www.phonepayplus.org.uk/upload/070.pdf>

- In 2009 Ofcom clarified its expectations of General Condition 17.8, which would require those allocatees who receive 070 numbers from Ofcom to undertake due-diligence on operators to whom they sub-allocate numbers.⁷⁷⁴

A7.479 As noted above, it is apparent that the net effect of these interventions has been to reduce the number of consumer complaints about the 070 range. However, there are still serious concerns regarding the lack of transparency of 070 prices and the ability of scams to be undertaken on this number range.

Policy objectives and regulatory options

A7.480 These ranges have much in common with other non-geographic ranges in terms of the lack of proper awareness of charges and the potential harm deriving from high charges, particularly for calls from mobiles. However, there is also a specific risk linked to frauds.

A7.481 Having regard to the above concerns and our policy objectives for this review, we think that the policy objectives in relation to calls to 070 numbers are:

- i) Promoting greater transparency and consumer price awareness;
- ii) Promote prices that are reflective of consumers' preferences, including ensuring protection from bill shock;
- iii) Ensure protection from fraud; and
- iv) Promote service availability and innovation where desirable and beneficial to consumers.

A7.482 Building on the analysis set out in the previous Section, where we identified a set of broad options that would address some or all of the broad issues affecting the market for NGC services, we consider that the following options are relevant to these ranges:

- Option 1: *Status quo*;
- Option 2: Removal of *ex-ante* regulation (with and without the current revenue sharing prohibition);
- Option 3: Maximum prices applying to all networks;
- Option 4: Unbundled tariff structure with no maximum prices; or
- Option 5: Unbundled tariff structure with maximum prices for the Service Charge;
- Option 6: Informational remedies to address concerns with pricing transparency – as remedies in their own right or in combination with options 1-5 above:
 - i) Pre-call announcements (PCA') where consumers are informed of the retail charge they will face or the service charge; or

⁷⁷⁴ See <http://stakeholders.ofcom.org.uk/telecoms/numbering/guidance-tele-no/070-guidance>

- ii) Pre-call labelling where consumers can choose to find out information about the retail charge they will face or the service charge; and/or
- Option 7: Regulate all personal numbers as PRS, making them subject to PhonepayPlus pricing transparency regulation;
- Option 8: Prohibit Terminating Networks from making payments to Service Providers, as a remedy in itself or in conjunction with above options; or
- Option 9: Take active steps to close the number range and migrate to another range.

Assessment of the options

Option 1: The *status quo*

A7.483 The status quo would preserve the existing confusion for consumers about the nature of 070 calls and the costs of calling them. As outlined in preceding Sections, we no longer consider the *status quo* to be justifiable given the lack of pricing transparency, the confusion over the nature of the number range and the persistence of scams being undertaken.

Option 2: Removal of *ex-ante* regulation

A7.484 Under a fully deregulated approach all OCPs would continue to be free to charge as they saw fit for 070 numbers but there would be no prohibition on revenue sharing with end-users of 070 numbers. We consider this position would be untenable and would result in an even less transparent retail market for consumers, with increased opportunities for scams. Given the close similarities between 070 and mobile numbers it is essential that revenue sharing continues to be prohibited. Any SP that considers this would undermine legitimate revenue raising opportunities should simply move to a PRS number.

A7.485 Even if the revenue sharing prohibition was carried across into an otherwise deregulated environment, we would be concerned with the increased risks of consumer harm. Such a change would do nothing to improve pricing transparency, but would magnify the scale of harm for those consumers who mistakenly believe they are calling a mobile number rather than a personal number.

Option 3: Maximum prices applying to all networks

A7.486 Under such an approach, all OCPs would be bound by a maximum maximum price for 070. It is readily apparent that the benefit of this option would largely depend on the level at which the maximum price was determined.

A7.487 If termination rates did not change then there would either need to be multiple maximum prices within the 070 range (with corresponding loss of the benefits of pricing transparency) or a single maximum price towards the upper end of rates being charged by BT at present (which may actually encourage OCPs to increase the price of some 070 calls). Alternatively, we could set a maximum retail price that is lower than present day prices. This may well result in a fall in termination rates. However, we recognise this later approach would affect firms such as Hospedia that rely on termination rates and who may be effectively forced onto an alternative number range if they wished to retain their margins.

A7.488 The benefit of setting a retail maximum price is that it would allow Ofcom, through the Numbering Plan, to provide a greater degree of pricing transparency, and to mitigate some aspects of consumer harm:

- a single maximum price for 070 calls would make it easier to educate consumers about the possible costs of these calls. Depending on the service, they currently vary from 4.6ppm to £1.50pm across OCPs, but a single maximum price point would be easier to communicate to consumers;
- a maximum price for 070 calls would reduce the scale of harm for those consumers who may make 070 calls in the belief that they are calling a mobile number and that the calls will be included within their bundle of calls;
- a maximum price for 070 calls could conceivably be set at a level that would reduce the prospect of scams occurring on this number range (for example, if an OCP was unable to charge more than 20ppm, we would reasonably expect this to make scams much less profitable and therefore reduce the prospect of them occurring).

A7.489 However, we are conscious that a maximum price on 070 could also have negative effects on consumers and the market including:

- setting a maximum price for 070 calls that reduces OCPs' retention on these calls may mean that some OCPs choose to no longer carry certain 070 calls. In principle, reducing OCPs' retention on 070 calls could result in higher prices for other services provided by OCPs (the tariff package effect). However in practice this effect is likely to be negligible, given that the total amount retained by OCPs from these calls is relatively small (under £10m – see above);
- setting a maximum price for 070 calls at levels to discourage scams is likely to result in lower termination rates which could have the unintended effect of reducing the market for legitimate use of personal numbers; and
- there is a risk that setting a maximum price will co-ordinate all retail prices to that level.

A7.490 Putting to one side what any maximum price should be, there would be significant advantages to introducing a retail maximum price on the 070 number range. Unlike PRS, the cost of calling 070 numbers is not advertised, so ideally consumers should already know, or easily find out, the cost of making a call to a specific number. Where this is unlikely (as in the case of 070, which many consumers may not realise is not a mobile number) then there is a strong case for the need to protect consumers through a maximum price. While such an approach is unlikely to make material improvement to pricing transparency (i.e. many consumers may still mistake the number for a mobile number) the major benefit would be in protecting consumers from unexpectedly high telephony charges.

A7.491 We accept that such an approach is unlikely to promote greater competition amongst suppliers offering personal numbering services than that which exists under the *status quo*. However, we do not necessarily consider this to be problematic. Different personal numbering services are unlikely to be substitutes from the perspective of callers – in other words, competition for callers at the retail level is unlikely ever to be strong, as competition is focussed around the call recipient. Therefore, we are less concerned about the lack of ability of a PNS

supplier to be able to choose a particular price point at which their service is retailed. If a service provider is sufficiently price-sensitive that they need to influence the actual retail price of their service then they would be free to offer a call-forwarding service on an 09 number.

Option 4: Unbundled Tariff without maximum prices on the service charge

- A7.492 Under this option, as explained earlier, the caller's CP would apply a network access charge and the SP/TCP will set a service charge. However, the service charge would not be limited by a maximum price.
- A7.493 An unbundled tariff would allow PNS providers to specify the price for their service more accurately, depending on the access charge chosen by each OCP, which might provide greater price transparency. It is important to note that this approach would provide limited transparency for the calling party (the consumer incurring the charge) unless they were aware they were calling a personal number and subsequently took steps to research the service charge for the holder of that number. We therefore consider that, by itself, an unbundled tariff is unlikely to improve pricing transparency for consumers (as is discussed below, this could prove effective if coupled with informational remedies).
- A7.494 Without maximum prices on the SC, we would need to rely on competition at the service layer to keep prices relatively low. As noted above, as end-users of personal numbers are unlikely to be particularly price-sensitive to the charges those consumers calling them will face, it is unlikely that competition between PNS providers will constrain service charges. Similarly, in the absence of any informational remedies (e.g. pre-call announcements or advertising requirements) or widespread recognition that 070 personal numbers are not mobile numbers, then it is unlikely that sufficient competitive forces will exist to keep service charges at a sufficiently low level.
- A7.495 For the reasons given, this scenario is not our preferred option.

Option 5: Unbundled tariff structure with maximum prices on the Service Charge

- A7.496 Although an unbundled tariff without pricing restrictions is unlikely to prevent the consumer harm we have witnessed on the 070 range, it may do if there were maximum prices on the service charge. We note however that a key limitation for just having unbundled tariffs for 070 is that, unlike PRS for example, there is no current requirement for the service charge to be advertised or provided in any format to consumers, so consumers are still likely to have low awareness of the cost of such calls and remain confused about whether they are mobile numbers. Therefore, it is doubtful if an unbundled charge by itself will be sufficient address concerns with pricing transparency.
- A7.497 As with option 3, one key benefit of this option is that Ofcom could potentially cap the amount of money passed to TCP/SPs (the service charge) at a level that discouraged scams. While this option may not improve transparency of the service charge, it could provide a valuable means to limit the opportunity for providers to scam consumers. As with setting a retail maximum price, Ofcom could potentially set the service charge at a level that was considerably lower than current POLOs in order to remove any incentive for scams. This would however have an impact on SPs operating on the number range, who would be likely to migrate to another

number range (most likely to the 09 number range if they wished to maintain their margins). As noted in 2009, such a migration could cost SPs up to £40m.⁷⁷⁵

- A7.498 This option would be less ‘intrusive’ for OCPs than setting a maximum retail price as OCPs would still have significant discretion in how they set their retail prices. We would expect that the improved transparency from unbundled retail pricing would help to constrain the total cost that consumers would face when making an 070 call. Our current view is that there should be a single simple (ppm) access charge for each tariff package that applies to all the number ranges covered by the unbundled remedy. Simplicity facilitates competition on the access charge although, as discussed in Annex 8, we invite stakeholders’ views on the likely effectiveness of such competition.
- A7.499 If we do cap service charges at a relatively low level compared to today’s termination rates then it is likely that our concern with scams taking place on the 070 will be addressed. However, we note that establishing multiple services charges for the 070 range, or having one relatively high SC maximum applying across the range, is unlikely to address the concerns we have identified. In such a scenario, there is a risk that SPs will continue to set prices at a level that significantly exceeds consumer expectations about the cost of calling an 070 number – while also continuing to leave open the ability of scams to take place on this number range.

Option 6: Informational remedies

- A7.500 Much of the harm associated with 070 numbers stems from the fact that consumers are unaware they are personal numbers and of the retail tariffs they will be charged (with many expecting them to be included within bundles). Informational remedies that inform consumers about the cost of these calls are therefore likely to be a particularly effective means of addressing consumer harm. On receipt of information about the cost of such calls consumers will then be in a position to modify their behaviour – and may choose to make calls for a shorter duration or not make the call at all.
- A7.501 Given the limited awareness that an 070 number is a personal number rather than a mobile number, we do not think that it is realistic to expect consumers to take proactive steps to check the costs of such calls. Therefore, it is unlikely that introducing ‘call price labelling’ would be a particularly effective means of improving pricing transparency.
- A7.502 Ofcom previously introduced a requirement for OCPs to offer PCAs for calls to 070 numbers costing more than 20ppm/ppc and which stated the maximum price that a consumer would face. Out of concern that such PCAs were interfering with automated calling services operating on the 070 number range this obligation was subsequently removed.
- A7.503 We still consider the risk of interfering with automated systems is a significant barrier to the effective use of PCAs. However, whereas the previous attempt to establish PCAs failed because an OCP would not know whether any given 070 number was being used for machine-to-machine communications, a similar problem would not exist if the obligation to have a PCA was instead provided by the TCP or the SP. As outlined in the 2010 Implementation Costs study⁷⁷⁶, a PCA provided by

⁷⁷⁵ See <http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>

⁷⁷⁶ 2010 Implementation Costs study, pages 6-7.

either the TCP or SP could be a workable solution because the TCP/SP is aware if a specific number is being used by automated equipment and could exclude such numbers from any PCA requirement.

- A7.504 Under the *status quo*, a TCP/SP does not know the actual price being charged for a particular caller. However, in the presence of an unbundled tariff or maximum price, they would be able to impart more useful pricing information to consumers through a PCA (i.e. “Calls to this number cost Xppm plus your network access charge” or “Calls to this number cost no more than Yppm from all networks”). PCAs would thus be easier to implement if they were combined with changes to retail prices (either maximum retail prices or the unbundled tariff).
- A7.505 If a PCA were to be introduced on the 070 number range, then it is likely it would only be successful in improving pricing transparency and reducing the likelihood and incidence of scams if the TCP was providing the PCA.
- A7.506 If the SPs were to provide the PCA, then those SPs who wanted to conduct scams would simply ignore the obligation, as they currently ignore prohibitions on sharing revenue with the end-user of the number. A TCP is likely to have a more permanent place in the industry, will be easier to locate if something goes wrong, will know the pricing message to convey (either the service charge or the maximum retail charge), and will be able to take steps to determine how the specific number is being utilised (with the obligation to provide a PCA not applying if the number is being used for time-sensitive machine-to-machine communications).

Option 7: regulate all personal numbers as PRS, making them subject to PhonepayPlus pricing transparency regulation

- A7.507 Responses to our Call for Inputs submitted that Ofcom should designate all 070 numbers as ‘premium rate’ and subject them to PhonepayPlus regulation. This would be likely have the effect of imposing transparency obligations on the end user of the number.
- A7.508 At present PhonepayPlus only regulates 070 numbers where there is evidence that that revenue sharing is taking place with the end-user of the number, with the service therefore determined to be acting as a premium rate service. However, without changes to the Act, we do not consider that all 070 services can be brought within the remit of PhonepayPlus. In the absence of revenue sharing with an end-user, there is no premium element to making an 070 call (i.e. if the service is being legitimately used it is not premium rate) – it is just one consumer having a personal/business conversation with another consumer and the 070 number is being used as a micro payment facility for the SP rather than the end-user.

Option 8: Prohibit all payments from Terminating Networks to Service Providers

- A7.509 At present there is a prohibition on those in the value chain from sharing revenue with an end-user of an 070 phone-number. However, this has provided an opportunity for scams to take place, with many parties in the value chain sharing revenue with those downstream of them and claiming that they genuinely believed that party was simply another intermediary in the value chain and not an end-user who may have been scamming consumers. The 2010 Flow of Funds study suggest that, in 2009, 54% of the revenue from calling an 070 number went to the Service Provider, an exceptionally high proportion when compared with other non-geographic numbers and in light of the policy objective that 070 numbers are not designed for traditional value-added or revenue raising purposes.

- A7.510 One means of preventing scams on 070 could be to prohibit the party who terminates the call from sharing any revenue with any other party, including Service Providers. 070 numbers are designed for the benefit of the called-party, but at the moment the calling-party is expected to pay the entire cost of calling such numbers and has no means of placing competitive pressure on the cost of making the call. If all revenue sharing was prohibited, then Service Providers offering 070 numbers to end-users (such as Hospedia) would need to adapt their business model, and would likely do so in a manner that better protected the calling-party who bears the cost of the call. Under such a scenario it is conceivable that a business model could emerge whereby TCPs would bill the called-party for the use of an 070 number, or alternatively SPs would move to a premium rate number range that is better suited to offering value-added services.
- A7.511 We are however, of the view that this option is unlikely to be practical. At present Service Providers are able to relatively easily set themselves up as terminating network operators. Therefore any prohibition on TCPs sharing revenue could become meaningless.

Option 9: Take active steps to close the number range and migrate services to another range.

- A7.512 Ofcom has previously looked at closing the 070 number range, with the option of moving personal numbering to the 06 number range. However, this was not pursued in light of tightening the rules on use of 070 numbers and introducing a Consumer Protection Test to prevent number allocation to those parties that had previously caused consumer harm.
- A7.513 Given the persistence of scams on this number range, we are now actively considering closing this number range. Our earlier 070 consultation noted that the total costs to PNS providers, resellers, end-users and Ofcom of migrating personal numbers to another range could be as high as around £40 million (not factoring in significant costs to OCPs).⁷⁷⁷ We would welcome thoughts on the associated migration costs if the 070 range was to be closed or whether it may be possible to address concerns regarding scams by taking more decisive steps to improve pricing transparency (as discussed above).

Preliminary views on the best option for the 070 range

- A7.514 The key concerns on the 070 number range are the lack of transparency about prices, the level of prices and the ability of scams to be undertaken which is often driven by the similarities with mobile phone numbers.
- A7.515 The introduction of an unbundled tariff may be a useful approach to address these problems. It would be essential that a maximum price is imposed on the Service Charge to limit opportunities for scams to be undertaken by limiting the amount of revenue that can be generated from calls to 070 numbers.
- A7.516 This approach is likely to bring the day-to-day operation of 070 numbers closer to the original intention of providing Personal Numbers, where the benefit is to the called-party rather than Service Providers. It would also in our view substantially reduce the opportunity for scams to be conducted on the 070 number range by capping the revenue associated with this number range. This option is likely to have a considerable impact on the operations of 070 Service Providers. Subject to the

⁷⁷⁷ See <http://stakeholders.ofcom.org.uk/binaries/consultations/070options/statement/statement.pdf>

issue of migration costs, we consider that those providers wishing to maintain their margins should move to other number ranges if their business model is heavily influenced by the revenue share received from calls.

A7.517 However, there will remain risks of consumer confusion with this range. We would therefore like stakeholders' initial views on the potential costs and benefits of closing the 070 number range. We recognise there are migration costs for existing legitimate users, so we will need to consider whether the direct benefits to consumers and the benefits to the NGCS framework of this rationalization are warranted. We would appreciate views on alternative approaches and appropriate timescales.

076

Introduction

A7.518 Numbers beginning 076 have been designated as a radiopaging service. The formal definition, as set out in the Numbering Plan is 'Electronic Communications Services consisting in the conveyance of Signals by means of Wireless Telegraphy where every Signal, apart from simple acknowledgement, is ultimately transmitted from a station for Wireless Telegraphy comprised in the Communications Provider's Electronic Communications Network to a station for Wireless Telegraphy or Wireless Telegraphy Apparatus that is not comprised in that network.'

A7.519 In essence, an 076 phone number is assigned to a pager and, for the cost of the 076 call, the calling party can reach the party with the pager and leave a message (often a numeric message such as a phone number to call). Such paging systems are often used widely by emergency services and hospitals.

A7.520 It is also relevant to note that 07624x numbers are allocated for use in the Isle of Man for mobile phones and paging services. Such international numbers are outside the scope of this review.

Overview of Concerns

A7.521 Essentially, the same concerns that Ofcom has with the 070 number range apply to the 076 number range – consumers are typically unaware that the number is not a mobile number and there are opportunities for scams to therefore be conducted by inducing consumers to make calls to these numbers.

A7.522 As with 070 numbers there are wide variances in the costs of calls. As of September 2010 charges from major operators varied from as low as 7.9p per minute from BT up to £1 per call, plus a further 70p per minute for a major mobile operator.

A7.523 In February 2010 Ofcom was alerted by network operators to unusual traffic patterns on some 076 numbers. A check of consumer complaints to Ofcom and PhonepayPlus confirmed what appeared to be an identical experience to the 070 "wangiri" scam, whereby consumers see a missed call from a 076 number and returned the call only to incur unexpectedly high charges. Other complaints involved consumers receiving text messages inviting them to call the phone number to receive 'free minutes' or to ring the number to retrieve voicemail. In such instances the subsequent calls made by consumers were not being used to provide connections to pagers, but to instead generate revenues.

- A7.524 On 2 March 2010 PhonepayPlus issued an industry notification informing the industry that where there is evidence that 076 numbers are used for the purpose of generating revenue then they will be regulated as a premium rate service. They also signalled their intention to investigate any network providers involved in terminating such 076 calls to determine whether they were meeting their due diligence obligations. In the four months since PhonepayPlus issued this statement Ofcom has only received six complaints from consumers about 076 numbers.
- A7.525 A theme that emerged from our call for inputs was concern with fraud on the 07 range as well as criticism for Ofcom for not adopting a stronger approach, through either enforcement or in controlling who numbers are allocated to, to address the prevalence of scams.

Policy Options

A7.526 The analysis of options for the 076 range should be read in light of the above analysis for the 070 range. Policy options we have considered are:

- Option 1: Maintain the *status quo*; or
- Option 2: adopt the same approach as for 070 numbers.

Assessment and preliminary views on the best option for the 076 range

- A7.527 It is pleasing that complaints about fraudulent use of 076 numbers have decreased, but it is undeniable that the current regulatory framework still provides opportunities for businesses and individuals to commit fraud by inducing consumers to ring 076 numbers. We do not consider it appropriate to simply rely on enforcement action to deter such fraud and believe changes are needed to the regulation of 076 numbers to minimise the prospect of scams occurring in the future.
- A7.528 We consider the rationale for introducing an unbundled tariff on 070 holds true for introducing an unbundled tariff for 076 numbers: consumers would benefit from clarity as to which provider was responsible for levying particular components of the charge, while Ofcom would be able to establish additional protections by restricting the charges that can be levied on consumers.
- A7.529 We note that, unlike for 070 calls, the introduction of an unbundled tariff might introduce a greater degree of competition into the Service Charge element, as organisations that issue pagers to their staff and make high volumes of calls to them (such as hospitals) are likely to be more price sensitive to the charges levied by paging companies. They would now be able to directly compare the service charges that pager companies will levy for making calls to paging numbers.
- A7.530 Unlike 070 numbers, it is not practical to consider the introduction of PCAs as a means of reducing scams, given that the vast majority of calls will be machine-to-machine communications which are likely to be adversely impacted by PCAs.
- A7.531 It is our preliminary view that the best means of regulating the 076 number range to protect consumers may be to introduce an unbundled tariff with a maximum price for the Service Charge and, potentially, some restriction for the AC, as discussed in Annex 5.
- A7.532 Given that scams on the 076 number range took place after enforcement action limited opportunities on the 070 range, we would appreciate stakeholder views on

the merits of Ofcom closing the 076 number range to new applicants. As there is already a large volume of 076 numbers in industry circulation we recognise this is unlikely to address our concerns with this number range, but this may be a useful complementary means of preventing opportunistic behaviour by some CPs.

A7.533 The concerns we have with the 076 number range mirror those on the 070 number range and we consider, for the reasons given above for 070, that the policy solution should be very similar.

Annex 8

Preliminary assessment of migration costs

Introduction and overview

- A8.1 Section 62(3) of the Act states that an allocation must not be withdrawn if the reorganisation fails to provide for withdrawn allocations to be replaced by allocations of telephone numbers so nearly resembling those numbers withdrawn in terms of purpose. Therefore, Ofcom must provide a migration path for users where a number range is withdrawn.
- A8.2 Some of the options that we are proposing may result in some SPs having to migrate their services to alternative number ranges. In particular:
- We will need to consider whether to close and clear the 0870 number range: in order to evaluate this option we need to estimate what the costs of migrating would be; a migration path already exists with numbers in the 0370 sub range reserved for 0870 providers;
 - We are proposing changes to 0845, for which some SPs might want to migrate to other ranges; we have reserved already the 0340 for migration of 084 service providers;
 - We are proposing that 080 calls should be “free-to-caller”. We will need to consider whether mobile OCPs should receive a higher origination payment. Any increase in origination payments will increase the amount SPs need to pay for hosting which may prompt some SPs to migrate away from 080; we are also considering an approach based on the maximum price for calls to 080, which might also cause some SPs to migrate; and
 - We are proposing changes for 070/076 numbers which are likely to prompt SPs to migrate elsewhere.
- A8.3 We will investigate these options in further detail as part of the implementation phase described in Section 7. Accordingly, at this stage we do not need to reach firm view on migration costs. Nonetheless, below we set a preliminary discussion of migration costs, in order to allow stakeholders to comment on our initial thinking. In particular, there are considerable uncertainties around the preliminary figures presented below, given the age of some of the underlying data and some of the assumptions that we have needed to make. We would thus particularly welcome consultation responses on these figures, including evidence of the likely costs.
- A8.4 As part of our previous work on non geographic calls we have produced a number of estimates of migration costs, most recently in 2009.⁷⁷⁸ These updated earlier estimates from 2005 and 2006.⁷⁷⁹ Similarly our preliminary thoughts on migration costs, as set out below, are largely based on this earlier work.

⁷⁷⁸ *Changes to 0870*, 23 April 2009 (the “0870 Statement”), Annex 4 available at:

<http://stakeholders.ofcom.org.uk/binaries/consultations/0870calls/statement/0870statement.pdf>

⁷⁷⁹ 2005 NTS Consultation, Annex 14. These were updated in *NTS: A Way Forward*, 19 April 2006 (the “2006 NTS Statement”), Annex 2 available at:

http://stakeholders.ofcom.org.uk/binaries/consultations/nts_forward/statement/statement.pdf

A8.5 In summary, we draw the following key observations from our analysis:

- The costs that we identify below (e.g. replacing stationery) depend on the number of firms that migrate to a new number range. As explained above, some of our proposals may reduce termination rates on some number ranges which may prompt SPs to migrate elsewhere. However, in the absence of more detailed proposals for how termination payments may change, it is not possible to estimate the number of firms that are likely to be affected. Accordingly at this stage we do not attempt to estimate the overall costs of these potential changes in termination rates;
- In contrast, we do provide a range of preliminary estimates for the cost of clearing the 0870 number range. Based on our estimates of live 0870 numbers from the 0870 Statement we infer how many SPs currently operate on the 0870 number range. Nonetheless there are considerable uncertainties around our estimates – they are particularly sensitive to assumptions about how many 0870 numbers each SP uses. Some of our overall cost estimates are relatively large. In order to determine whether or not it is proportionate to close this number range we will refine our migration cost estimates as part of our implementation projects; and
- Some costs (e.g. replacing stationery) can be avoided by allowing a sufficiently long transition period. However even a three year transition period will only reduce the estimated costs for SPs by 50-60%. This is because there are a number of costs that are directly linked to the migration decision (e.g. staff time of arranging to migrate) that cannot be avoided by allowing a longer transition period. In addition, a longer transition period might not reduce the costs for callers (namely misdialled calls).

Key determinants of migration costs

A8.6 There are four key determinants of migration costs for firms, which we discuss in turn below:

- i) How many firms would migrate?
- ii) What is the average cost per firm of migration if they had to migrate immediately?
- iii) Allowing a longer period for migration will avoid some costs. How does the profile of migration costs change depending on the length of the transition period? and
- iv) Migration may result in some callers misdialling numbers.

Number of firms that will migrate

A8.7 The costs that we identify depend on the number of firms that migrate to a new number range. We have considered whether it is possible to make a preliminary estimate of the number of firms that might migrate as a result of our policy choices.

Impact of changes in termination rates

A8.8 As explained above, a number of policy options may result in migration costs. If we were to increase origination payments for 080 calls above the current levels or if we were to set SC maxima that are lower than current termination rates then this may result in some SPs migrating elsewhere. We will set out more specific proposals for origination payments and SC maxima as part of the subsequent implementation

work streams. At this stage, in the absence of more detailed proposals, it is not possible to take a view on the number of SPs that are likely to migrate as a result of potential changes in termination rates.

Impact of clearing 0870 number range

A8.9 As part of the implementation projects, we will also consider whether or not to clear the 0870 number range. In the modelling carried out for the 0870 Statement we estimated 0870 call volumes and how many live 0870 numbers there were. These estimates are set out in Table A8.1 below.⁷⁸⁰

Table A8.1: Live 0870 numbers and call volumes from 0870 Statement

	2004/05	2009/10
Live 0870 numbers	643,302	211,974
Modelled 0870 call volumes	6,279m minutes	1,654m minutes
Average call minutes per live number	9,761 minutes	7,803 minutes

Source: Ofcom's modelling for the 0870 Statement (See Footnote 778 for a reference)

A8.10 The 2010 Flow of Funds study estimated that the volume of 0870 calls in 2009 was 2,477m minutes.⁷⁸¹ This may overestimate current 0870 volumes since the number range was in a state of flux in 2009 (as a result of the regulatory changes that occurred during 2009). Taking estimated call volumes from the 2010 Flow of Funds study and dividing by the average number of minutes per live number for 2009/10 from the 0870 Statement (7,803 minutes) suggests there might be 317,442 live 0870 numbers.

A8.11 In summary, our preliminary estimate is that there may be between 317,000 and 212,000 live 0870 numbers (rounding the above figures to the nearest thousand).

A8.12 This raises the question of how many live numbers each SP uses. The 0870 Statement implicitly assumed that each SP used only a single number. We consider that, in practice, SPs are likely to use multiple live 0870 numbers. However, we do not have data to allow us to estimate how many live 0870 numbers SPs use on average. This is thus a source of significant uncertainty and we would welcome evidence from stakeholders on this issue.

Average cost per firm of immediate migration

A8.13 There are a number of costs associated with migration, which we discuss in turn below:

- Replacement of stationery.
- Replacement of advertising/promotional material.

⁷⁸⁰ The 2004/05 estimates were taken from modelling for the 2005 NTS Consultation and ultimately based on estimates provided by TCPs in 2005. The 2009/10 estimates were derived from various assumptions, particularly concerning the amount of migration as a result of the policy changes set out in the 0870 Statement.

⁷⁸¹ 2010 Flow of Funds study, Figure 5.10 on page 33.

- Replacement of signage.
- Telecoms costs.
- Administration costs.

A8.14 Below we set out preliminary estimates of each of these costs based on the 0870 Statement.⁷⁸² Stakeholders' views on whether the cost per firm is likely to vary between number ranges would be welcome. In particular, it seems plausible that the costs incurred by legitimate businesses using 070 numbers (such as Hospedia and Autotrader) may be different to those incurred by SPs on other number ranges.

Replacement of stationery

A8.15 If they were to change their non geographic number, some SPs may incur design/artwork costs associated with updating letterheads, compliments slips and business cards to show new telephone numbers.

A8.16 Survey evidence from SPs for the 2005 NTS Consultation suggested that 50% of SPs used their non geographic number as a general contact point for their organisation. We thus assumed that a maximum of 50% of NTS telephone numbers could be included on letterheads, compliments slips, business cards etc. If these SPs choose to migrate then they could incur some stationery costs.⁷⁸³ Our preliminary estimates update the estimated stationery costs in the 2005 NTS Consultation to reflect inflation. These costs vary depending on the size of the firm and are summarised in Table A8.2 below.⁷⁸⁴

Table A8.2: Stationery costs

Business size	Distribution of SPs by size	Letterhead costs per firm	Business card costs per firm
Less than 10 staff	47%	£58	£52
10-99 staff	29%	£116	£464
100 or more staff	24%	£290	£783
Weighted average		£130	£346

Source: Ofcom's modelling for the 0870 Statement

A8.17 As in the 0870 Statement and the 2006 NTS Statement we have assumed that 2½ days of staff time would be necessary to deal with stationery changes.⁷⁸⁵ We have updated our previous cost estimates (which comprise wages and overheads) to

⁷⁸² In the 2005 NTS Consultation and the 2006 NTS Statement we separately estimated migration costs for ISPs. We do not separately estimate these costs given the decline in dial up internet and because, at this stage, it is not clear whether ISPs would be particularly affected by our proposals.

⁷⁸³ 2005 NTS Consultation, paragraph A14.7.

⁷⁸⁴ The estimated size of businesses using non geographic numbers is taken from the 2005 NTS Consultation, paragraph A14.12. The costs set out in paragraph A14.14 of the 2005 NTS Consultation have been uplifted by 16% to reflect five years of inflation (at 3% per annum) since that document was published. We adopted the same approach in the 0870 Statement.

⁷⁸⁵ 2006 NTS Statement, paragraph A5.34.

reflect inflation. Our preliminary estimate is that the average staff cost for arranging new stationery is £199.

- A8.18 Adding up the cost items listed above, and taking into account the fact that only 50% of firms would need to replace stationery, our preliminary estimate of the average cost per firm is £337.

Replacement of advertising/promotional material

- A8.19 If they were to change their non geographic number, SPs may also need to replace their advertising and promotional material, to reflect their new number.
- A8.20 In the 0870 Statement we estimated the costs of adding compliments slips and sticky labels to advertising and promotional material. This was on the basis that SPs would presumably choose the least cost means of updating their advertising material, so these costs will not exceed the costs of using labels and compliments slips. In the 0870 Statement, we also assumed the likelihood that the SP would have enduring advertising material that needs to be updated and the amount of material that the SP would have to update depends on the amount of non geographic calls that the SP receives. In particular, those SPs that received between 11 and 999 minutes of calls per month would need to update 5,000 items; SPs receiving 1,000 or more minutes of calls per month would need to update 15,000 items. We used a traffic profile for 087 numbers taken from responses to a 2005 information request.⁷⁸⁶ To generate our preliminary estimates we have updated the figures from the 0870 Statement to reflect inflation (at 3%) – see Table A8.3 below.

Table A8.3: Advertising/promotion costs

SPs traffic profile	Distribution of SPs by traffic profile	Cost of compliments slips/sticky labels	Proportion of businesses with enduring advertising material
1-10 minutes of calls/month	48%	£0	N/A
11-99 minutes of calls/month	26%	£480	5-10%
100-999 minutes of calls/month	18%	£480	25-50%
1,000 minutes of calls/month	8%	£1440	25-50%

Source: Ofcom's modelling for the 0870 Statement

- A8.21 Depending on the number of business that have enduring advertising/promotional material, our preliminary estimate of the average cost per firm varies between £58 and £116.

⁷⁸⁶ 0870 Statement, paragraphs A4.25-A4.30.

Replacement of signage

- A8.22 Some businesses would need to update their signage e.g. on fleet vehicles or on buildings to reflect a new telephone number. The 0870 Statement estimated the costs of replacing vehicle signage. It did not estimate building signage costs since 0870 numbers are not commonly displayed on building signs and thus these costs are unlikely to be significant.⁷⁸⁷
- A8.23 The 0870 Statement assumed that vehicle signage costs depend on the profile of traffic received by the SP (similar to our approach to the costs of replacing advertising/promotional material). In particular, between 2% and 10% of SPs that received between 11 and 999 minutes of calls per month would need to replace signage on three vehicles. Between 2% and 10% of SPs receiving 1,000 or more minutes of calls per month would need to replace signage on ten vehicles.⁷⁸⁸ The estimates underlying the 0870 Statement have also been updated to reflect inflation at 3% and are summarised in Table A8.4 below.

Table A8.4: Vehicle signage costs

SPs traffic profile	Distribution of SPs by traffic profile	Cost of replacing vehicle signage	Proportion of businesses that need to replace vehicle signage
1-10 minutes of calls/month	48%	£0	N/A
11-99 minutes of calls/month	26%	£359	2-10%
100-999 minutes of calls/month	18%	£359	2-10%
1,000 minutes of calls/month	8%	£2,887	2-10%

Source: Ofcom's modelling for the 0870 Statement

- A8.24 Depending on the number of businesses that need to replace vehicle signage, our preliminary estimate of the average cost per firm varies between £8 and £39.

Telecoms costs

- A8.25 To ensure continuity, some SPs may choose to temporarily run both old and new numbers, while others may prefer to supply recorded announcements on their old number providing their new number.
- A8.26 In the 0870 Statement (which updated figures from the 2005 NTS Consultation) we assumed that SPs that received a greater volume of traffic are more likely to operate two numbers simultaneously or make use of a recorded announcement.

⁷⁸⁷ 0870 Statement, paragraph A4.45.

⁷⁸⁸ 0870 Statement, paragraph A4.38.

Table A8.5 sets out our assumptions about the proportion of firms that operate additional telecoms services in this way.⁷⁸⁹

Figure A8.5: Proportion of firms incurring additional telecoms costs

SP's traffic profile	Number of months that SP operates two numbers in parallel			Number of months that SP operates a pre-recorded announcement		
	6	3	0	6	3	0
1-10 minutes of calls/month	0%	50%	50%	0%	0%	0%
11-99 minutes of calls/month	50%	25%	25%	0%	0%	0%
100-999 minutes of calls/month	75%	25%	0%	0%	25%	75%
1,000 minutes of calls/month	100%	0%	0%	33%	33%	33%

Source: Ofcom's modelling for the 0870 Statement

A8.28 We have updated the cost figures from the 2005 NTS Consultation to reflect inflation. This implies that the cost of three months line rental for an additional line is £46 (for firms operating two numbers in parallel) and the cost of operating a pre-recorded announcement for three months is £87.⁷⁹⁰ Accordingly, using the traffic profile figures set out above, our preliminary estimate of the average cost per firm is £59.

Administration costs

A8.29 SPs are likely to incur an overhead cost to arrange a new number, as well as a one off charge from their hosting provider (to reflect its administrative costs).

A8.30 In the 2005 NTS Consultation we assumed that ½ a day of staff time would be necessary to arrange a new number. We have updated our previous cost estimates (which comprise wages and overheads) to give a cost of £88 per firm.⁷⁹¹ Similarly, we estimate that the one off charge to the SP from their hosting provider is £29.⁷⁹² Our preliminary estimate of the total administrative costs for each SP is thus £117.

⁷⁸⁹ These assumptions are taken from 2005 NTS Consultation, paragraph A14.22.

⁷⁹⁰ 2005 NTS Consultation, paragraph A14.24. We have added five years of inflation at 3% per annum. This is the same approach that we adopted in the 0870 Statement.

⁷⁹¹ 2005 NTS Consultation, paragraph A14.27. We have added five years of inflation at 3% per annum. This is the same approach that we adopted in the 0870 Statement.

⁷⁹² 2005 NTS Consultation, paragraph A14.24. We have added five years of inflation at 3% per annum. This is the same approach that we adopted in the 0870 Statement.

Summary of average migration costs per firm

A8.31 Table A8.6 summarises our preliminary estimates of average migration costs per firm.⁷⁹³ Note that these costs assume that firms had to migrate immediately. As discussed in the next Section, specifying a transition period over which SPs migrate will avoid some of these costs.

Figure A8.6: Preliminary estimate of average costs of immediate migration

	Average cost per firm
Replacing stationery	£337
Replacing advertising/promotional material	£58-£116
Replacing vehicle signage	£8-£39
Telecoms costs (parallel numbers, recorded announcements)	£59
Administration costs	£117
Total	£580-£669

Source: Ofcom's modelling for the 0870 Statement

Impact of a transition period on migration costs

A8.32 Some of the migration costs set out above can be avoided by allowing a longer migration period. For example, suppose that we allow a one year transition period. During that year, some firms would replace their stationery anyway. Those firms could thus choose to migrate at the same time that their stationery would be updated as part of the normal replacement cycle. As a result, they would avoid any additional stationery replacement costs.

A8.33 Of the cost categories listed in Figure X above, the telecoms costs and administration costs cannot be avoided by allowing a longer time allowed for migration. There is scope for some of the other costs (stationery, advertising/promotional material, vehicle signage) to be avoided depending on the transition period.

A8.34 We have previously assumed that stationery and vehicle signage are replaced on a four year cycle while marketing/promotional material is replaced every year.⁷⁹⁴ However, even given these assumptions, it is not straightforward to calculate the impact of a longer transition period on migration costs. This depends on the extent to which the replacement cycle for these costs are in sync. To illustrate:

- Suppose that a SP would normally replace its stationery in 18 months time. It would also update its advertising material at the same time. This means that, if we were to allow a 2 year transition period, the SP could migrate after 18 months without incurring any additional stationery and advertising costs.

⁷⁹³ The various elements presented in the table do not sum to the total due to rounding.

⁷⁹⁴ 0870 Consultation, paragraph A4.39 and footnote 72 to paragraph A4.47. 2005 Consultation, paragraph A14.17.

- Suppose instead that we only allow a year for transition. During that time the SP would not replace its stationery (so this cost would not be avoided) but would replace its advertising material (since this is replaced every year).
- Suppose instead that, the SP would normally replace its stationery in 18 months time but that it would replace its advertising material in 12 and 24 months time. The replacement cycles are thus out of sync. This means that, even if we allow a 2 year transition period, the SP would incur either stationery costs (if it migrates after either 12 or 24 months, when it replaces its advertising material) or advertising costs (if it migrates after 18 months, when it replaces its stationery).

A8.35 We do not have any information on the extent to which different costs are in sync. As a pragmatic solution we have thus made the following simplifying assumptions:

- Since replacing stationery is the largest of the cost items, we assume that SPs will seek to migrate at the same time they replace their stationery. Assuming stationery is replaced every four years then this cost item will decline linearly to zero over a four year period. Thus if we allow a one year transition period, 25% of these costs are avoided; allowing a two year period means 50% of these costs are avoided and so forth.
- It seems plausible that many SPs also replace their vehicle signage and advertising/promotional material at the same time they replace their stationery (for example, as part of a rebranding exercise). Moreover, given a sufficient transition period, there seems scope for SPs to sync these costs (for example, by ordering additional promotional material to change the point at which it will next need to be replaced). We have thus assumed that these cost items decline geometrically. Thus if we allow a one year transition period, 50% of these costs are avoided; allowing a two year period means 75% of these costs are avoided and so forth.⁷⁹⁵

A8.36 Table A8.7 applies these assumptions to show our preliminary estimate of the average unavoidable cost per firm of migration, depending on the transition period allowed.⁷⁹⁶

⁷⁹⁵ To be precise, the proportion of costs that are not avoided is $(\frac{1}{2})^T$ where T is the number of years allowed for transition.

⁷⁹⁶ All figures rounded to nearest £1. The elements presented in the table may not sum to the total due to rounding.

Figure A8.7: Unavoidable migration costs per firm

Transition (months)	0	6	12	18	24	36	48
Stationery	£337	£295	£253	£211	£169	£84	£0
Advert. + signage	£66-£155	£46-£110	£33-£77	£23-£55	£16-£39	£8-£19	£4-£10
Admin + telecoms	£176	£176	£176	£176	£176	£176	£176
Total	£580-£669	£518-£581	£462-£507	£411-£442	£362-£384	£269-£280	£181-£186

Source: Ofcom's modelling for the 0870 Statement

Misdialling costs

A8.37 In addition to the costs for SPs listed above, in our previous statements we have also estimated the cost to callers of misdialled calls following SPs migration to new numbers.

A8.38 In the 0870 Statement we assumed (based on a response to the 2005 NTS Consultation) that the average length of an 0870 call was 3 minutes. The 2010 Flow of Funds study estimated that the volume of 0870 calls in 2009 was 2,477m minutes (as explained above this may overestimate current 0870 call volumes).⁷⁹⁷ This implies that there were just under 826m 0870 calls in 2009. In the 2006 NTS Statement we explained that a relatively small proportion of calls are likely to be misdialled. We assumed that the overall proportion of calls misdialled during the year after the proposals are implemented is likely to be no more than 10%.⁷⁹⁸ We have updated the estimated cost per misdialled call to approximately 29p reflect inflation.⁷⁹⁹ This gives a preliminary estimate of the total cost of misdialled calls of no more than £24m.

Preliminary estimate of migration costs associated with closure of 0870

A8.39 Using the figures set out above, we have produced a preliminary estimate of the migration costs associated with closing the 0870 number range. In producing these estimates, we have assumed that there are between 212,000 and 317,000 live 0870 numbers. Our estimates are very sensitive to assumptions about how many live numbers each firm uses (if each firm is assumed to use twice as many numbers then it halves the estimated number of firms and thus halves the overall costs). We do not have information on this and present two scenarios, namely each firm using an average of two or four 0870 numbers. Figures A12.8 and A12.9 set out the estimated costs for SPs, depending on the length of the transition period.

⁷⁹⁷ 2010 Flow of Funds study, Figure 5.10 on page 33.

⁷⁹⁸ 2006 NTS Statement, paragraph A5.16.

⁷⁹⁹ In 2006 we assumed that the cost per call was 25p, based on a response to the 2005 NTS Consultation. 2006 NTS Statement, paragraphs A5.12 and A5.16.

Figure A8.8: Migration costs for SPs of clearing 0870 (assumes SP use two 0870 numbers)

Transition (months)	0	6	12	18	24	36	48
Lower estimate	£61.4m	£54.9m	£49.0m	£43.5m	£38.5m	£28.5m	£19.1m
Upper estimate	£106.0m	£92.1m	£80.4m	£70.1m	£60.8m	£44.4m	£29.5m

Source: Ofcom's modelling for the 0870 Statement

Figure A8.9: Migration costs for SPs of clearing 0870 (assumes SP use four 0870 numbers)

Transition (months)	0	6	12	18	24	36	48
Lower estimate	£30.7m	£27.5m	£24.5m	£21.8m	£19.2m	£14.3m	£9.6m
Upper estimate	£53.0m	£46.1m	£40.2m	£35.0m	£30.4m	£22.2m	£14.7m

Source: Ofcom's modelling for the 0870 Statement

A8.40 In addition to the migration costs for SPs, our preliminary estimate is that the cost to callers of misdialled calls would be no more than £24m.

A8.41 In summary:

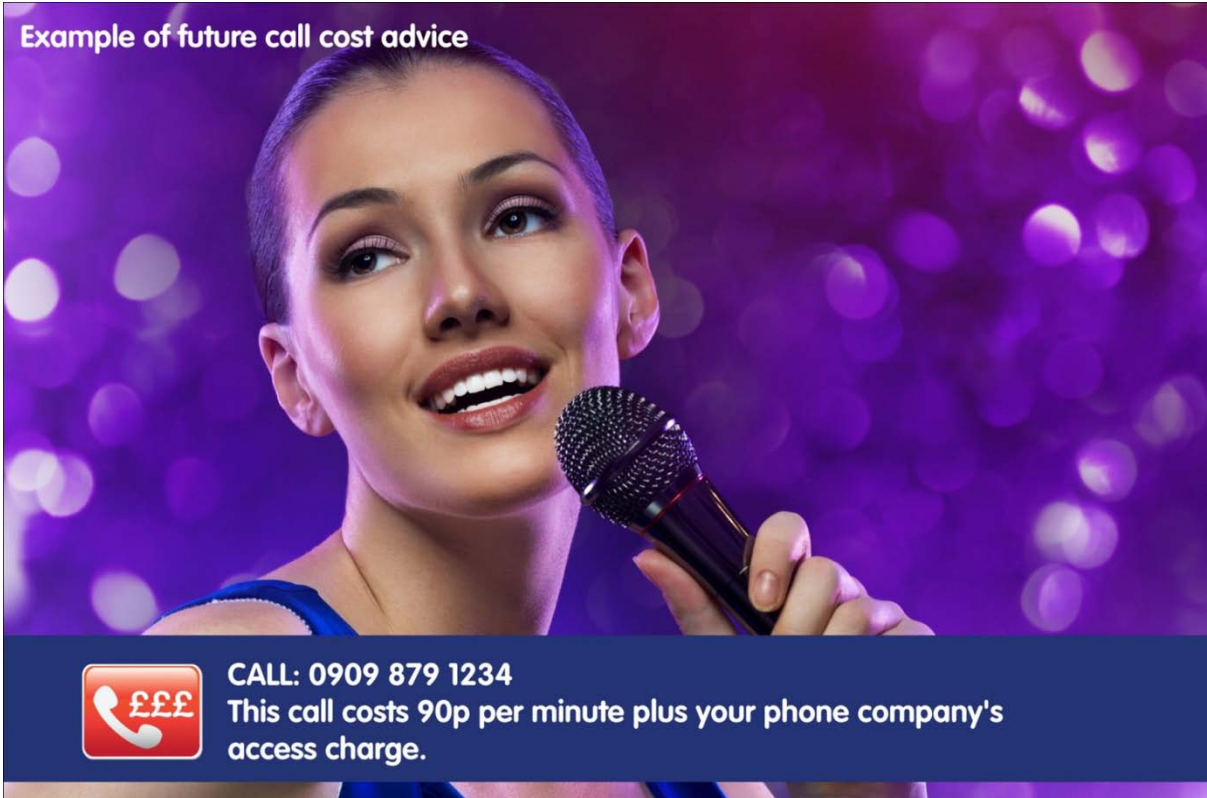
- First, there are considerable uncertainties around our preliminary estimates. They are particularly sensitive to assumptions about how many 0870 numbers each SP uses. We welcome comments by stakeholders on the figures set out above.
- Second, some of our overall cost estimates are relatively large. In order to determine whether or not it is proportionate to close the 0870 number range we will refine our migration cost estimates as part of our implementation projects.
- Third, a longer transition period is likely to reduce the cost for SPs, by allowing them to integrate migration with the normal replacement cycle for stationery, advertising material and signage. However even a three year transition period will only reduce the estimated costs for SPs by 50-60%. In addition, a longer transition period might not reduce the costs for callers (namely misdialled calls).

Annex 9

What would consumers see

Geographic 01 02 03	
Mobile 07	
Free 0800	
Business Rate 0843/4/5 0871/2/3	
Premium Rate 090/1 098	

Example of future call cost advice



CALL: 0909 879 1234

This call costs 90p per minute plus your phone company's access charge.

Annex 10

Responding to this consultation

How to respond

- A10.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 10 March 2010**.
- A10.2 Ofcom strongly prefers to receive responses using the online web form at <http://stakeholders.ofcom.org.uk/consultations/simplifying-non-geo-numbers/howtorespond/form>, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A10.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email NGCSReview@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.
- A10.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.
- Non-Geographic Numbers Review Team
Floor 6
Competition Group
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- Fax: 020 7981 3333
- A10.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.
- A10.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 13. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

Further information

- A10.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Ofcom on 020 7981 3000.

Confidentiality

- A10.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, ideally on receipt. If you think your

response should be kept confidential, can you please specify what part or whether all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

- A10.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A10.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at <http://www.ofcom.org.uk/about/accoun/disclaimer/>

Next steps

- A10.11 Following the end of the consultation period, Ofcom intends to publish a statement in the Spring of 2010.
- A10.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/static/subscribe/select_list.htm

Ofcom's consultation processes

- A10.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.
- A10.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.
- A10.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Vicki Nash, Director Scotland, who is Ofcom's consultation champion:
- A10.16 Vicki Nash
Ofcom
Sutherland House
149 St. Vincent Street
Glasgow G2 5NW
- Tel: 0141 229 7401
Fax: 0141 229 7433
- Email vicki.nash@ofcom.org.uk

Annex 11

Ofcom's consultation principles

A11.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A11.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the consultation

A11.3 We will be clear about who we are consulting, why, on what questions and for how long.

A11.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A11.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A11.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A11.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A11.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 12

Consultation response cover sheet

- A12.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.
- A12.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.
- A12.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.
- A12.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' Section of our website at www.ofcom.org.uk/consult/.
- A12.5 Please put any parts of your response you consider should be kept confidential in a separate Annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing	<input type="checkbox"/>	Name/contact details/job title	<input type="checkbox"/>
Whole response	<input type="checkbox"/>	Organisation	<input type="checkbox"/>
Part of the response	<input type="checkbox"/>	If there is no separate annex, which parts?	

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

Annex 13

Consultation's questions

Questions on the scope, rationale for the review and framework for analysis

A13.1 These questions relate to the analysis set out in Section 2 and Annex 1:

Q2.1 Do you consider that the scope for this review, set out above, is appropriate? If not how would you suggest that it should be modified and why?

Q2.2 Do the summary of the history of NGC services and the rationale for this review capture all the essential concerns which this review should be seeking to address? If not, please set out those issues which you consider are not being considered and why these should be included in the review at this stage.

Q2.3 Do you consider our proposed approach and framework for analysis is fit for the purpose of this review?

Questions on the assessment of the consumer experience and detriment

A13.2 These questions relate to the analysis set out in Section 4 and Annex 2:

Q4.1 Do you consider that the analysis set out in this Section and in more detail in Annex 2 represents fairly the consumers' concerns? In particular: does it provide a reasonable assessment of the type and extent of the detriment consumers currently experience? And does it identify all the relevant factors?

Q4.2 In this section and in Annex 2 we set out our views of the main factors that contribute to the current outcomes, specifically the interaction of poor price transparency for consumers combined with poor incentives leading to vertical and horizontal externalities. Do you accept that this analysis is a valid assessment of the incentives of the market participants? Do you consider that the implications for consumers we draw are sound and represent a useful basis for assessing appropriate regulatory responses? If not, how would you categorise the relationships and motivation underpinning consumers and OCPs' behaviour?

Q4.3 We have identified five key areas of consumer detriment as a result of the poor transparency and poor incentives in the market: reduction in demand for NGC, relative prices not reflecting consumers' preferences; costly avoidance strategies; increased fraud risk and loss of service diversity; and the disproportionate impact these problems have for low income mobile only households when accessing essential services. Do you consider that this represents a comprehensive summary of the impact on consumers? If not, how should it be modified and why?

Q4.4 Do you consider that our assessment of the state of the market in the absence of ex ante regulation is a reasonable extrapolation of the evidence? If not, why?

Questions on the assessment of the providers' experience

A13.3 The following questions relate to the analysis set out in Section 5 and Annex 3:

Q5.1 Do you consider that the analysis set out in this Section and in more detail in Annex 3, fairly represents the wholesale relationship and issues in this market? If not, why?

Q5.2 Specifically, do you agree with our assessment of the market experience for SPs', including in hosting markets? Do you agree with our assessment of SPs' concerns about price transparency and the impact on their incentives? If not, how would you characterise the market from the SPs' perspective?

Q5.3 Do you agree with: our assessment of the OCPs' incentives and behaviour and our preliminary views of the outcome for OCPs under the current market conditions? Are there other factors we should take account of in our analysis? How complete do you consider the tariff rebalancing effect would be in the event of any changes to retail prices, and what impact might any reduction in NGC prices have on consumers?

Q5.4 Do you agree with our assessment on the complexity of the market relationships between OCPs and TCPs and the balance of bargaining power summarised in this Section and set out in detail in Annex 3? If not, what factors do you consider this analysis should include or give a different weight to?

Q5.5 Do you consider that our assessment of the state of the market in the absence of ex ante regulation is a reasonable extrapolation of the evidence? If not, why?

Questions relating to the assessment of the impact of the different options

A13.4 The following questions relate to the analysis set out in Section 6 and Annexes 4 to 7:

Q6.1 Do you agree with our assessment of the likely failure of deregulation to address the identified market failures? If not, please explain why, ideally with reference to the analysis set out Annex 2 and 3.

Q6.2 Do you consider that we were right to put aside consideration of wholesale intervention at this stage? If you disagree please set out your views, ideally with reference to the wholesale analysis set out Annex 3.

Q6.3 Do you agree with our assessment of the limitations of informational remedies to address the totality of the identified market failures? If not, what informational solutions would you propose and to what extent do you see that they would resolve the market failures identified, ideally with reference to the analysis set out Annex 4.

Q6.4 Do you agree with our assessment of unbundled tariffs as a potential remedy for the market failures identified? Do you agree with our assessment of the pros and cons of this approach? What do you consider would be the impact of the introduction of unbundled tariffs in this market? Ideally include in your response reference to the analysis set out Annex 5.

Q6.5 Do you agree with our assessment of maximum price as a potential remedy for the market failures identified? Do you agree with our assessment of the pros and cons of this approach? What do you consider would be the impact of the introduction

of maximum prices in this market? How should such a scheme be structured? Ideally include in your response reference to the analysis set out Annex 6.

Q6.6 Do you agree with our assessment of the impact of different options relating to calls to Freephone numbers summarised in this Section and set out in full in Annex 7? In particular, do you agree with our preference for 080 to be “free-to-caller”?

Q6.7 Do you agree with our assessment of the impact of different options relating to calls to numbers which prices are linked to the prices of geographic calls (03,0845,0870) summarised in this Section and set out in full in Annex 7? In particular, do you agree with our preference for 03 to be the only range with calls prices at geographic rates?

Q6.8 Do you agree with our assessment of the impact of different options relating to calls to revenue share ranges (084, 087, 09, 118) summarised in this Section and set out in full in Annex 7? In particular, do you agree with our preference for:

- Adoption of the unbundled tariff for these ranges, with a maximum tariff to apply for consumers’ protection on the Service Charge; and*
- 0845 to be treated the same as 0844?*

Q6.9 Do you agree with our assessment of the impact of different options relating to calls to 07 numbers which are not mobile numbers (070/076) summarised in this Section and set out in full in Annex 7? In particular, do you agree with our preference for reducing the revenues available from these calls so as to remove the incentives for fraud?

Questions on our assessment of the potential implementation issues

A13.5 The following questions relate to the analysis set out in Section 7 and Annex 7:

Q7.1 Do you consider 18 months would be a reasonable period for the implementation of an unbundled tariff structure? What are your views on staging for the potential implementation? In particular, would it be desirable to move more quickly to restructuring charging to reflect the new regime even if detailed billing would not be ready? What are your views of the technical cost of potentially introducing the new regime and how could implementation be staged to minimise these cost (see also Annex 7 for a discussion of costs)? What are your views on the communications’ challenges for potentially introducing this new structure and how should they be addressed?

Q7.2 Do you consider 6 months would be a reasonable period for the implementation of the maximum price structure? What are your views of the cost of the potential new regime and how could implementation be staged to minimise these cost? What are your views on the communications challenges for introducing this potential new structure and how should they be addressed?

Q7.3 What are your views on the implementation period of up to 6 months for the change to Freephone charges? What are your views of the challenges to the implementation of the new regime and how could implementation be managed to overcome these challenges and minimise any cost? What are your views on the communications challenges for introducing this potential new structure and how should they be addressed?

Q7.4 What are your views on the implementation period of up to 3 years for the modification of the 0870/0845/070/076 ranges? What are your views of the challenges to the implementation of the new regime and how could implementation be managed to overcome these challenges and minimise any cost? What are your views on the communications challenges for introducing this potential new structure and how should they be addressed?

Q7.5 Do you consider that the potential approach to the potential price publication obligations would be likely to be effective?

Q7.6 Do you consider 6 months would be a reasonable period for the implementation of the maximum price structure? What are your views of the cost of the potential new regime and how could implementation be staged to minimise these cost? What are your views on the communications challenges for introducing this potential new structure and how should they be addressed?

Q7.7 Do you consider that the potential approach to the potential price publication obligations would be likely to be effective?

Annex 14

List of respondents to the Call for Inputs

Organisations

- Alternative Networks
- BCH(Bristol) Ltd
- BSkyB
- BT
- C&W
- Citizen's Advice Bereau
- Consumer Focus
- Direct Marketing Association
- FCS
- FleXtel
- IPV6
- ITV
- O2
- Orange / T-Mobile UK
- PhonepayPlus
- Powwownow
- PRA
- Professional Telecoms Services Limited
- Scottish & Southern Energy (SSE)
- TalkTalk Group
- TelXL (NW7)
- Verizon
- Vodafone
- The Number

Individuals

- Chidlow, Mr F
- Cohen-Rose, Mr A (NW3)
- Daziel, Mr C
- Hickson, Mr D
- Kennedy, Mr
- Lindsay, Mr D (from saynoto0870)
- Mason
- Philips, Mr
- Robson, Mrs V (NW4)
- Rogers, Mr C (NW1)
- Ross, Mr N
- Roxborough, Mr A
- Sasse, Mr G (NW2)

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- Shah, Mr
- Skinner, Mr L (NW5)
- Strike, Mr R (NW6)
- Towers, Mr C
- White, Mr M
- 0800Handyman

Annex 15

Extracts from complaints to the Ofcom Advisory Team

A15.1 The table below sets out an extract OF callers' complaints to the Ofcom Advisory Team ('OAT')

Table A15.1 NGCS Complaints to the OAT from a typical month

Description	No. Range
Consumer is unhappy that [a mobile company] mobile charge him to call 0800 numbers he thought that they were part of his tariff allowance. Consumer is unhappy that they are not part of his tariff allowance. He is also unhappy that he is being charged for a Video call service when he did not realize that he had this on his tariff. He is very unhappy that [a mobile company] failed to offer him enough information on his tariff in general.	080
Consumer is unhappy that [a company] did not put an announcement about the cost of calling their 0871 customer service number when he called the number. He called Phone Pay Plus who said that [a company] need to put an announcement for 0871 numbers. PPP said they would open an investigation which would take 8 weeks. He is not happy about this PPP time frame and they referred him to Otelo. Otelo said that PPP were put in place by Ofcom. He wants Ofcom to take action immediately.	0871/2/3
Consumer is unhappy because [a landline company] [a landline company] [a landline company] has increased the cost of calling 0844/45 numbers and not informed. This has affected him as he uses a [a mobile company] [a mobile company] [a mobile company] 0844 access number for prepay. Internet. He wants to dispute [a landline company] his bill.	0843/4 0845
The consumer is unhappy that [a landline company] [a landline company] is charging customers 9p per minute [for 0844 numbers] whereas the number should only be up to 5ppm.	0843/4
The consumer is unhappy with [a landline company] [a landline company] . The consumer is unhappy with [a landline company] [a landline company] charging more for 08 numbers for indirect service. [a landline company] [a landline company] charges 11p per minute for an 0845 he uses for an indirect service. The consumer is unhappy also that [a landline company] [a landline company] have been giving conflicting and incorrect information on where these extra charges are coming from.	0845
The consumer advises that she has an anytime package but has found several 03 numbers have charged at £4.88 per minute. The consumer has complained to [[a landline company]] who seem to think this is correct.	03
By email: "Why am i being charged Premium rates when I use my mobile to dial 0800 numbers?"	080
Consumer called [a landline company] support on 090 PRS number but when she got through she received a recorded message asking her to call a 0871 number. Consumer feels this is a con and a means to generate extra revenue	090 0871
[a mobile company] contract mobile - Consumer called 118 118 to request contact details for an organisation. The operator put him directly through. He was on the call 2 hours. Today he has been notified the cost of the call of £98.00. Unhappy he was not advised he would charged for the connection and the cost is excessive.	118
[a landline company] package - Consumer checked her bill on line and noticed she has been charged to PRS 09 numbers which she did not make. She called [a landline company] to query charges who investigated and came back to say charges are correct.	09
Caller is unhappy that he has to pay continue his 0870 number with [a terminating company]. The company said this is because Ofcom removed revenue sharing. He did not want to leave any details when I asked him.	0870
Consumer is unhappy that [a company]y are using an 09 number for customer service which will cost £1.50 to call from his fixed line provider.	09
Caller states that her mother has been billed for calls made to premium rate numbers she does not recognise.	09
Consumer is unhappy because [a company] are making their customers call a 0871 number	0871

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and are kept on hold without answer, with calls costing 10p a minute. He did not log contact details.	
The consumer is unhappy with not being able to get through to [a company] on their 0871 number. The consumer feels that the airline is not conducting their business correctly on it.	0871
The consumer advises that she has received a large bill over £100 as she tried to contact an airline company on an 0871 number. The consumer was told on the call that it was 10p per minute where [a landline company] has charged 22p.	0871
The consumer was given several 070 to communicate with dealers online. The consumer did not know it would cost him 63 per minute to call them.	070
Consumer unhappy with proliferation of 0844 numbers. She feels that it is part of collusion between end companies and the service providers for revenue generation. She cited example of [an insurance company] switching to 0844[xxx]	0843/4
The customer is unhappy that her [a landline company] charged her £5 for a 6 minute call to an 0844 number.	0843/4
Consumer is unhappy that 084 numbers are not included in his 'landline' charges for his mobile contract. He thought that 084 numbers were landline numbers. He did not check his terms and conditions about 084 numbers. He would like mobile providers to state that 084 numbers are not landline numbers when selling contracts.	0843/4 0845
The consumer has a WLR with [a landline company] and has had at least 40 calls to the above number appear on her bill. The consumer does not recognise this number and wants some assistance. The consumer runs a small business and has an alarm system attached to the line.	0870
The company is concerned that [[a landline company]] is charging 10p per minute to divert calls from a GP to the out of hours service. The company thought the point of the 0300 number range was to make sure there was clear pricing.	03
The consumer is unhappy with [a landline company] . The consumer advises that he called an 0872 number advertised in a newspaper as 10ppm + additional network charges that may apply. The consumer did not check with [a landline company] but has ended up with a £800 bill for the calls. The consumer advises that [a landline company] has charged £1 per minute for the calls.	0871/2/3
Caller says he dialled the above number - thinking it was a mobile - and has been charged by his SP, [a landline company]. He says he received a text saying if he phoned the number he would get free minutes on his phone. He's now been charged 50p through his SP and they have told him to report it to Ofcom. Apparently a friend of his was billed over 15 GBP by dialling the same number.	076
Consumer called to say she dialled the directory enquiries service on 118 [xxx] and is very unhappy with the service. She said the advisor could not understand her. She said she kept her on the line a long time and when the consumer asked for the call not be transferred, she did this anyway. Consumer called back to complain and said she is now worried about the charges she will receive for calling the service.	118
Consumer is unhappy that his surgery advertise the cost of 0844 numbers used by them as being local rate which is misleading as it should be distinguished as being a 'lo-call rate'.	0843/4
Consumer is concerned that the 070 number range resembles mobile range numbers too closely therefore increasing the risks of consumers contacting such numbers under the pretence that they are standard mobile phone numbers under standard mobile phone rates. Consumer would like to log this issue as he has been charged for making such calls and suggests that such numbering services should not be permitted to prevent this type of detriment.	070
Consumer has his line with [a landline company]. He has received his bills and he has been charged for calls to 0330 at 0.073 GBP in the day and in the evening 0.03 GBP. He wants to know the cost of these calls.	03
I am unable to pay a telephone bill to [a landline company] using my bank's online payment service. All other utilities and individuals will accept payment directly into their bank account, as far as I am aware, and I would like [a landline company] to be able to do the same. I do not wish to make Direct Debits or to go through an expensive (0844) call centre to make a debit card payment. Cheque payments are also inefficient and can be costly as well.	0844
I answered an advert for a Land Rover on private sale tel no. 070[xxx] and did not get a warning of the premium cost charge	070
Consumer unhappy MNO do not include calls to 08 in their call packages. He gets free calls to national numbers and feels 08 should be included. Especially as most companies now use 08 numbers for contact	080 0843/4 0845 0870

	0871/2/3
Consumer is unhappy at the cost of calling 118 118. She wishes to log her concerns.	118
Consumer has a [a landline company] line and made calls to directory enquiries between July and August 2009. Consumer was given a phone number and was then asked if he would require the call to be connected. Consumer requested this to be done. Consumer then received a bill for £350 from [a landline company]. Consumer has said that he is upset with the lack of information given by directory enquiries as they didn't advise him of what the connection costs would be and the charge to call them.	118
Consumer is unhappy that [a landline company] [a landline company] charged three times as much for calls to numbers like 0870 numbers at 5p a minute rather than 2p a minute like other providers.	0870
Consumer has been charged for calls to 118 118 and has queried with her SP. SP, [a landline company] , has advised her to call Ofcom for an explanation. [a landline company] will cover the cost.	118
The consumer feels 070[xxx] is being mis-used as they are not advising of the cost of the call.	070
Consumer called to say he is unhappy with [a bank] as the contact number they are using is charged at a high rate and they have changed the service options which he believes is keeping him on the line longer. Consumer would like to log a complaint.	0843/4 0845
Consumer called to say he is unhappy that companies such as [a company] have begun to use 0844 numbers and believes they should not be able to use this. He said he would like to know whether the 0844 number will be included in local/national packages where he can dial them for free.	0843/4
Consumer called to say he has received a charge of 5.00 GBP for a 30 second call he made to a Directory Enquiries number. Consumer would like advice about this as he feels the charge is too high.	118
Consumer has called 070 numbers and been charged an extra amount for this outside of his normal tariff. He would like some advice on disputing this bill as he feels he shouldn't have been charged this amount for these calls. He has spoken to [a landline company] who say the tariff is set by the Auto Trader who use the number and that they won't provide him with a tariff summary for the services.	070
Consumer is unhappy with the surcharges used when he dials an 0844 access number via their network. He has been trying to find information on their charges but cannot find information on the [a landline company] website with regards to cost of calls to 0844 numbers	0843/4
Consumer is calling on behalf of her father. Consumer is concerned that an indirect access service number he dialled to make international calls, was advertised at a 1ppm but has actually appeared on his [a landline company] bill as 4ppm. Consumer seeks advice as to taking his complaint forward.	0843/4
Consumer is concerned that he has been charged in excess of 200 GBP from his MNO [a mobile company] for calls to the above 09 number, which was as an indirect access service. Consumer seeks advice as to the way forward.	09
Consumer is unhappy at the cost of calling the 08 range from his mobile phone. He says that he only has a mobile and would like these calls to be included in an inclusive call package.	080 0843/4 0845 0870 0871/2/3
Consumer has his mobile contract with [a mobile company] He dialled a 0845 number and he was charged 1.20 GBP for 2 minutes. He has checked their website he has learnt the cost for these calls are 0.20 GBP for a minute.	0845
Consumer has called as he is very unhappy that many companies use 0871 and 0870 numbers as their contact point. He feels that they should be obligated to supply a geographical number as an alternative. Consumer has refused to supply his first name.	0871/2/3 0870
Consumer is unhappy that there are companies who have 0871 numbers as their contact number. he contacted a company today and he was on hold for 30 minutes and it took him 2 hours to resolve his complaint. Also he said he called an 0871 number last week which cost him 0.10 GBP a minute. He is not happy	0871/2/3
Consumer has called as [a landline company] has charged her 18.00 GBP to ring a premium rate number. She has also been charged another 12.00 GBP for ring another premium rate number.	09

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She states that on the leaflet it says the amount to call from a BT line and then other networks may vary but she feels this is not clear enough.	
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Annex 16

Research reports relevant to this review

- A16.1 Below is a list of the research reports compiled for Ofcom relevant to this review, which are published on our website:
- 16.1.1 The 2008 Consumer Transparency in Numbering research (**the 2008 Consumer research**) by Futuresight, available at:
<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>
 - 16.1.2 The February 2009 Consumer Transparency in Numbering research by Futuresight (**the 2009 Consumer research**) summarised at:
<http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/annexes/transparency.pdf>
 - 16.1.3 The 2010 non-Geographic Call Services Review research by Futuresight (**the 2010 Consumer research**) published at:
<http://stakeholders.ofcom.org.uk/binaries/consultations/nongeo/annexes/nts.pdf>
 - 16.1.4 The 2010 Survey of Service Providers (SPs) report by AnalysysMason (**the 2010 SPs survey**) published at:
<http://stakeholders.ofcom.org.uk/binaries/consultations/nongeo/annexes/used-of-nongeo.pdf>
 - 16.1.5 The 2010 Analysis of the Flow of Funds by AnalysysMason (**the 2010 Flow of Funds study**) published at:
<http://stakeholders.ofcom.org.uk/binaries/consultations/nongeo/annexes/flow-funds.pdf>
 - 16.1.6 The 2010 report on the implementation costs of different tariffing and billing options by AnalysysMason (**the 2010 Implementation Feasibility study**) published at:
<http://stakeholders.ofcom.org.uk/binaries/consultations/nongeo/annexes/tariff-billing.pdf>
 - 16.1.7 Ofcom's **2010 Communication Market Report**, published at:
<http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr10/>

Annex 17

Past Ofcom's decisions and consultations

Introduction

A17.1 Below is a list of past consultations and decisions from Ofcom relevant to this review, which are published on our website:

- 17.1.1 Oftel's Statement on the Relationship between Interconnection Charges and Retail Prices for Number Translation Services, December 1999, at: <http://www.ofcom.org.uk/static/archive/oftel/publications/1999/consumer/nts1299.htm>
- 17.1.2 NTS call termination market review, 22 October 2004 (the "2004 NTS Termination Consultation") available at: http://www.ofcom.org.uk/consult/condocs/ntsctmr/nts_call_termination.pdf
- 17.1.3 Number Translation Services: A way forward, 28 September 2005 (the "2005 NTS Consultation") available at: http://stakeholders.ofcom.org.uk/binaries/consultations/nts_forward/summary/nts_way_forward.pdf
- 17.1.4 NCCN 500, 22 July 2008 (the "NCCN 500 Decision") available at http://www.ofcom.gov.uk/shared_ofcom/consultations/ca98_public_register/decisions/NCCN_500_FINAL_PUBLIC_310701.pdf
- 17.1.5 Review of the 070 Personal Numbering Range, 15 October 2008 (the "070 Consultation") available at: <http://stakeholders.ofcom.org.uk/binaries/consultations/070options/summary/070options.pdf>
- 17.1.6 Determination to resolve 0870 call termination rate disputes between BT and various operators, 17 June 2009 (the "0870 Dispute Determination") available at: <http://stakeholders.ofcom.org.uk/binaries/consultations/resolve0870calls/statement/determination.pdf>
- 17.1.7 Review of the fixed narrowband wholesale services markets, 15 September 2009 (the "Wholesale Narrowband Statement") available at: http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/summary/main.pdf
- 17.1.8 Determination to resolve a dispute between BT and each of T-Mobile, Vodafone, O2 and Orange about BT's termination charges for 080 calls, 5 February 2010 (the "080 Dispute Determination") available at: http://stakeholders.ofcom.org.uk/binaries/consultations/draft_deter_bt_tmobile_vodafone/nonconf.pdf
- 17.1.9 Determination to resolve a dispute between BT and each of Vodafone, T-Mobile, H3G, O2, Orange and Everything Everywhere about BT's termination charges for 0845 and 0870 calls, 10 August 2010 (the "0845/0870 Dispute Determination"), available at:

http://stakeholders.ofcom.org.uk/binaries/enforcement/competition-bulletins/closed-cases/all-closed-cases/761146/Final_Determination.pdf

- 17.1.10 Review of the fixed narrowband services wholesale markets: Further statement on wholesale transit markets and remedies in the wholesale call termination market, 5 February 2010 (the “Transit Statement”) available at: http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/statement/statement.pdf
- 17.1.11 Wholesale mobile voice call termination, 1 April 2010 (the “2010 Mobile Termination Consultation”) available at: http://stakeholders.ofcom.org.uk/binaries/consultations/wmctr/summary/wmvct_consultation.pdf

Annex 18

Glossary

- A18.1 **Adult Services:** Adult services are defined in the Plan as sexual entertainment services. That is an entertainment service of a clearly sexual nature or any service for which the associated promotional material is of a clearly sexual nature, or indicates directly, or implies that the service is of a sexual nature.
- A18.2 **Communications Provider ('CP'):** a person who provides an Electronic Communications Network or provides an Electronic Communications Service.
- A18.3 **Electronic Communications Services ('ECS') Provider:** a provider of a service consisting in, or having as its principal feature, the conveyance by means of an electronic communications network of signals, except in so far as it is a content service.
- A18.4 **Freephone:** a special services number that is not normally charged to the caller, except where charges are notified to the caller at the start of the call. Freephone numbers begin with 080 (e.g. 0800 and 0808) and also include the legacy 0500 range.
- A18.5 **Impact Assessment ('IA'):** an assessment of the impact of regulatory options on stakeholders as defined by Section 7 of the Communications Act.
- A18.6 **Internet Service Provider ('ISP'):** a company that provides individuals and other companies with access to the internet and other related services.
- A18.7 **National Numbering Scheme ('the Scheme'):** the day to day record of telephone numbers allocated by Ofcom in accordance with the National Telephone Numbering Plan, and as provided for in Section 56(3) of the Communications Act 2003.
- A18.8 **National Telephone Numbering Plan ('NTNP'):** a document setting out telephone numbers available for allocation and restrictions on the Adoption and other uses of those numbers, and as provided for in Section 56(1) of the Communications Act 2003.
- A18.9 **Network Charge Change Notice ('NCCN'):** a document Issued by BT to notify the industry of changes to BT's charges to the industry.
- A18.10 **Number Translation Services ('NTS'):** telephone services using the following numbers: Special Service numbers (including Freephone, special basic rate and special higher rate) and Premium Rate Services numbers ('PRS') (services currently provided under 090 and 091 number ranges). Within these ranges calls to 0844 04 numbers for Surftime internet access services and calls to 0808 99 for FRIACO ('Flat Rate Internet Access Call Origination') are excluded.
- A18.11 **NTS Call Origination Condition:** SMP Condition AAA11 set out in Part 2 of Schedule 1 to the Notification which is contained in Annex 8 of the Regulatory Statement completing the Review of the fixed narrowband services wholesale markets published by Ofcom on 15 September 2009.
- A18.12 **Pre Call Announcements ('PCAs'):** a pre recorded message played to the caller before the call is connected setting out how the call will be charged for.

- A18.13 **Pay-as-you-go dial-up internet access:** internet access that uses a dial-up connection over an analogue or ISDN telephone line.
- A18.14 **PhonepayPlus:** the premium rate services (PRS) regulator, formerly ICTSIS.
- A18.15 **Service Provider ('SP'):** a provider of voice or data services to third parties using non-geographic numbers.
- A18.16 **Ofcom Advisory Team ('OAT'):** Ofcom's contact centre for consumers of electronic communications services.
- A18.17 **Originating Communications Provider ('OCP'):** the Communications Provider on whose network a call originates. There can be fixed OCPs or mobile OCPs.
- A18.18 **Premium rate service ('PRS'):** a particular type of Number Translation Service provided on the 090 and 091 number ranges.
- A18.19 **Significant Market Power ('SMP'):** the Significant Market Power test is set out in European case law, the new EU Communications Directives and the Commission's SMP Guidelines. It is used by the National Regulatory Authorities such as Ofcom to identify those CPs who must meet additional obligations under the Access Directive.
- A18.20 **Short Messaging Service ('SMS'):** A means by which short text-based messages can be sent to and from digital mobile phones and other devices.
- A18.21 **Terminating Communications Provider ('TCP'):** the Communications Provider on whose network a call terminates.