A New Pricing Framework for Openreach

Second Consultation

Publication date: 5 December 2008

Closing Date for Responses: 20 February 2009

Contents

Section 1

Summary

Introduction

1.1 BT Group plc ('BT') is subject to SMP conditions including price controls and cost orientation obligations in relation to Wholesale Line Rental (WLR) and Local Loop Unbundling (LLU)

1.2 In 2005, BT offered and Ofcom accepted a set of undertakings ('the Undertakings') pursuant to Section 154 of the Enterprise Act 2002. These Undertakings included the commitment to establish a new organisation, Openreach, which is separate from the rest of BT.

1.3 Openreach is required to provide services to competing providers of telecommunications services ("CPs"). These include:

- WLR;
- LLU which includes fully unbundled lines (Metallic Path Facility or "MPF") and shared unbundled lines (Shared MPF or "SMPF"); and
- Ethernet services.

1.4 In May 2008, we published a consultation document, "A New Pricing Framework for Openreach" (the "First Consultation"[1]). This set out our proposals to review certain aspects of the regulatory regime, including the prices of all of these regulated access network services; certain other access and backhaul services are covered by the separate Leased Line Charge Control review. The scope of this review therefore includes the charges for WLR, MPF and SMPF rentals (the "Core Rental Services") and related services.

1.5 The First Consultation explained that the review would be held in two stages. The purpose of the First Consultation was to obtain Stakeholder views on a range of issues relating to the review, including the objectives, our proposed approach and the potential implications of different outcomes.

1.6 This, the Second Consultation, sets out a range of proposals for modified price controls. It also describes the key assumptions and parameters which will inform our final conclusions on the charge controls. The latter will be set out in a Statement which we expect to publish in the first quarter of 2009.

1.7 We have also begun a new market review on fixed wholesale narrowband services with a view to publishing a consultation around March 2009. This will consider, amongst other things, whether BT continues to have market power with respect to WLR services. A market review on wholesale local access is also expected to begin in 2009. It will consider the need for any future regulation of the other services to which our proposals relate, including MPF and SMPF.

[1] http://www.ofcom.org.uk/consult/condocs/openreach/openreachcondoc.pdf

1.8 However, we consider the current charge ceilings – which are fixed in nominal terms and unlimited in their duration - are no longer appropriate. We remain of the opinion, set out in the First Consultation, that the controls need to be reviewed now.

1.9 To provide the appropriate market context for this review, it is necessary to look ahead several years, which we have done through analysing the appropriate market and financial data to the end of 2012/13. In this document we, therefore, set out specific proposals for the adjustment of the relevant charges over the next 1-2 years, but in the context of the changes we anticipate over a full 4 year period.

1.10 The long term charge controls will be considered further as we complete the relevant market reviews. We would expect to rely on analysis and proposals set out in this consultation, and the Statement which will follow, in the event that we conclude that charge controls continue to be appropriate for the relevant access services.

1.11 There are significant uncertainties surrounding the short term macro-economic outlook and capital markets continue to exhibit unusual levels of volatility. Setting a new set of charge controls in this context is challenging. In particular, we recognise the possibility that certain eventualities (such as general price deflation) may present unforeseen challenges that necessitate review of the controls that we set following the consultation. In light of this we will closely monitor the effectiveness of our new controls, and intervene if such circumstances require.

The first consultation

1.12 In the First Consultation, we explained that the current charge ceilings for the Core Rental Services are fixed in nominal terms and have not changed since they were set in 2005. When they were first set, we indicated that it would be appropriate to review the charge controls within the first few years of operation.

1.13 There have been significant developments since these charges were set. CPs have invested heavily in LLU. Openreach and the CPs are also facing important decisions including those relating to potential investment in unbundling further local exchanges and other new infrastructure.

1.14 In the First Consultation, we also set out the financial evidence presented by Openreach at that time. This indicated that the prevailing level of the regulated charges may not be sustainable, and that there may also be a case for increasing the price of MPF relative to WLR. We invited Stakeholder responses on our initial views that:

- Infrastructure competition has been working well and is delivering substantial benefits to consumers;
- Openreach has been making a reasonable overall rate of return to date based on the prevailing regulated access prices;
- This is likely to change if the impact of cost inflation cannot be mitigated, thus potentially bringing into question the sustainability of the current price ceilings;

- There appears to be financial evidence to support a case for increases in the prices of the current regulated services;
- The strength of this evidence is critically dependent on a number of key assumptions; and
- The foregoing must be considered alongside other evidence, including international benchmarking and the impact price changes might have on infrastructure competition, consumers and future investment decisions.

Responses and other developments

1.15 We received 14 responses to our First Consultation. These are listed in Annex 16 and include responses from Openreach, other CPs, and organisations representing the interests of the communications industry and employees, and individuals. Non –confidential responses can be reviewed on our website[2].

1.16 Stakeholders generally agreed that infrastructure competition has been working well and agreed that this review should aim to promote efficient and sustainable competition in the future.

1.17 However, Stakeholders did not all agree that there is a persuasive case for price increases. Some stakeholders suggested that prices should fall. Stakeholders expressed a range of views on the key assumptions to be taken into account when determining charges, particularly regarding the appropriate rate of return and the potential for efficiency gains.

1.18 Several stakeholders also expressed the view that greater disclosure of the data underlying the case for price changes was necessary. In particular, they considered this to be necessary to ensure that the consultation process is informed and effective. We have drafted this document with this in mind.

1.19 Since these initial responses were received, we have also received further information from Carphone Warehouse and from Openreach. At our request, Openreach has also provided updated financial projections to cover the period to 2012/13. Openreach also revised (upwards) its assessment of the costs it considers should be recovered through the regulated charges. Carphone Warehouse's additional response is available with the other responses on our website. To the extent it has informed our proposals, we describe the further information provided by Openreach in this document.

1.20 The period since May, when we published the first consultation, has also been characterised by significant volatility in the financial markets. This is pertinent to our consideration of the appropriate cost of capital and is, therefore, a factor we have analysed further in this second consultation.

1.21 We consider that this new information is relevant to our assessment of the pricing framework for Openreach and should, therefore, be taken into consideration. This Consultation sets out this new information and analysis and shows how we have taken it into account in shaping our proposals.

[2] http://www.ofcom.org.uk/consult/condocs/openreach/responses/

The second consultation

1.22 Informed by the responses to the First Consultation and our own financial and economic analysis, we set out in this consultation our updated views on the underlying assumptions, and our initial views on the modified price controls that will be required as a result.

1.23 Our current views can be summarised as follows:

- The impact of general price inflation has - and will continue to - put upward pressure on the costs of providing the regulated services;
- Further, due to the fixed nature of some of Openreach's costs, the expected decline in demand for fixed lines, and the projected shift from WLR services to MPF, will create additional upward pressure on costs and the structure of charges;
- The impact on costs will be offset to some extent by efficiency gains, but it is unlikely to be mitigated entirely;
- We consider that Openreach's assessment overstates the need for price increases. Specifically, we consider that Openreach's analysis overstates the costs of providing the regulated services, and understates the scope for efficiency improvements; and
- Recent developments in the capital markets since May are likely to have implications for Openreach's cost of capital[3].

1.24 In conclusion, we believe that the evidence on Openreach's costs supports a general case for increases in the charges for the regulated access services. Further, we now consider that there is relatively greater need for an increase in the price of MPF rentals. The MPF rental price is currently less closely aligned with underlying costs than other Openreach services. We also consider that prices of other related services, such as migrations and provisions, may need to change, probably at around the rate of inflation.

1.25 This Consultation sets out our view on the direct evidence on the need for changes to the current regulated charges – including volume projections, cost levels, cost allocation, efficiency trends and the cost of capital. It also sets out our view on the other evidence that should be taken into account when determining if and how prices need to change. This includes international benchmarking and the impact price changes might have on competition, consumers and investment.

1.26 We also consider the impact of the possible outcome of this consultation on Openreach and other CPs in the context of the outcome of other related Ofcom projects, such as the Leased Line Charge Control review.

Proposals

1.27 Our final decision on the future charge controls will take account of responses to this consultation, including those relating to the assumptions to be taken

[3] Throughout the document references to Openreach's cost of capital refer to the cost of capital for the main existing Openreach business.

into consideration when determining the cost of providing the regulated services.

1.28 To inform this consultation, we have therefore constructed what we consider to represent reasonable "high" and "low" estimates of Openreach's future costs. These define the basis from which our proposed charge controls are derived. Having made our assessment of the likely range for costs in 2012/13, we have considered the rate at which the current charges should move towards these projections of costs over the next one or two years.

1.29 On this basis, our proposed ranges for the major new controls are set out in Table 1.1. These comprise two elements: the proposed price ceilings for 2009/10, and the proposed indexation of this ceiling into 2010/11 (in the case of MPF and SMPF).

Table 1.1 Proposed price changes

Service	Current price cap	Proposed charge from 1 April 2009	Proposed indexation on 1 April 2010
MPF rental	£81.69[4]	£85.00 to £91.00	RPI + 0.0% to RPI + 5.0%
SMPF rental	£15.60[5]	£15.60 to £16.20	RPI - 2.5% to RPI + 1.5%
WLR residential rental	£100.68[6]	£100.68 to £104.40	See paragraph 1.7
WLR business rental	£110.00[7]	£106.00 to £110.00	See paragraph 1.7

1.30 In summary we propose regulated charges as follows:

- MPF: an increase from £81.69 to between £85.00 and £91.00 on 1 April 2009, followed by an adjustment of between RPI + 0.0% and + 5.0% on 1 April 2010;
- SMPF: an increase from £15.60 to between £15.60 and £16.20 on 1 April 2009, followed by an adjustment of between RPI - 2.5% and + 1.5% on 1 April 2010;
- Residential WLR: an increase from £100.68 to between £100.68 and £104.40 on 1 April 2009;

[4] As set in the 30 November 2005 Statement, "Local loop unbundling: setting the fully unbundled rental charge ceiling and minor amendment to SMP conditions FA6 and FB6" (the "LLU Statement") http://www.ofcom.org.uk/consult/condocs/llu/statement/llu_statement.pdf

[5] Charge ceilings was set in the 16 December 2004 Statement "Review of the Wholesale Local Access Market" (the "WLA Statement")http://www.ofcom.org.uk/consult/condocs/rwlam/statement/

[6] Charge ceilings were set in the 24 January 2006 Statement, "Wholesale Line Rental: Reviewing and setting charge ceilings for WLR services "(the "WLR Statement") http://www.ofcom.org.uk/consult/condocs/wlrcharge/statement/statement.pdf

- Business WLR: a reduction from £110.00 to between £110.00 and £106.00 on 1 April 2009.

1.31 The final combination of 2009/10 charge and subsequent indexation will be determined such that – if an equivalent annual indexation were to apply until 2012/13 - it would deliver a price that equals our final assessment of the projected efficient fully allocated cost of each service in the final year.

1.32 For the purposes of illustration, in calculating the proposed indexation ranges for 2010/11 indexation shown in the table above, we have assumed that these start from the mid-point of the respective range for the proposed 2009/10 charges. The indexation ranges shown would, if applied to this mid-point starting charge, allow prices to approach fully allocated costs by 2012/13.

1.33 To the extent that the final set of assumptions supports prices towards the high or low end of the range for one service, it is likely to support a similar outcome for all services. We therefore expect to see MPF prices increasing relative to WLR prices.

1.34 The Wholesale Narrowband Market Review which we are undertaking will consider the potential requirement for the continuation of the WLR remedy in the longer term and any associated charge control in the longer term.

1.35 Our current assessment in the context of this review of the costs of WLR indicates that – if we were to set 2009/10 WLR charges at the mid-point of the ranges shown in table 1.1 - any future control on combined WLR rentals (business and residential) would, on average, need to allow prices to change at a rate of between RPI-3% and RPI+3%.

1.36 As set out in the First Consultation, Openreach provides a range of other services, related to the provision of rental services. These are currently subject to price control and/or cost orientation obligations. We propose that these services should be subject to price controls applied to appropriately defined baskets.

1.37 Our decision on the definition of these baskets will be informed by responses to this Consultation. However, we consider that the baskets should be designed to be straightforward to understand and implement, while minimising the risk of inappropriate incentives or disruption to the markets.

1.38 In broad terms, we intend to group these services into three baskets based on the underlying services – WLR services[7], MPF services and SMPF services – plus a fourth basket for services relating to the occupation of space in BT buildings. One-off price changes for some services within those baskets remain an option, although we do not consider there to be a case for significant changes to average prices within each basket. We currently expect to apply a similar control to each basket, with prices being allowed to increase at a rate similar to, or just above, inflation.

[7] If a control on a WLR services basket was considered appropriate following the outcome of the Wholesale Narrowband Market Review

Next steps

1.39 Stakeholders are invited to comment on the methodology employed and assumptions used in arriving at these proposals and the potential implications of these proposals. Responses should be submitted by 20 February 2009.

1.40 We intend to publish our statement before the end of March 2009 with an expectation that any new controls will take effect from 1 April 2009.

Section 2

Scope

Introduction

2.1 Openreach provides wholesale access services in which BT has SMP (WLR, LLU and Ethernet access) to all Communications Providers (including BT and its competitors) on an equivalent basis.

2.2 With respect to the WLR and LLU services, Openreach operates under controls that were introduced following SMP determinations in the wholesale narrowband and broadband access market reviews conducted by Ofcom and Oftel. These include:

- charge ceilings for the key LLU and WLR services;
- cost orientation obligations for most of the remaining LLU and WLR services; and
- broader SMP remedies requiring no undue discrimination, price publication and the public provision of audited regulatory accounts.

2.3 For ease of reference in this document, we have divided the services provided by Openreach into four categories, as follows:

- **"Core Rental Services"**, which include the WLR, MPF and SMPF rentals;
- **"Ancillary Services"**, which include the related services in the markets where SMP has been found. These can be further divided into three sub-categories, as follows:
    a. SMP services that are subject to price controls;
    b. SMP services that are subject to cost orientation obligations; and
    c. SMP services that are not subject to cost orientation obligations.
- **"Non-Regulated Services"**, which include the related services that are not subject to a finding of SMP; and
- **Services covered by the Business Connectivity Market Review** (which are outside the scope of this review).

2.1 The table below provides examples of the key services in each category.

Figure 2.1: service categories

1	2. Ancillary services			3	4
Core Rental Services	**a. SMP with price controls**	**b. SMP with cost orientation obligations**	**c. SMP with no cost orientation obligations**	**Non-Regulated services**	**Services covered by BCMR**
Residential WLR rentals Business WLR rentals MPF rentals SMPF rentals	some WLR transfers, MPF transfers, connections and network interventions, some SMPF connections	WLR connections, takeovers and some transfers, network services, ISDN 2 rentals, connections and transfers, MPF connections, room build and hostel rentals, some SMPF connections	ISDN 30 rentals, connections and transfers	Non-SMP services	e-PPC links and WES/BES rentals

2.2 The current charge controls predate the creation of Openreach. Fixed charge ceilings for WLR and LLU services were set as follows:

- For WLR, in the 24 January 2006 Statement, "Wholesale Line Rental: Reviewing and setting charge ceilings for WLR services";
- For MPF, in the 30 November 2005 Statement, "Local loop unbundling: setting the fully unbundled rental charge ceiling and minor amendment to SMP conditions FA6 and FB6"; and
- For SMPF, in the 16 December 2004 Statement "Review of the Wholesale Local Access Market".

2.3 As a result of these reviews, the charges for core rental services were set as follows:

Figure 2.2: current controls

Service	Charge before reviews in 2005 and 2006	Charge ceiling for annual rental, post 2005 and 2006 reviews
Residential WLR	£104.92	£100.68
Business WLR	£119.40	£110.00
MPF	£80.00	£81.69
SMPF	£53.00	£15.60

2.4 The other regulated services set out in Figure 2.1 are subject to a range of regulatory controls including cost orientation non-discrimination, price publication and the publication of audited accounts (which is also required in respect of the core rental services). Full details are provided in Annex 7.

2.5 In the First Consultation, we explained that

- The Core Rental Services and the Ancillary Services would be within the scope of this project.
- Services covered by the Business Connectivity Market review are beyond the scope of this project; and
- Our review of the Non-Regulated Services will be limited to ensuring that Openreach is not attributing costs to regulated services that might be more appropriately attributed to other services.

2.6 We explained that, in the Second Consultation, we would consider how the Ancillary Services should be taken into account in the new pricing framework.

2.7 There was general agreement regarding the scope of services to be considered within this review. Stakeholders provided detailed feedback on scope which we address in this second consultation. However, in general stakeholders agreed that there was a need for a broad based examination of the cost controls for the Core Rental Services and Ancillary Services subject to cost orientation.

2.8 Several stakeholders expressed concern relating to what was perceived by some to be the low level of costs allocated to some unregulated services. Openreach also considered it appropriate that the non-regulated Services were within the scope of the review, to ensure that the allocation of common costs across Openreach is appropriate.

2.9 This review will therefore consider the cost of providing the Core Rental Services and all Ancillary Services, and the allocation of costs across all services, including the Non-Regulated Services. However, as stated, it will not consider the prices for non-regulated services as they fall outside the relevant SMP conditions.

2.10 We invited Stakeholders' views on the appropriate objectives for this review. To some extent, the range of responses reflects the parties' specific interests in the outcome of this consultation. In light of the responses, we have refined the objectives in making our proposals as follows:

- to promote efficient and sustainable competition in the delivery of both broadband and traditional voice services;
- to provide regulatory certainty for both Openreach and its customers and to avoid undue disruption
- to ensure that the delivery of the regulated services is sustainable, in that the prevailing prices provide Openreach with the opportunity to recover all of its relevant costs (where efficiently incurred), including the cost of capital; and
- to maintain incentives for Openreach to innovate and improve service quality.

2.11 We are reviewing the controls now as we consider the current charge ceilings – which are fixed in nominal terms and unlimited in their duration - are no longer appropriate.

2.12 We are doing the review by reference to a 4 year forward look model. This allows us to provide the appropriate market context for this review, analysing the appropriate market and financial date to the end of 2012/13.

2.13 We are currently carrying out a market review for Fixed Narrowband Wholesale Services which we expect to complete in 2009. We are also shortly going to commence a market review for Wholesale Line Rental which we expect to complete in 2010. In light of these, we propose in this document adjustments to the relevant charges over the next one to two years but by reference to the evidence and analysis of the changes we anticipate over the full 4 year period. We expect the evidence and analysis from this review, therefore, to assist in the market reviews.

Links to other projects

2.14 We have recently undertaken, or are currently undertaking, reviews which are closely linked to the markets for narrowband and broadband access and which have a bearing on this review. In addition to the fixed narrowband review and the wholesale line rental review outlined above, these include:

- *Service Level Guarantees (SLGs).* On 20 March 2008, Ofcom published a statement entitled *Service level guarantees: incentivising performance*[8]. The statement included three Directions that required Openreach to amend its SLGs for certain wholesale access services to more closely align compensation with service performance and to help incentivise improved service performance. In the First Consultation, we sought views as to whether it was appropriate within the scope of this review to consider options for further performance incentives. In light of responses and the ongoing improvements to service quality, we do not consider that there is any requirement at present to introduce further incentives within this review. As set out in Annex 10, we will set charges based on the efficiently incurred level of SLG payments; and

- *The Lease Line Charge Control.* In the Business Connectivity Market Review, Ofcom considered the markets for wholesale symmetric broadband origination services, including Ethernet-based (or “alternative interface”) services. These include BES services which are the key backhaul products supporting LLU. Ofcom has today issued its statement on its finding that BT has SMP in the relevant market for these services and has made them subject to a charge control. The Leased Line charge control review, which is also consulting today, makes proposals for the appropriate charges for these services.

2.15 There are differences in the modelling approach between this review and the Leased Line Charge Control reflecting the differences in the services under review. Specifically, as the LLU and WLR services make up the bulk of the Openreach operations we have chosen to model the totality of Openreach costs drawing on Openreach planning information. As Leased Lines operations cut across most of the operational elements of BT the identification

[8] http://www.ofcom.org.uk/consult/condocs/slg/slg.pdf

of relevant costs and their relationship required the development of a unique model of unit costs.

Legal framework for this review

Our impact assessment

2.16 The analysis presented in Annex 5, when read in conjunction with the rest of this document, represents an impact assessment, as defined in section 7 of the Act.

2.17 Stakeholders should send any comments on this impact assessment to Ofcom also by the closing date for this consultation. Ofcom will consider all comments before deciding whether to implement its proposals.

2.18 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 means that generally Ofcom has to carry out impact assessments where its 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. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of its policy decisions. For further information about Ofcom's approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on the Ofcom website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

2.19 Specifically, pursuant to section 7, an impact assessment must set out how, in our opinion, the performance of our general duties (within the meaning of section 3 of the Act) is secured or furthered by or in relation to what we propose. We first set out below the prescribed statutory objectives within our general duties that we consider is of particular importance to our proposals before turning to specific objectives that we consider are relevant following our consideration of the responses on similar objectives as set out in our May 2008 consultation.

Section 3 – Ofcom's general duties

2.20 Under the Act, our principal duty in carrying out functions (such as making the present proposals) is to further the interests of citizens in relation to communications matters and to further the interests of consumers in relevant markets, where appropriate by promoting competition.

2.21 In so doing, we are required to secure a number of specific objectives and to have regard to a number of matters, as set out in section 3 of the Act. As to the prescribed specific statutory objectives in section 3(2), we consider that the objective of securing the availability throughout the UK of a wide range of electronic communications services objectives as particularly relevant to this consultation.

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

- the desirability of promoting competition in relevant markets;
- the desirability of encouraging investment and innovation in relevant markets; and
- the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom.

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

2.24 Ofcom has, however, a wide measure of discretion in balancing its statutory duties and objectives. In so doing, we will take account of all relevant considerations, including responses made in response to this consultation, before reaching our conclusions.

Section 4 – European Community requirements for regulation

2.25 As noted above, our proposals involve Ofcom exercising functions falling under the EU regulatory framework, the CRF. As such, section 4 of the Act requires us to act in accordance with the six European Community requirements for regulation.

2.26 In summary, these six requirements are:

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

2.27 We consider that the first and fifth of those requirements are of particular relevance to our proposals and that no conflict arises in this regard with those specific objectives in section 3 that we consider are particularly relevant in this context.

Question 2.1 Do you agree with the stated scope of the review in the context of the proposed market reviews for Fixed Narrowband Market Review and Wholesale Line Access? If not please provide your reasons.

Question 2.2 Do you agree with the proposed objectives for this review? If not please provide your reasons.

Section 3

Recent market developments

Introduction

3.1 In the First Consultation, we explained that this review must take account of the current market environment. With this in mind, we set out our assessment of the key market developments since the creation of Openreach and noted that access service competition has increased substantially while consumers have benefited from innovation in services and reductions in retail prices.

3.2 To inform our assessment of the market environment, we invited views on the key developments in the provision of access and line rental services and how these developments have affected customers and consumers. We also asked for views on the extent to which future developments would be affected by changes to the prices of LLU and WLR services.

3.3 Informed by responses to the First Consultation and other developments since May, this section sets out an updated summary of recent market developments and the implications for this review.

Recent market developments

3.4 As set out in the First Consultation, we consider that the creation of Openreach and the associated Undertakings and charge controls have helped transform infrastructure-based competition. Communication Providers including Carphone Warehouse, Tiscali, Orange and Sky have invested heavily in Local Loop Unbundling.

3.5 The rate of migration to LLU networks has been substantial. LLU connections grew from around 1 million lines to around 2 million lines between 06/07 and 07/08 and we estimate total LLU will be around 5 million by the end of 08/09. This has been both new growth and in competition to existing broadband delivery with a substantial fall in non-LLU DSL connections, the majority of which are provided using BT's wholesale products. Service bundling has also been a major driver of LLU take-up, with a number of major LLU operators offering free or reduced-price broadband to consumers who also take the service with other fixed, mobile or pay-TV services.

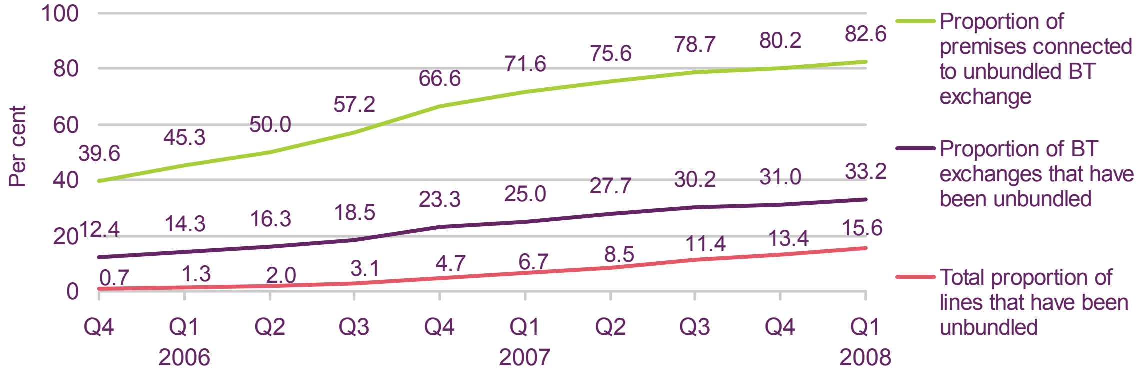
3.6 During 2007 the number of BT Retail DSL subscribers increased by 33% to 4.1 million, while Virgin Media's cable modem subscriber base increased by 12% to 3.4 million. BT remained the largest retail provider during 2007 and its market share increased by three percentage points to 26.5% (though this is largely due to the acquisition of PlusNet and Brightview.) This year, we have seen Sky increase its presence in the market both drawing on its existing satellite customer base and new customers.

3.7 By January 2008, there were almost 1,800 unbundled exchanges in the UK. This represents nearly a third of all exchanges and provides over 80% of the UK population with a choice of at least two providers. Around 60% of the UK population now has a choice of four or more network providers (excluding cable). Around 60% of homes now have broadband access, up from 7% in

2002. The UK now has the fifth highest number of broadband lines per person in Europe[9].

3.8 The proportion of premises connected to an unbundled local exchange is now over 82%. This represents around 33% of all exchanges (see Figure 3.1). We consider that there have been clear benefits to the entire nation from increased competition in the delivery of voice and broadband services.

Figure 3.1 Proportion of unbundled exchanges and connected premises



Source Ofcom/operators

3.9 The ability of Communications Providers to compete at the infrastructure level has been a key driver of the nature and extent of competition. LLU has given operators the flexibility to offer differentiated services to their customers, allowing true diversity in service offerings.

3.10 Taken together WLR and LLU have led to a substantial change in the competitive voice environment since 2004. Prior to 2004 carrier pre-selection was the only real competitive option aside from cable. As figure 3.2 shows there has been a massive increase in access services provided by Communications providers other than BT, with the trend towards the provision of a complete access package (either WLR + CPS or full LLU).

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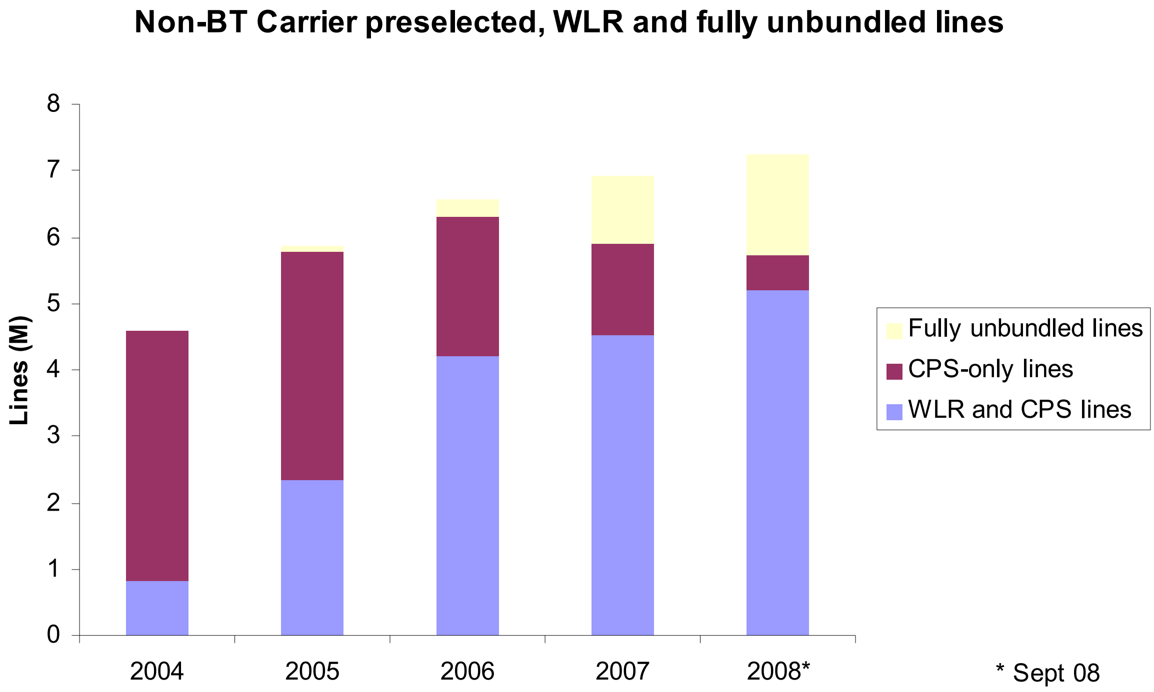
[9] European Commission Progress Report on the Single European Electronic Communications Market 2007(13th Report) 19 March 2008 (the report defines penetration in terms of lines per person) http://ec.europa.eu/information_society/policy/ecomm/library/communications_reports/annualreports/13th/index_en.htm

Figure 3.2



Source: Ofcom / operators

Stakeholders' views

3.11 Respondents agreed that there has been a major transformation in the telecommunications market since 2005.

3.12 Respondents noted that the development of Openreach and the changes to wholesale level processes for LLU and WLR have allowed operators to compete successfully with BT and each other, with clear benefits in terms of price and consumer experience.

3.13 Sky noted that competition based on WLR and CPS has given consumers lower prices and increased choice of provider but has not offered much in the way of innovation. Sky suggests that this can be attributed to the lack of infrastructure competition. However, Sky notes that the present regime has helped foster a highly competitive retail broadband sector.

3.14 C&W's comments reflected those of several respondents noting that until November 2005 "alternative investment in broadband services was low. As the majority of services were based on BT's IPStream and Datastream inputs the retail market was essentially full of 'me too products'".

3.15 C&W also noted that, "Since the November 2005 decision, the UK market has seen major investment in broadband networks and services…The results of this substantial investment by alternative providers has led to the availability of innovative service packages, increased broadband bandwidth availability (at generally the same price or lower prices than before) and the wider availability of bundled communications and entertainment packages.

Consumer expectation is that they will receive greater bandwidths for the prices they paid for far lower bandwidths in previous years."

3.16 Openreach noted that the creation of Openreach, through functional separation from the rest of BT Group, and the provision of services on an Equivalence of Inputs basis, have given CPs greater confidence to make investments in the different access and line rental products. They argued that the main benefits that customers have experienced have been generated through service improvements, the streamlining of processes and the added confidence that heightened transparency gives to other providers, in doing business with Openreach.

3.17 Some stakeholders, however, suggested caution regarding recent developments:

- Thus suggested that residential consumers probably gained more than business consumers from the changes, with the lack of appropriately dedicated business wholesale variants reducing the scope for innovation and fully effective competition in business markets.

- SSE and Thus also noted that there remain issues with respect to the provision of wholesale services in terms of quality and flexibility, but they also suggest that the solution will largely rely on on-going efforts by all parties.

3.18 Most respondents agreed that the current pricing structure has been a major driver of the growth of LLU and WLR, although there was some disagreement on the sustainability of the structure, and the sensitivity of the market to future price movements. CPW argued that the likely impact of any wholesale price change will be a simple 'pass through' to retail prices. They noted that "the residential retail market for telephony and broadband services is increasingly competitive with several large scale players. In this environment any excess retail prices/margins tend to be competed away quickly – Ofcom's no SMP finding in the WBA market 3 in effect supports this conclusion. Therefore, any rises in wholesale input prices is likely to quickly feed through to retail level – the exact level and speed of pass through will depend on prices rises between different products e.g. MPF versus SMPF/WLR/CPS."

3.19 Some respondents, including Tiscali, argued that the current price structure - including the relative prices of LLU and WLR - was critical to the growth of LLU and the willingness of providers to invest in infrastructure located at BT exchanges. They argued that the market remains highly sensitive to any changes in absolute and relative prices which would lead to major impacts on future growth and investment.

3.20 Openreach argued that pricing is only one aspect of the movement to LLU. It argued that there are a range of factors beyond the scope of Openreach that impact CP's business models and investment decisions and hence market developments. These include:

- The cost of inputs from other suppliers (such as content);

- The growing competition from wireless and cable solutions; and

- The extent and nature of downstream competition.

3.21 Openreach has also argued that the recent successes would be threatened if the pricing of services was allowed to continue to move out of line with the underlying costs as, they argue, has been the result of the current fixed charges.

3.22 Other respondents argue that charges should accurately reflect costs so that there is not an inappropriate imbalance of charging between LLU and WLR, that could either distort demand or impose an unfair burden of costs on one service rather than another. For example, one individual respondent stated, "I have a simple point to make as a consumer - I should not be penalised financially for being a BT WLR customer, especially if I have no LLU options".

Implications for this review

3.23 It is clear that there have been significant positive changes to the nature of the telecommunications market since 2005 as a result of the creation of Openreach, existing structure of regulated charges and the gradual improvement in Openreach's service delivery. Together these factors have allowed a range of competitors to enter the market offering differentiated, competitively priced propositions to the benefit of consumers.

3.24 Stakeholders' views as to the sensitivity of the market with respect to changes in the current framework vary. It is clear that WLR and LLU pricing is not the only factor influencing decisions on future investment but it is equally clear that it is an important determinant.

3.25 Stakeholder responses have also highlighted the need to ensure that the pricing framework provides appropriate price signals to investors and to consumers. The framework must be sustainable and ensure that future investment is efficiently made.

3.26 This document is an Impact Assessment including in particular, Annex 5, and sets out our assessment of the implications of alternative pricing structures on the market in the context of overall service costs and service delivery alternatives.

Question 3.1 What do you consider to be the key developments in access service competition and has your assessment changed since the First Consultation?

Question 3.2 How should we take account of these developments and possible future developments when developing our final proposals?

Section 4

Openreach's current financial performance

Introduction

4.1 We explained in the First Consultation that Openreach has operated profitably to date and, based on our estimates, has delivered overall rates of return which have exceeded our previously determined cost of capital for Openreach. However, we noted that the combination of regulated prices that are fixed in nominal terms, rising costs and the shift from WLR to MPF means that Openreach's returns are falling and are likely to continue to do so if prices remain unchanged.

4.2 With this in mind, we have considered (and asked stakeholders to comment on) whether there appears to be a compelling case for a review of the price controls now.

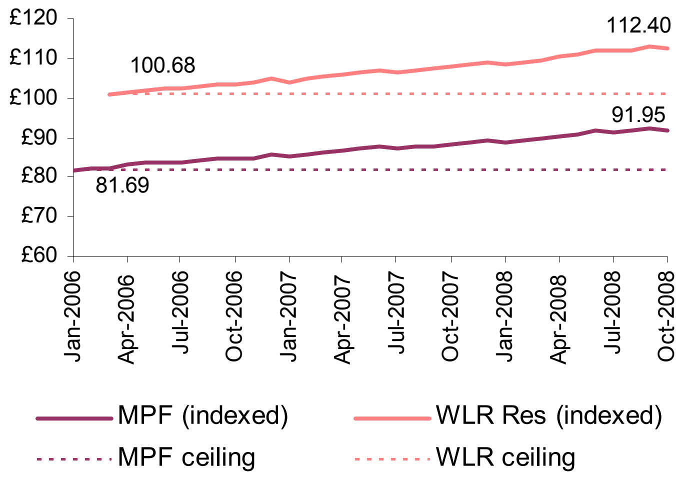
4.3 Since May, Openreach has published its Regulatory Financial Statements for the year to 31 March 2008 ("2007/08"). These provide additional insight into Openreach's financial performance and the context for a review of the controls. Informed by this new information and the responses received to the First Consultation, this section sets out an updated summary of Openreach's financial performance to date and describes the implications for this review.

Openreach's performance to date

4.4 The current charge ceilings were set in 2005 and 2006. The ceilings were fixed in nominal terms. Since then costs have increased with inflation. To the extent that Openreach is unable to offset the effects of inflation by delivering efficiency gains, this combination of increasing costs and fixed charges will put pressure on Openreach's financial performance.

4.5 Graph 4.1 illustrates how the MPF and WLR ceilings may have changed if they had been allowed to increase in line with inflation since it was implemented in January 2006.

Graph 4.1: illustration of MPF and WLR charges if allowed to increase with RPI



4.6 In the First Consultation, we set out an assessment of Openreach's financial performance on three bases, as follows:

- For Openreach as a whole, on an Historical Cost basis;
- For Openreach as a whole, on a Current Cost basis; and
- For the Core Rental Services (WLR, MPF and SMPF), on a current cost basis

4.7 Historical cost information is relevant in any assessment of Openreach's financial performance. However, for the reasons set out in Ofcom's Statement on valuing copper access, published in August 2005[10], we consider that financial data prepared on the basis of Current Cost Accounting ("CCA") principles provides the appropriate basis for valuing BT's copper assets for the purpose of determining charge controls for WLR and LLU[11]. For similar reasons, we consider that the current cost financial statements provide the most relevant basis for considering Openreach's financial performance in the context of this review.

4.8 We explained that it is not always straightforward to derive accurate assessments of profitability and the related underlying rates of return. For example, it is necessary to make several adjustments – particularly when looking at returns on a current cost basis - to arrive at a view that is representative of the underlying performance of a business.

4.9 However, based on the assessment presented in the First Consultation, it appeared that Openreach's rate of return on assets employed, to date, has exceeded Ofcom's previous estimate of Openreach's cost of capital of 10%.

[10] http://www.ofcom.org.uk/consult/condocs/copper/value2/statement/statement.pdf

[11] For the purpose of setting charge controls, we use an adjusted CCA value for BT's copper assets. As explained in the statement on valuing copper access, the regulatory asset value ("RAV") for assets acquired before August 1997 is based on the closing historical cost accounting value, increased each year by the Retail Price Index to ensure it is not eroded by inflation. Over time the RAV adjustment will gradually disappear as the pre-1997 assets are replaced.

However, the same evidence also suggested that those returns are now falling. Within this overall picture, the regulated Core Rental Services (WLR, MPF, SMPF) were, on average, less profitable than was the case for Openreach as a whole, and their overall profitability exhibited a steeper rate of decline.

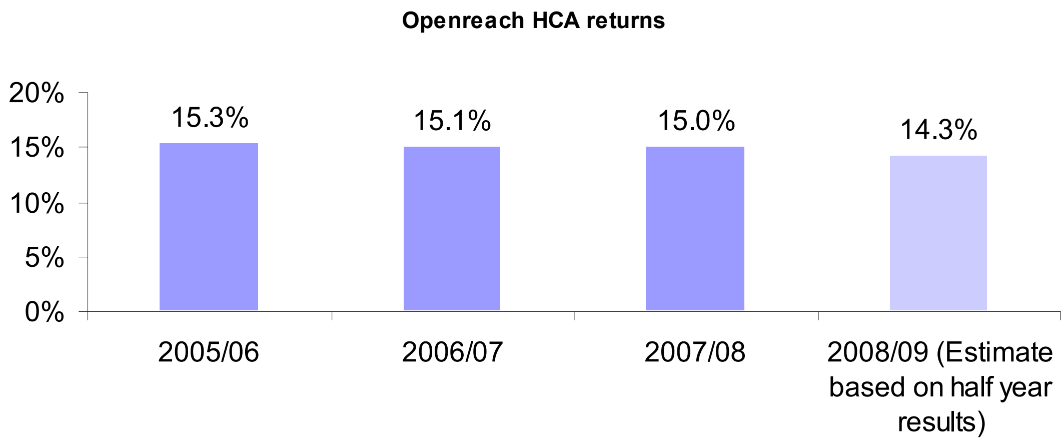
4.10 We identified a number of drivers behind these declining returns, which included the following:

- The fact that the regulated rental charge controls are currently fixed in nominal terms;
- The reductions in the aggregate number of lines in service;
- The changing mix of services, with a shift from WLR to MPF, which appears to make a lower contribution to fixed and common costs than WLR;
- The impact of continuing inflation on the costs of providing and maintaining all services; and
- The impact of efficiency gains which, although material, appear not to have been sufficient to offset fully the impact of inflation on costs.

4.11 Since publication of the First Consultation, new information has become available to inform our assessment of Openreach's performance. Specifically, the 2007/08 regulatory financial statements have been published. We now have a better understanding of Openreach's likely financial performance for 2008/09.

4.12 Based on Openreach's results for the six months to September 2008, we estimate that the decline in returns for Openreach as a whole – as measured on an HCA basis - is likely to continue, as illustrated in the graph below.

Figure 4.1



4.13 The 2007/08 regulatory financial statements were published in September 2008. These provide a view of BT's and Openreach's financial performance in current cost terms as well as reporting the services on an individual basis.

4.14 The statements report a return on mean capital employed of 11.5% for 2007/08, compared with 7.7% (subsequently restated to 8.0%) for the previous year. However, as noted above it is necessary to make a number of adjustments to estimate the underlying rate of return on a CCA basis.

4.15 These adjustments were explained in detail in our First Consultation, but can be summarised briefly as follows:

- The elimination of any asset write offs;
- The removal of actual holding gains (which can fluctuate widely from one year to the next), to be replaced by a more representative holding gain, based on the underlying rate of inflation; and
- The removal of other one-off items, and inclusion of certain other changes to the accounts, to ensure consistency with the approach adopted previously by Ofcom, including the approach to asset valuation as set out in the statement on valuing copper access and the adjustment of certain costs to reflect Ofcom's regulatory treatment.

4.16 On this basis, we estimated in the First Consultation that the underlying return made by Openreach in 2006/07 was around 13%, when measured on a current cost basis. Based on our updated view of the appropriate cost adjustments to be made in light of our further financial analysis described in this document, we now estimate that the underlying return for Openreach as a whole was around 14% in 2006/07 and between 13% and 14% in 2007/08.

4.17 In the First Consultation document, we also estimated that, based on Openreach's assessment of the returns made on the individual rental services, the aggregate CCA/FAC returns for the Core Rental Services were around 12% in 2006/7 and were therefore less than for Openreach as a whole.

4.18 As set out in Section 5, Openreach now estimates that – across the Core Rental Services - it made a return of around 10% in 2007/08 and predicts that the rate of return will continue to fall. Based on our calculations set out in Section 5, we consider that the underlying rate of return in 2007/08 – as adjusted to exclude one off adjustments and other changes to the accounts to ensure consistency with the approach previously adopted by Ofcom is between 13% and 14% in 2007/08 falling to between 12% and 13% in 2008/09.

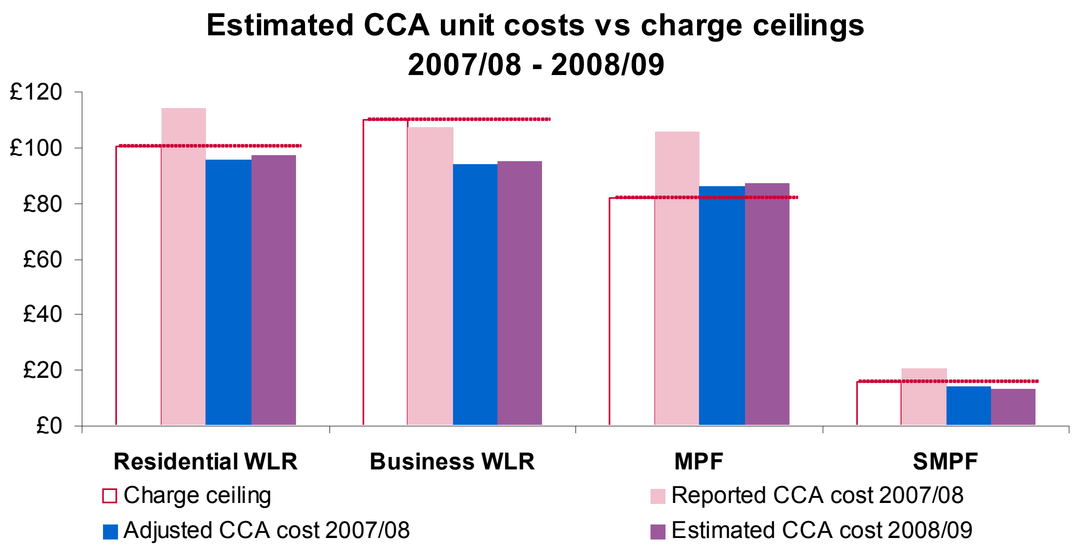
4.19 In addition to the financial data for 2007/08, we have the operating budget for 2008/09. We have put this data through our model to give us the most relevant up to date information available.

4.20 The graph below compares the current charge ceilings for each of the Core Rental Services to the following benchmarks, based on a 10% cost of capital:

- The CCA FAC unit cost of providing each service, as reported in the 2007/08 regulatory financial statements;
- Our estimate of the CCA FAC unit cost of providing each service, adjusted on a similar basis to that described above for the overall returns in 2007/08; and

- Our forecast of the CCA FAC unit cost of providing each service, adjusted on a similar basis in 2008/ 09, and based on the 2008/09 budget to which Openreach is working.

Figure 4.2



4.21 This analysis is consistent with the view presented in the First Consultation. Specifically, the cost of providing MPF may already exceed the regulated charge while the cost of providing WLR services – and residential WLR (which represents the bulk of WLR demand) in particular - is likely to increase towards the ceiling in the current year.

4.22 As explained above, increasing costs and movement in demand away from WLR towards MPF, is likely to cause Openreach's returns to decline over time assuming charges stay at their current levels.

Implications for this review

4.23 The evidence summarised above indicates that, overall, Openreach's financial returns have exceeded our previously published estimate of its cost of capital.

4.24 However, for the reasons described above, Openreach's returns are falling and are likely to continue to fall to the point where its returns no longer cover its cost of capital within the next four years, particularly for the Core Rental Services.

4.25 In light of the considerations above, we previously set out our view that there was a need to consider whether the current charge controls need to be modified to ensure that they continue to promote efficient and sustainable competition. The evidence gathered since May confirms this view.

4.26 Some stakeholders agreed that it was now appropriate to review the charge controls. For example, Thus considers that that there is "a strong case for reviewing the price controls, given that Ofcom had previously indicated that a review would take place on the proposed timescales, and given the significant price movements that have occurred over the last few years in key inputs such as energy and copper". CWU and Connect stated that, "with the shift from WLR to MPF services, as well as rising costs and the declining returns …the time is right for a review of price controls".

4.27 Openreach argued that the key drivers behind the need for a review of the charge ceilings are:

- overall volumes of copper access lines are set to decline but much of Openreach's cost base is fixed in nature;
- the "product mix" is rapidly changing so that customers who were buying WLR+SMPF are moving to MPF, resulting in material loss of revenue without a corresponding reduction in costs;
- there is considerable inflationary pressure on inputs to the Openreach business and the effect of other government legislation/regulation (e.g. more stringent environmental standards); and
- previous regulatory cost and asset adjustments are now unwinding (and adding to the input cost inflation).

4.28 Conversely, several stakeholders did not accept that there was a case for a review of the price controls now. Orange argued that it had seen little evidence that BT's costs are changing. Vodafone stated that the argument for reviewing Openreach's prices relies on three premises – that the existing returns on regulated services are a correct assessment; and there is a robust case for projecting an increase in Openreach's costs; or there is an imbalance in returns between WLR and MPF prices – and none of these justifies a case for changing Openreach's prices at this time.

4.29 Most of the arguments against the review were directed against the need for price rises rather than the review itself. Specifically, several respondents commented on the need for BT to share more information to support its case for price increases. For example, Sky argued that Ofcom should not, "start from a position that Openreach's controls require increasing but should query whether or not changes are required and, if so, what levels can be justified".

4.30 Having taken account of all of these responses, and in light of the latest financial information received since the First Consultation, for the reasons set out below, we continue to be of the view that it is appropriate to review these charge controls at this time.

4.31 We also recognise stakeholders' need for enough information to enable an informed response to our proposals

Question 4.1 To what extent should our assessment of Openreach's financial performance to date inform our final decisions for a new financial framework?

Section 5

Review of the financial evidence

Introduction

5.1 In this section, we set out our current view on the financial case for price changes for the Core Rental Services. This is based on our assessment of the total and unit costs for each of the Core Rental Services and the assumptions we have taken into account in making these projections. We set out our assessment of the total cost of providing the Core Rental Services, followed by our view of the underlying unit costs.

5.2 Section 6 explains why we intend to place considerable weight on this cost evidence in proposing changes to the charge controls for the Core Rental Services. It also sets out the other factors that must be taken into account when considering if and how prices should be allowed to change.

Background

5.3 As is explained in Section 6, we have taken Fully Allocated Current Cost Accounting (CCA FAC) principles as providing the most practical, appropriate, basis for determining the cost of providing services.

5.4 Prior to the First Consultation, Openreach provided, at our request, projections of estimated CCA returns and service unit costs for the period to March 2012. The unit cost projections provided by Openreach were calculated on a fully allocated current cost (CCA FAC) basis, and included a 10% return on capital employed. These calculations formed the basis of the analysis set out in the First Consultation.

5.5 Following publication of the First Consultation, we asked Openreach to provide updated financial projections to cover the period to 2012/13. Openreach provided these projections and also revised (upwards) its assessment of the costs it considers should be recovered through the regulated charges and included a 12% return on its capital employed.

5.6 As explained above, we consider that it is appropriate to use a four year period as the basis for the modelling of forward costs. We consider that the four year period allows us to take a medium term view of the impact of changes in costs, volume and efficiency levels.

5.7 The financial data provided by Openreach is set out in Annex 9, together with an explanation of its approach to the calculations and the relevant underlying assumptions. The calculations assume that prices remain at their current level and that demand for its services is in line with the volume scenario set out in Annex 11.

5.8 On this basis, Openreach has provided the following estimate of how its costs and revenues might change between now and 2012/13.

Table 5.1: Openreach estimate of CCA costs and revenues, assuming current prices remain fixed in nominal terms

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£'m	£'m	£'m	£'m	£'m	£'m	CAGR
Revenue	**5,266**	**5,215**	**5,179**	**5,203**	**5,040**	**5,008**	**-1.0%**
Pay	985	1,003	1,037	1,109	1,127	1,124	2.7%
Non Pay	2,591	2,567	2,586	2,565	2,480	2,420	-1.4%
Operating cost	**3,577**	**3,570**	**3,623**	**3,674**	**3,608**	**3,544**	**-0.2%**
EBITDA	**1,689**	**1,644**	**1,555**	**1,529**	**1,432**	**1,464**	**-2.8%**
Depn	468	568	635	699	769	823	11.9%
EBIT	**1,221**	**1,076**	**920**	**830**	**663**	**641**	**-12.1%**
ROCE %	13%	11%	9%	8%	6%	6%	
Mean Capital Employed	**9,459**	**9,530**	**9,969**	**10,261**	**10,526**	**10,733**	**2.6%**

5.9 Openreach's projections indicate that, overall, its returns would fall below the Ofcom view of its cost of capital for the first time in 2009/10, if its prices remain unchanged.

5.10 On the same basis, Openreach has provided the following estimate of its costs and revenues for the Core Rental services in the period to 2012/13, as set out in table 5.2 below

Table 5.2: Openreach estimate of CCA costs and revenues: Core Rental Services, assuming current prices remain fixed in nominal terms

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£'m	£'m	£'m	£'m	£'m	£'m	CAGR
Revenue	**2,687**	**2,670**	**2,660**	**2,488**	**2,249**	**2,091**	**-4.9%**
Pay	541	572	572	576	601	597	2.0%
Line cards and TAMS	274	273	270	233	158	99	-18.5%
Accomodation	273	281	300	308	317	326	3.6%
Stores, contractors & misc	156	139	136	135	134	133	-3.1%
Corporate Overheads	101	104	103	99	103	105	0.8%
IT	138	143	137	133	138	140	0.3%
Fleet	87	90	89	92	93	95	1.6%
Other	66	58	62	54	42	36	-11.2%
Operating cost	**1,636**	**1,659**	**1,669**	**1,629**	**1,587**	**1,531**	**-1.3%**
EBITDA	**1,051**	**1,012**	**991**	**858**	**662**	**560**	**-11.8%**
Depn	329	403	458	508	559	599	12.7%
EBIT	**722**	**609**	**532**	**350**	**103**	**-39**	**-155.8%**
ROCE %	10%	9%	7%	5%	1%	0%	
Mean Capital Employed	**7,056**	**7,047**	**7,343**	**7,534**	**7,700**	**7,821**	**2.1%**

5.11 Openreach's projections therefore indicate that, across the Core Rental Services, it will make a return of less than 10% this financial year. Further, it estimates that – if prices were to remain unchanged and the other assumptions set out in Annex 9 were to prove correct – its profit across the Core Rental Services would decline from around £722 million in 2007/08 to become a loss of £39 million by 2012/13.

5.12 At our request, Openreach has provided a reconciliation between its calculated profit in 2007/08 and the return reported in the audited 2007/08 regulatory financial statements. The reconciliation is set out in Annex 9. We are satisfied that the reconciliation identifies the key differences between the two figures.

5.13 As shown in Annex 9, Openreach's calculations indicate that the current profits are generated mainly on the WLR services, with MPF and SMPF making only a marginal contribution to overall profits. In addition, as demand shifts from WLR to MPF, the contribution that was being generated by the WLR services is lost and not replaced by increased contribution from the other services.

5.14 Openreach's projections also reflect a number of other factors (not all of which we accept or agree with, as we discuss later). These include the following:

- Pay costs, which are projected to increase by around 10% in the period. This is the result of projected pay inflation of RPI + 1% offset to some extent by efficiency improvements;

- Line card and text access matrix costs, which track Openreach's projected migration of customers from WLR and SMPF to MPF;

- Accommodation costs, which increase in line with inflation, much of which – including rent inflation – is not offset by efficiency gains

- Energy costs, which are projected to increase significantly in the short term.

5.15 We have attempted to explain the significant increase in the net depreciation charge is in broad terms, which is the consequence of three separate factors. This is our interpretation of the calculations provided by Openreach. Broadly our explanation comes close to the actual numbers with the differences being in the detail of asset lives and other complexities.

- *Asset Inflation*. Normalised depreciation in 07/08 was £646m. Asset inflation at 3.5% per annum for five years results in an increase of around £120m to depreciation. Offsetting this are holding gains. In 07/08 normalised holding gains were £261m. Inflating the holding gain by 3.5% per annum for five years results in an increase of around £35m. On this basis we estimate the increase in net depreciation to be about £86m.

- *Regulatory unwinds* – this affects net depreciation in three asset areas

  - RAV. The RAV adjustment to net depreciation is unwinding. In 07/08 we estimate that there is seven years of RAV unwind for Copper which falls to two years by 12/13. We estimate the equivalent figures for Duct to be 29 years falling to 22 years. The 07/08 RAV adjustment for copper was £21m; we estimate this falls to (£21m x 2/7) £6m by 12/13, a £15m decrease. For Duct the adjustment was £51m in 07/08, we estimate this falls to (£51m x 24/29) by 12/13, a fall of £9m. These falls in the RAV adjustment add £24m to net depreciation.

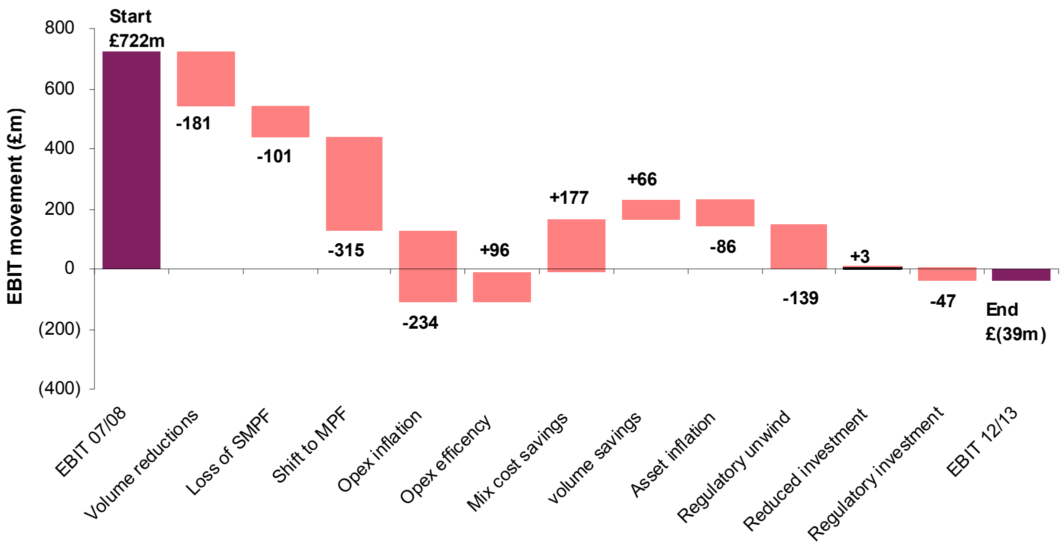
  - Asset Lives. In 06/07 the asset life of copper was extended from 15 years to 18 years whilst the asset life of Duct was extended from 38 years to 40 years. The accounting impact was that in 06/07, there was a holding gain and an increase in the asset value. These both result in increases to the net depreciation charge going forward. The charge increases from the old steady state to the new steady state over a period equal to the change in the asset life. For Copper we estimated the increase, based on 07/08 net depreciation of £280m to be (£280m x 2/16) £35m. For Duct we estimated the increase, based on 07/08 net depreciation of £162m to be (£162m x 1/39) £4m.

- o Dropwire. Dropwire has been capitalised since 00/01 with a 10 year life, previously it was expensed. The impact of this change is that net steady state depreciation is not reached until the asset base is complete, which is ten years. Based on net depreciation of £165m in 07/08, which is seven years into the build up, net steady state depreciation will be (£165m x 10/7) £235m by 12/13, an increase of around £71m.

- Steady state IT spend for Core Services is approximately £60m per annum. The starting depreciation in 07/08 was at a low £15m, due to the relative young age of the assets and other BT accounting policies (namely classifying a large proportion of cumulative IS spend as work-in-progress). The average life of the computing assets is around 4 years, and in the following years, the depreciation increases rapidly on these assets to equal the average steady state capex spend of £60m.

5.16 Notwithstanding the above, a decline in profits of more £750 million over five years would represent a significant deterioration in financial performance. Indeed, several respondents expressed surprise at a similar projected level of decline – between 2006/07 and 2011/12 – set out in the First Consultation. We therefore asked Openreach to set out the main drivers behind this trend in more detail. Openreach's analysis is set out in Figure 5.4.

Figure 5.4: Key drivers of change in revenues and costs from Core Rental Services



5.17 Openreach's analysis illustrates the impact of another factor on its overall returns: the effect of changes to overall volumes and the mix of those volumes.

5.18 A decline in the aggregate demand for fixed lines will reduce overall profits because of the fixed nature of some of Openreach's costs. Therefore, as demand declines, revenues fall in line with volumes but costs fall to a lesser extent.

5.19 Further, as noted in Section 3, the cost of providing MPF may already exceed the regulated charge while the cost of providing WLR services is currently close to or below the ceiling. Therefore, any movement in demand away from WLR towards MPF, will cause Openreach's returns to fall. Openreach's projections assume that roughly 14 million lines will migrate to MPF.

5.20 In addition, the migration away from WLR results in a reduction in demand for SMPF. Each SMPF rental makes a contribution to Openreach's common costs. The loss of that contribution reduces Openreach's profits.

5.21 Overall, we estimate that over £400 million of the decline in the contribution made by the Core Rental Services in Openreach's projections can be attributed to the combined effects of the reduction in overall volumes, the migration to MPF and the loss of SMPF. The effect of Openreach's inflation forecasts, offset to some extent by its efficiency assumptions, reduces the forecast profit further.

5.22 As explained below, we consider that Openreach's cost modelling follows a logical approach, and provides a useful starting point for our modelling of Openreach's costs. However, the projected costs depend on the underlying assumptions. We do not accept all of Openreach's assumptions and consider that Openreach's cost estimates and the extent of the decline in profits illustrated above are overstated as a result.

Openreach's basis of calculation

5.23 Openreach's cost estimates are derived from a model used by Openreach for internal planning purposes.

5.24 The model takes account of the numbers of activities multiplied by task times. The base year of the model is 2007/08 and it reflects the actual hours spent on each activity. The 2008/09 data is a mixture of actual time spent in the period to June 2008 (extracted from Openreach's monthly management accounting system) and forecast activity levels.

5.25 The forecasts are a function of product volumes and task times, with the latter being subject to efficiency adjustments. The model has effective annual hour and cost per FTE assumptions (including training, fleet, stores etc). Volume parameters include orders, connections, number of lines, rentals, faults per lines and capital expenditure programmes.

5.26 The outputs of the cost forecast model (including labour hours, total volumes and total costs) feed into a cost allocation model along with data from other sources (including data on the Regulatory Asset Value and transfer charges).

5.27 The cost allocation model combines this information with financial and operational allocation data to calculate product profitability and unit costs on a CCA basis. Allocations bases are consistent with those adopted in the regulatory financial statements (although not in the same level of detail).

5.28 Costs are first allocated to activities. Where it is possible to match costs to specific activities, the allocation basis reflects this. Activity costs are then allocated to products and services. Where the activity relates to a specific product, the activity cost is allocated directly to that product. In other cases, the costs are shared between the relevant services. We consider the appropriateness of the allocation bases later in this section.

Ofcom's review of the financial evidence

5.29 Openreach has provided Ofcom with functional versions of the models used to generate its cost projections.

5.30 For the reasons given in Annex 10, we consider that Openreach's model provides a robust starting point for our modelling of Openreach's costs. We have therefore used this model to inform our estimates of the cost of providing the services.

5.31 However, the cost estimates are ultimately dependent on the assumptions used in the calculations. In this respect, we do not accept that Openreach's calculations provide the appropriate basis for determining regulated prices.

5.32 We set out our early thoughts on some of the key assumptions in the First Consultation. Our detailed review of the key assumptions, which takes account of responses to the First Consultation, is set out in Annex 10. A summary of our current views is set out in Table 5.4 below, alongside the assumptions proposed by Openreach in its cost projections: the 'estimates' or 'ranges' on which we are consulting are set out in **bold** in the column labelled 'Ofcom view'. Our final view on the appropriate assumptions will be informed by responses to this consultation.

Table 5.4: Key assumptions

Assumption	Openreach view	Ofcom view
a) Aggregate volumes	Openreach's view is set out in Annex 11 but can be summarised as follows: Copper Lines reduce by 7% between 2007/08 and 2012/13	As set out in Annex 11, the decline in demand for fixed lines is likely to continue but Openreach's projected decline appears to sit at the high end of a plausible range. We consider that the low end of this range could be defined by a decline at about half the rate proposed by Openreach. **Decline in volumes by 2012/13: 3.5% to 7%**

Assumption	Openreach view	Ofcom view
b) Change in mix	As set out in Annex 11, Openreach's volume scenario anticipates the migration of around 14 million lines to MPF between 2007/08 and 2012/13 (and the loss of around 7 million SMPF lines)	As set out in Annex 11, the rate of migration to MPF reflected in Openreach's volume scenario in our view sits at the high end of a reasonable range. After allowing for the effects of the decline in aggregate volumes we estimate that Openreach's projections represent the migration of around 14 million lines from WLR to MPF. We consider that the actual rate of migration could be around 25% lower. Our assumptions are likely to fall in the following ranges, but we are keen to get stakeholder views on these projections. **Increase in demand for MPF by 2012/13: 10m to 14m lines. Reduction in demand for SMPF by 2012/13: 7m to 8m lines**.
c) Inflation	General inflation will run at an average rate of 3% per annum. Pay costs increase at 1% above inflation. Energy costs increase by 50% in 2008/09 before following general inflation.	A rate of 3% is below the current rates of RPI and CPI inflation (both currently around 5%) but is above the Bank of England target for CPI inflation. For the time being we consider it represents a reasonable basis for an average rate for long term forecast and the same rate is assumed in our calculation of the RPI – X control. One respondent noted that BT's most recent pay settlement was calculated at RPI + 0.5%. We consider that this defines the low end of the range for long term increases in pay cost. Our final decision on pay inflation will be consistent with our approach to efficiency. Energy prices increased significantly in the first half of 2008 (as illustrated by BERR's energy price index). We understand that Openreach's projected increase was based on the terms of a forward contract. However, some energy prices are now falling. We may need to revisit this assumption in our final assessment of costs. **Inflation: RPI = 3.0%** **Real wage inflation: 1.0%**
d) Efficiency target	Efficiency gains of up to 1% should be achievable on costs controllable by BT	As set out in Annex 14, we consider that efficiency gains around the high end of our earlier range of 1- 4% per annum should be achievable on costs controllable by BT. **Efficiency target: 2% to 4%**

Assumption	Openreach view	Ofcom view
e) Reduction in fault rates	Fault rates will remain static beyond 2007/08	As set out in Annex 11, we expect fault rates to continue to decline at between 4% and 6% per annum. **Fault rates are likely to continue to fall by 4% to 6%**
f) Cost allocation	Costs are allocated from Group to Openreach and from Openreach in accordance with a defined set of allocation bases.	As set out in Annex 10, we consider that, in general, the allocation bases adopted by Openreach appear reasonable. However, some of the Non-Regulated Services do not appear to pick up an appropriate share of costs. On this basis, some costs may be over-allocated to the regulated services. We set out our proposals for dealing with the potential over-allocation of costs to the regulated services in Annex 10. **Some reallocation of costs to unregulated services may be appropriate**
g) Group Costs	Openreach picks up a fair share of group costs	As set out in Annex 10, we consider that Group costs have been allocated to Openreach on an appropriate basis. Our view has been informed by a review of the allocation bases by KPMG, which concluded that "the allocation of costs from BT Group to Openreach (are) reasonable". The level of these charges is also reviewed in Annex 10. This review takes account of the separate KPMG review on efficiency levels. The overall efficiency assumption (see above) reflects some potential for efficiency improvements across the group costs but we do not propose any major adjustments, other than those specifically identified below. **No significant adjustment to Openreach's assessment of its contribution to group costs is required**
h) Pension costs	Openreach's cost forecasts include an annual charge to meet future liabilities of members of the defined benefits scheme (at 19.5% of pensionable pay, with 6% met by employee) and Openreach's share of an additional payment by BT Group to cover a deficit identified in the triennial valuation.	Our cost assessment should include the annual charge to meet future liabilities of members of the defined benefits scheme. However, as explained in Annex 10, we do not currently consider that regulated charges should include any amount in relation to the cost of funding the deficit, or related 'top-up' payments. **Regulated charges should not include any contribution to the funding of the pension deficit**

Assumption	Openreach view	Ofcom view
i) Line cards	Line card costs should be recovered on the basis of the number of services provided.	As set out in Annex 10, Openreach's estimated cost stacks for WLR include what we consider to represent a reasonable charge for line cards that includes both legacy PSTN and voice related 21CN costs. Data related 21CN costs are not included in Openreach's projections for the Core Rental Services. The cost per WLR line increases from around £12 per line in 2007/08 to around £13 in 2012/13. **Allocation of line card costs by number of services does not provide an unreasonable basis for setting the WLR charge at the present time.**
j) SLG payments	SLG payments should be recovered based on the level that would be incurred by an efficient operator	Openreach should expect to recover the cost of meeting SLG payments to the extent that such costs would be incurred by an efficient operator. Ofcom has calculated an efficient level of SLG payments based largely on Openreach's own targets for service improvement which have been shared with industry. Our assessment of the level of payments is lower than Openreach's estimate. **SLG payments can be recovered to the extent that such costs would be incurred by an efficient operator**
k) Light User Scheme ("LUS")	Openreach should not absorb the cost of the cost of the LUS. Its forecast includes an estimate of this cost.	The LUS provides a reduced line rental to lower income customers of BT retail as mandated by Ofcom and the Universal Service Directive. For the reasons set out in our consultation on BT's regulatory financial reporting, of 17 April 2008, attributing a cost of the LUS to Openreach's service is not consistent with Ofcom's conclusion that the net cost to BT of the universal service obligations was relatively small, with most of the benefit accruing at the retail level. Ofcom will be beginning a review of USO funding in 2009.**LUS costs should not be recovered through regulated charges**
l) Regulatory Asset Value ("RAV")	Openreach's cost forecasts include an assessment of the RAV adjustment necessary to restate the value of assets acquired prior to August 1997 from a CCA value to an indexed HCA value. This adjustment declines over time as these older assets are written off.	As explained in Annex 10, the (RAV) was created to prevent over- or under-recovery of cost related to assets purchased prior to August 1997. Having examined Openreach's RAV calculations, we consider that they are in accordance with Ofcom's Statement on valuing copper access and provide a consistent basis for dealing with the RAV adjustment. **We do not intend to adjust Openreach's calculation of the RAV adjustment at this stage.**

Assumption	Openreach view	Ofcom view
m) Dropwire costs	Openreach's projections do not adjust the Dropwire asset base to take account of the Ofcom 2005/06 determinations. In calculating dropwire depreciation, Openreach includes all capital relating to residential dropwires installed between 2000/01 and 2004/05.	The dropwire adjustment relates to the costs of installing and maintaining the copper wire that links the end users premises to the distribution point in the street. As explained in the First Consultation, we consider that including a proportion of capital relating to residential dropwires installed between 2000/01 and 2004/05 represents an over-recovery of costs. This is because until December 2005, the Residential Retail Price Control had set allowed for the full recovery of dropwire operating and capital costs for BT retail residential customers. We therefore propose an adjustment in line with our previous approach. **Dropwire costs should be adjusted to avoid over recovery of costs. However, we accept Openreach's estimate of the impact of the adjustment.**
n) Line length adjustment	Openreach's projections apply the same methodology to determine line length as that used in the regulatory accounts.	The effect of Openreach's approach is to determine an average line length reduction of 6% for MPF when compared to a residential WLR line. In our view, Openreach's approach provides a reasonable basis for determining the line length adjustment. **No additional line length adjustment is proposed.**

5.33 We have recalculated the cost projections to take account of a our views set out above. On this basis, we have generated what we consider to represent a reasonable range of cost projections, ranging from a "low" cost case to a "high" cost case, as set out in the tables below.

Table 5.5: Ofcom 'high-case' estimate of costs and revenues for Core Rental Services, assuming current prices

	Aggregate CRS: high case					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£m	£m	£m	£m	£m	£m
Revenue	**2687**	**2670**	**2660**	**2488**	**2249**	**2091**
Pay	465	492	477	471	493	473
Line cards and TAMS	264	263	261	225	153	95
Accomodation	264	271	290	297	305	313
Stores, contractors & misc	150	133	129	126	122	120
Corporate Overheads	97	100	98	94	97	97
IT	133	138	132	126	130	130
Fleet	84	86	83	84	83	83
Other	31	22	26	19	6	-1
Operating cost	**1489**	**1506**	**1497**	**1441**	**1389**	**1311**
EBITDA	**1198**	**1164**	**1163**	**1047**	**860**	**780**
Depreciation inc holding gains	253	335	398	452	509	556
EBIT	**945**	**829**	**765**	**595**	**351**	**224**
ROCE %	13%	12%	10%	8%	5%	3%
Mean Capital Employed	**7056**	**7047**	**7343**	**7531**	**7693**	**7809**

Table 5.6: Ofcom 'low-case' estimate of costs and revenues for Core Rental Services, assuming current prices

	Aggregate CRS: low case					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£m	£m	£m	£m	£m	£m
Revenue	**2687**	**2670**	**2660**	**2553**	**2365**	**2249**
Pay	448	473	462	429	454	425
Line cards and TAMS	254	254	252	225	171	120
Accomodation	254	262	280	286	293	300
Stores, contractors & misc	145	128	122	117	112	107
Corporate Overheads	94	97	93	87	88	86
IT	128	134	120	113	114	112
Fleet	81	82	78	77	74	73
Other	21	12	15	10	-1	-6
Operating cost	**1425**	**1442**	**1422**	**1344**	**1305**	**1218**
EBITDA	**1262**	**1229**	**1238**	**1209**	**1060**	**1031**
Depreciation inc holding gains	253	335	394	444	494	535
EBIT	**1009**	**894**	**844**	**766**	**566**	**496**
ROCE %	14%	13%	12%	10%	7%	6%
Mean Capital Employed	**7056**	**7047**	**7330**	**7502**	**7644**	**7752**

5.34 An analysis of the revenues and costs for each of the Core Rental Services is set out in Annex 10, together with explanations of the key differences between our cost estimates and Openreach's projections.

5.35 As set out in the tables above, the above projections suggest that, in 2012/13, Openreach is likely to be making returns across its core rental services of between 3% and 6% on its mean capital employed, assuming charges remain at the current, nominal levels. These estimates can be compared to the return of 0% projected by Openreach as shown in Table 5.2.

5.36 Having formed a view on Openreach's projected costs and profitability, we also need to establish the appropriate cost of capital. This data can then be taken into account in determining the unit cost stacks for the regulated services.

Openreach's cost of capital

5.37 In the First Consultation we set out our initial view on the proposed approach to estimating Openreach's cost of capital. As set out in Annex 12, we have updated our estimates with recent data, taking into account respondents views and additional analysis.

5.38 At the time of the First Consultation, we noted the great uncertainty in global credit markets, and the challenges this presented in determining Openreach's cost of capital. Since then the international capital markets have continued to deteriorate, with a number of financial institutions failing or receiving substantial state funding, both in the UK and the rest of the world.

5.39 The financial turmoil has increased uncertainty in equity and credit markets, resulting in rapid, material changes to cost of capital inputs, some of which may be short-term in nature, and some of which may be more structural.

5.40 We need to take account of these changes in a way that reflects the outlook over the next few years, as well as taking account of current market circumstances, which remain very volatile. This is, inevitably, a complex exercise and requires a good deal of care to be taken when disaggregating the effects and causes of recent market movements.

5.41 In the First Consultation, we proposed an estimated range for Openreach's pre-tax nominal Weighted Average Cost of Capital (WACC) of 9 – 10% (vs 2005 figure of 10.0%). Our proposed range for the pre-tax nominal WACC for the rest of BT was 10 – 11% (vs 2005 figure of 11.4%). These ranges were consistent with a BT Group range of 9.5 – 10.5%.

5.42 As set out in Annex 12, we have taken into account changes to the parameters of WACC estimates and re-calculated our range of estimates for Openreach's pre-tax nominal WACC to 9.25 – 10.75%. Our proposed range for the pre-tax nominal WACC for the rest of BT is 10.25 – 11.75%. These ranges are consistent with a BT Group range of 9.75 – 11.25%.

5.43 Our calculations are based on the methodology employed previously by Ofcom, other industry regulators in the UK and the Competition Commission. This involves determining a WACC which takes account of the balance of debt and equity financing, where the latter is determined by drawing on the Capital Asset Pricing Model. The key assumptions, and the ranges underlying our current estimates of Openreach's WACC, are set out in the following table.

	May 2008		December 2008	
	Openreach	**Rest of BT**	**Openreach**	**Rest of BT**
Equity Risk Premium	4.5 – 4.75%	4.5 – 4.75%	4.5 – 5%	4.5 – 5%
Equity Beta	0.7 – 0.8	0.9 – 1.0	0.75 – 0.85	0.95 – 1.05
Risk-free rate	4.2 – 4.6%	4.2 – 4.6%	4.1 – 4.8%	4.1 – 4.8%
Debt premium	2 – 3%	2 – 3%	2 – 3%	2 – 3%
Optimal Gearing	35%		35%	
Pre-tax nominal WACC[12]	**9 – 10%**	**10 – 11%**	**9.25 – 10.75%**	**10.25 – 11.75%**

5.44 Our new estimate of BT's equity beta is based on an updated report from the Brattle Group, which suggests that BT's beta has increased slightly since the First Consultation.

5.45 The ERP estimate has also increased as we exercise a cautious approach to this metric, and choose a higher range from our plausible range of estimates. We believe this approach is in keeping with higher levels of uncertainty and volatility in the market.

5.46 The observed risk-free rate, as measured by nominal gilt yields, has fluctuated wildly in recent months. Our range has broadened to reflect this. Whilst longer-term averages have remained reasonably close to the values set out in the First Consultation, we note that nominal spot gilt rates have recently shown a marked decline, currently offering a yield of close to 3%.

5.47 To determine our range for the risk-free rate, we have analysed average yields over the last 3 months, 6 months, 1 year, 2 years, 3 years and 5 years. These average yields cover a range of 4.1 to 4.8%, which we have adopted as our new proposed range for the risk-free rate. Our reasoning for de-emphasising the spot risk-free rate (and other spot rates) is set out below.

5.48 We have also considered whether it would be appropriate to base the calculation of the WACC largely on the basis of current spot rates. These would imply, for example, a lower risk-free rate (c. 3% versus 4.1 - 4.8%), and a higher BT corporate debt premium (c. 4% versus 2 - 3%). We have concluded that the market remains too volatile and too uncertain to project forward these rates with confidence.

5.49 Thus, whilst we recognise that BT's corporate debt is currently trading at premia which exceed the values used to define our range for the WACC, we also note that these premia may not be a reliable indicator of the true cost of debt financing now and in the future.

[12] We consider it prudent to round our range estimates of the WACC at this stage to the nearest 0.25%.

5.50 We will continue to monitor trends in corporate financing costs leading up to the preparation of our Final Statement and will adjust our estimate as appropriate at that point.

Calculation of unit costs

5.51 Our detailed estimates of the unit costs of the Core Rental Services are set out in Annex 10. Openreach has also provided estimates of the unit costs for the Core Rental Services. They include a 12% return on capital employed. Openreach's explanation for the increases in its estimated unit costs is set out in Annex 9. The graphs below set out unit cost estimates for the main regulated services on four basis:

- Openreach's cost estimates assuming 12% WACC;
- Openreach's cost estimates, assuming 10% WACC;
- Our 'low case' cost estimates; and
- Our 'high case' cost estimates.

5.52 The Ofcom estimates reflect the range of assumptions described in Annex 10 and summarised in tables 5.7 to 5.10 above. The Openreach estimates reflect Openreach's assumptions on cost and the different estimates of the WACC (i.e. 10% v 12%). In each case we have also shown the current level of the regulated charge.

Figure 5.7

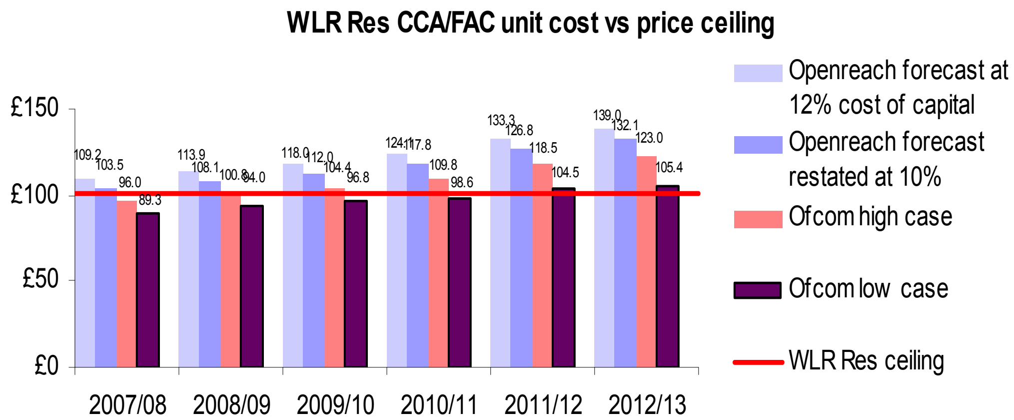


Figure 5.8

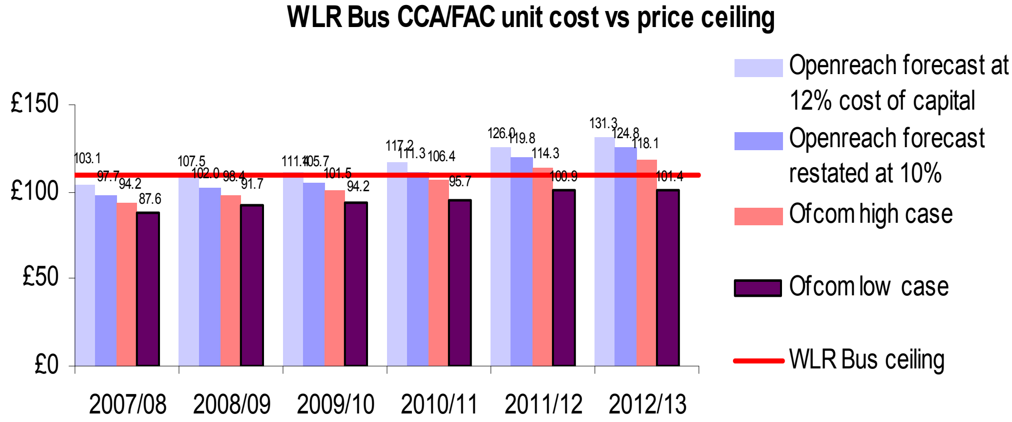


Figure 5.9

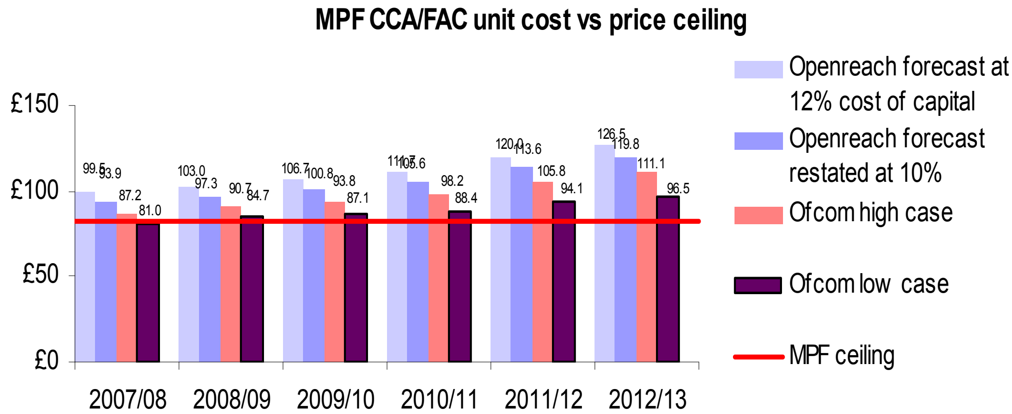
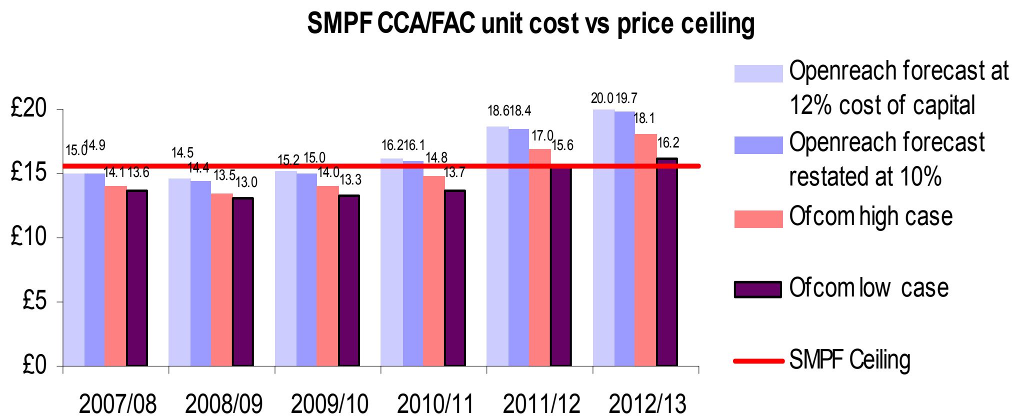


Figure 5.10



5.53 The upward trends in costs are consistent with the inflationary price pressures described in this section. The large increase in the unit costs between

2010/11 and 2011/12 is partly a consequence of the large projected decline in volumes in that period, coupled with the fixed nature of some of the costs.

Conclusions

5.54 The financial evidence set out in this section supports a general case for increases in the charges for the Core Rental Services. Further, the fully allocated cost projections set out in this section indicate that there is relatively greater need for an increase in the price of MPF rentals. The MPF rental price is currently less closely aligned with underlying costs than other Openreach services.

5.55 Section 6 explains why we intend to place considerable weight on evidence based on fully allocated costs as part of our review to determine the appropriate pricing regime for the Core Rental Services. However, it also explains why we consider that international price benchmarking suggests that the cost estimates may still represent an overstated view of required prices.

5.56 Further, Section 6 sets out the other factors to be taken into account when considering if and how prices should change.

Question 5.1 With reference to Annex 11, what are your expectations for future levels of demand for fixed lines and the mix of this demand between MPF and WLR?

Question 5.2 With reference to Annex 12, do you agree with our approach to estimating Openreach's cost of capital? If not, please provide evidence to support your view.

Question 5.3 With reference to Annex 14, do you agree with our approach to estimating Openreach's ability to deliver further efficiency gains in the future? If not, please provide evidence to support your view.

Question 5.4 Do you have any comments on the absolute levels of costs or cost trends projected in Section 5 and Annexes 9 and 10?

Question 5.5 Please provide any comments and evidence you may have to inform our assessment of the cost projections and key assumptions set out in Section 5 and in Annex 10

Section 6

Implications for charges

Introduction

6.1 In Section 5, we set out our assessment of the fully allocated current cost ("CCA FAC") of providing the Core Rental Services. In this section we explain why we intend to place considerable weight on this cost evidence in deciding on whether and how to modify the price controls for the Core Rental Services. We also set out the other factors that we consider must be taken into account when considering if and how prices should be modified.

6.2 Specifically, we explain that:

- We will place significant weight on CCA FAC in determining the appropriate charges for the Core Rental Services;
- Any assessment of the CCA FAC should reflect an efficient level of costs;
- Our assessment of efficiently incurred CCA FAC will be informed to a significant extent by the cost projections set out in Section 5;
- In assessing cost and charge levels, it will also take account of other sources of evidence, including international price benchmarking; and
- In determining if and how prices should change, we must also consider the potential implications of that change on, for example, competition and consumers.

6.3 In light of these points, we consider that existing charges should be adjusted by way of a glide path which aims to avoid undue disruption caused by rapid changes in prices. We consider that the glide path should allow the charges for each of the Core Rentals to move into line with CCA FAC within four years.

6.4 In its simplest form, a glide path would mean that prices increased at a constant annual rate. However, in theory, the rate of change could change each year. We consider, for example, relatively higher or lower increases in the opening year of any control.

6.5 Section 7 sets out some additional considerations to be taken into account in respect of the other services which fall within the scope of this review. Section 8 sets out how we intend to take these various factors into account in determining the appropriate pricing regime for both Core Rental Services and the other services.

Basing regulated charges on fully allocated costs

6.6 The projected cost stacks set out in Section 5 are prepared on a CCA FAC basis. If applied consistently to Openreach's regulated services, basing prices on the underlying efficient CCA FAC should prevent excessive charging and also ensure that the delivery of the regulated services is sustainable by allowing Openreach an opportunity to recover all of its relevant efficiently incurred costs.

6.7 As a basis for modifying charges, the use of CCA FAC also offers some important practical advantages, including:

- It is a widely understood concept and has been the anchor point for many previous price controls; and
- It uses data that can be reconciled to the regulatory financial statements, which are audited and, generally, in the public domain.

6.8 CCA FAC should therefore generally represent a predictable way of setting charges. A predictable methodology may have advantages in terms of building confidence in the regulatory regime. This may in itself help to encourage efficient investment. However, CCA FAC is not the only way of setting charges. When the current MPF charge ceiling was set in November 2005, we also considered setting charges on the basis of long run incremental costs with equi-proportionate mark-up (LRIC+EPMU).

6.9 There is little to choose between CCA FAC and LRIC+EPMU on efficiency grounds. Both involve accounting rules for recovering common costs from different products without regard to the implications for efficiency. Unlike historic cost accounting, both CCA FAC and LRIC+EPMU reflect forward looking costs rather than prices when assets were purchased, thus giving better signals for investment and entry.

6.10 However, CCA FAC was preferred to LRIC+EPMU, as a more practical and transparent approach to establishing service costs. As we explained at the time, we considered that LRIC+EPMU, "has the disadvantage of involving a time consuming operation which BT carries out on an irregular basis. Ofcom has little visibility of how BT generates costs from its LRIC model, and this extra iteration by BT of its financial data is not subject to external audit scrutiny. Performance monitoring on a LRIC+EPMU basis against BT's actual financial performance is not straightforward, as routinely prepared wholesale service profitability information is prepared on a FAC basis. By contrast, FAC uses data that can be reconciled to the regulatory financial statements, which have been audited and are in the public domain. Given that LRIC+EPMU is not conceptually superior to FAC as a cost basis for setting charges, but that FAC has transparency benefits, Ofcom has used FAC as the appropriate basis for setting the fully unbundled rental charge ceiling".[13]

6.11 We also noted that this was the approach that had been adopted for BT's network charge controls. In January 2006 the WLR charge ceiling was also set on a consistent basis using FAC.

6.12 Given that LRIC+EPMU is not conceptually superior to CCA FAC, while CCA FAC is more practical and transparent we continue to consider that FAC remains preferable to LRIC+EPMU. In later sections we consider whether we should move away from CCA FAC for efficiency reasons. Our preliminary conclusion is that there are not strong efficiency reasons for moving away from CCA FAC.

[13] See paragraphs 3.9 and 3.10 of http://www.ofcom.org.uk/consult/condocs/llu/statement/llu_statement.pdf

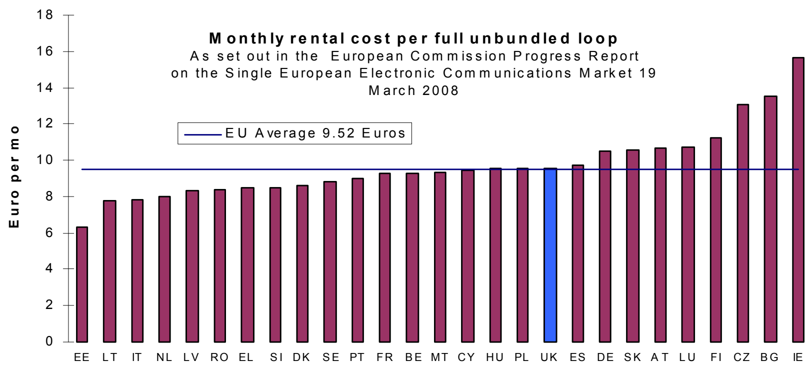
International benchmarking

6.13 In the First Consultation, we explained that operators using the network should act on the basis of input prices that are efficient and sustainable. Our calculations in Section 5 indicate that, by 2012/13, the prices for each of the Core Rental Services will be below CCA FAC. Further, the price for MPF already appears to be below CCA FAC. On the basis of this cost evidence there is then a case for considering increases to the current regulated charge ceilings. A key consideration for this review is, however, the extent to which our assessment of the costs represents the efficiently incurred cost of provision of services.

6.14 This assessment forms the basis of our efficiency assumptions in our cost modelling. However, given that other regulators also consider the efficient level of costs when determining regulated prices, we also consider that the prices charged by other operators provide a relevant benchmark that should inform our view on the efficient cost of providing LLU services.

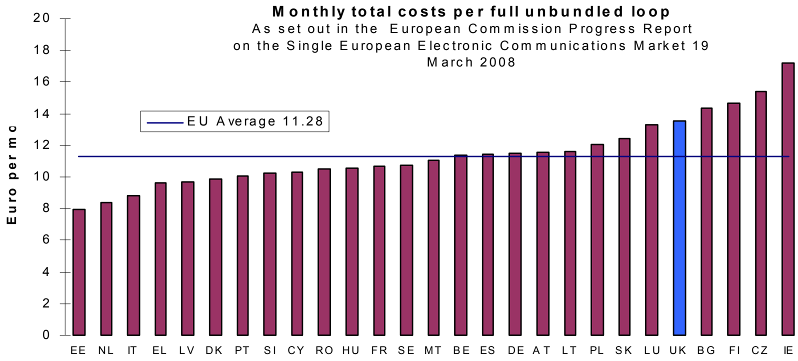
6.15 In the First Consultation, we set out two charts (6.1 and 6.2) comparing the prices of unbundled copper access services across Europe. These charts are also set out below. They are based on data published by the European Commission and compare, firstly, the basic monthly rental tariff that prevails in each country. As the first chart illustrates, Openreach's tariff for MPF rental appears close to the European average, but in the upper half of the range. Openreach's tariff sits in the middle of the range of charges for the "Big 5" European nations.

Figure 6.1



6.16 The second chart illustrates a more complex comparison. This attempts to compare the average monthly cost of connecting to shared across the three years, and renting, an unbundled service for three years. This chart indicates that Openreach's charges are significantly higher than the average and lie towards the upper end of the range.

Figure 6.2



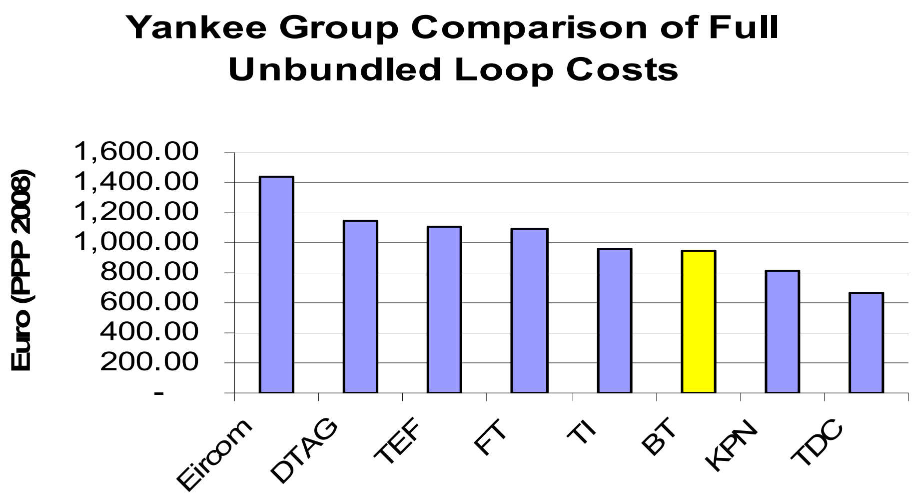
6.17 As we explained in the First Consultation, it is difficult to draw clear and detailed conclusions from such comparisons. For example, the complexities of comparing tariffs that are structured differently and denominated in different currencies are widely understood. However, we also explained that the benchmarking data suggested that other regulators (and operators) have agreed tariffs for LLU services that may be significantly below the costs indicated in the Openreach forecasts set out in the First Consultation.

6.18 Given that other European regulators are operating within the same regulatory framework and have a similar obligation to provide access at "cost oriented" tariffs, this evidence indicates that increased charges would mean that the prices charged by Openreach would exceed other regulators' estimates of efficiently incurred costs.

6.19 In its response to the First Consultation, Openreach argued that the EC comparison was not accurate as it over-estimated the cost of an average line in the UK and underestimated the full costs of the provision of the service in other states. Openreach commissioned the Yankee group to review the benchmarking data. The results of that work are illustrated in Figure 6.3, below. This data presents a view reflecting the comparison of the total costs of LLU provision including accommodation and power costs. It is based on assumptions of a large exchange and an 8 year investment life; BT's relative position in the ranking appears to be broadly similar under other assumptions.

6.20 The Yankee analysis draws on assumptions of average exchanges size, average sets of charges at exchanges and the economic life of the assets. These assumptions point to the fact that the total cost of MPF is more that the rental and connection charges and in this wider set of charges BT can show lower total costs than might be implied by the EC analysis.

Figure 6.3

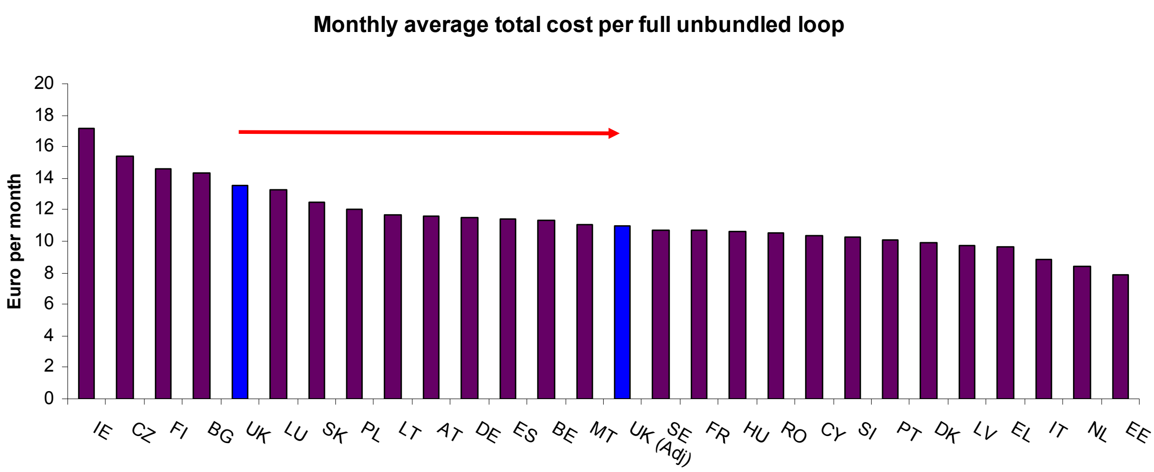


6.21 Since the First Consultation we have undertaken our own further analysis to compare BT's unbundled local loop prices with other major European countries. We have met with other European regulators to inform our understanding of the UK's relative position now and in the future.

6.22 Our analysis is set out in Annex 13. Our analysis is broadly consistent with the data presented by Openreach. Our further investigation has confirmed that the EC data does not lend itself to direct comparison of charges on a like for like basis without further adjustment. For example, the EC monthly cost estimates include only rental and connection charges and omit other relevant charges such as accommodation and equipment.

6.23 Our analysis suggests that when additional relevant charges are taken into account, and the input costs adjusted to reflect the real average costs in the UK, Openreach's current charges sit somewhere just below the European average, as illustrated by the chart 6.4 below. The higher bar for the UK shows the average cost including the new connection charge. The lower bar includes a weighted average of the new connection and transfer charges.

Figure 6.4



6.24 Although this evidence does not indicate that Openreach's charges for MPF are currently excessive, neither Openreach's analysis nor the additional analysis we have undertaken provides unambiguous evidence to support the need for price rises. Charges elsewhere are generally falling in real terms. This suggests caution in relying exclusively on cost estimates that appear high relative to other regulators' assessment of appropriate prices elsewhere.

6.25 One problem with these comparisons is that they relate to charges. Ideally, we would like to compare costs. Given that the current EC regulatory framework includes a requirement for 'cost orientation' in these charges, we can regard these charges as being cost orientated, although cost orientation can imply a wide range for charges.

Economic efficiency considerations

6.26 The choice between CCA FAC and LRIC+EPMU as a basis for estimating costs can be described as a choice between accounting approaches. As explained below, we also need to consider economic approaches to charge setting. To the extent it is possible to do so, charges should be set in a way that maximises economic efficiency. This will ultimately tend to maximise benefits to consumers as a whole.

6.27 There is a range of static and dynamic efficiency considerations, which often pull in different directions. Some considerations suggest that less common cost should be recovered from a particular charge, while other considerations argue for more common cost being recovered from that charge.

6.28 We discuss these considerations in general terms below, with particular focus on the possible impact on the MPF charge. Specifically, we set out how we would intend to take account of the following issues in making modifications to the charge controls:

- Static efficiency;
- Dynamic efficiency – promoting competition; and
- Dynamic efficiency – investment incentives.

Static efficiency

6.29 The best way to achieve economic efficiency is to set prices equal to marginal cost. Setting prices above this level could mean that customers who would have been prepared to pay more than the marginal cost of providing the service may be excluded. As a result some welfare enhancing transactions do not take place: some consumers will be deterred from purchasing the relevant services despite the fact that they place more value on those services than they cost to provide .

6.30 However, for prices to be sustainable in the longer term, the company providing the service must – across all its services – be able to recover its fixed and common costs as well as the marginal cost of providing individual services. Prices must therefore – on average – be higher than their marginal cost where there are some costs that are either common across all services or fixed in nature. This will inevitably reduce static efficiency relative to the ideal situation of marginal cost pricing. We refer to this effect below as a static distortion.

6.31 Static distortions from raising prices above marginal costs can be minimised by taking account of differences between the way demand for each product is affected by changes in price. Specifically, static distortion will be reduced if prices are set to recover a relatively high proportion of fixed costs from services whose demand is relatively unresponsive to changes in price (i.e. is less "elastic") and less from those whose demand is relatively responsive to price.

6.32 The set of prices that minimise static distortions are known as Ramsey prices. However, as explained in Annex 5, the calculation of Ramsey prices requires a great deal of information about how demand for each service is affected by its own price and the prices of the other products. In the case of the Core Rental Services, this calculation is made more complicated because we are considering different wholesale products which can be combined to provide similar retail products (for example, both MPF and SMPF & WLR can be used to provide voice and broadband services). This implies the presence of significant cross price elasticities (e.g., the demand for WLR and SMPF will be influenced to some extent by the price of MPF services), which complicates the formulation of optimal Ramsey pricing.

6.33 In its response to the First Consultation, Carphone Warehouse included analysis by Frontier Economics that considers Ramsey pricing. Carphone Warehouse subsequently submitted a second paper by Frontier Economics with revised illustrative Ramsey price estimates.

6.34 In order to make its calculations, Frontier Economics made a number of simplifying assumptions, including:

- Only own-price elasticity effects are considered;
- The own-price elasticity of demand for wholesale MPF appears to be derived from a retail elasticity of demand that is a weighted average of elasticities of demand for narrowband and broadband;
- Own-price elasticities of demand for the wholesale products are derived from the retail elasticity estimates by applying a dilution factor to reflect the fact that the price of the wholesale input is "diluted" by other cost items in the retail price. This simple adjustment is however valid only under certain quite restrictive assumptions, including assuming there is no alternative input at the wholesale level; and
- The range of empirical estimates of the elasticity of demand for broadband is very wide and its minimum overlaps the range of narrowband elasticities, although the mean estimate of the former is significantly higher. The studies referred to were from a number of developed countries, and especially the US, rather than relating specifically to the UK. Also, some of the studies relate to the early years of broadband development, when conditions may have been different to today.

6.35 Given the simplifying assumptions, we are cautious about adopting a similar approach. The cross-price elasticities between these different wholesale products may be significant, and ignoring them may lead to misleading results. Also, the assumption in the transformation from retail elasticities to wholesale elasticities that there is no alternative wholesale input is unrealistic given that these products may to some extent be regarded by CPs as substitutes.

6.36 We therefore do not think that significant weight should be attached to the precise numbers that Frontier Economics have put forward. But we think it is likely that currently demand for MPF is driven more by broadband than voice and that demand for broadband is likely to be more price sensitive than voice. On its own, this might suggest it would be more efficient to set a slightly lower mark up on marginal costs for MPF than for WLR. This approach would support an approach that set the MPF charge slightly lower than FAC and the WLR charge slightly above its FAC, at least in the short term.

6.37 In the longer term, however, some of the assumptions underlying this may become less tenable. In the longer term, demand for MPF is likely to be driven by demand for voice services as well as broadband. In particular, as BT moves to 21CN, it may use MPF for voice only services. It is also possible that those CPs who have already invested in LLU primarily in order to supply broadband may choose to use MPF for voice only services, given that the additional costs of supplying such voice only services are relatively low. Therefore even though this argument may have some weight in the short term, we consider it will become less important over time.

6.38 The most important problem we perceive with considering only own price elasticity of demand is that we also need to consider the interactions between demand for MPF, WLR and SMPF. In particular, if the MPF charge was set at a level such that MPF made a significantly lower contribution to common costs than WLR and SMPF, this could lead to CPs choosing MPF in preference to WLR and SMPF even when the incremental costs – reflecting the true costs to society – of the latter are lower. This would be an inefficient use of resources. In addition it could create distortions in competition that would further reduce static efficiency. That is, if the MPF charge is too low relative to the charge for alternative inputs which could be used to provide retail voice and broadband services, this may distort downstream competition.

6.39 While we are unlikely to have enough information to calculate Ramsey prices with any degree of accuracy, we consider that these distortions to competition in the longer term could be significant. We consider this to be the most important static efficiency consideration. We consider that allowing charges to move towards the FAC would help minimise these distortions.

Dynamic efficiency – promoting competition

6.40 Even if there were, on balance, static efficiency losses due to the relative level of some prices – say the MPF price relative to the WLR price - it may nevertheless not be in consumers' interests to adjust the relative prices too quickly (say, by way of an immediate adjustment of charges to equal FAC). This could be the case if the current relative charges facilitated longer term benefits to consumers in terms of dynamic efficiency gains that outweighed the static efficiency losses.

6.41 The first aspect of dynamic efficiency we consider is promoting sustainable competition. Where it is feasible and viable, competition is widely considered to be more effective at delivering benefits to consumers than regulation. Competition tends to give dynamic efficiency benefits through greater innovation and experimentation leading to the success of service propositions that are attractive to consumers and encourages operators to drive down costs. Where appropriate, Ofcom aims to further the interests of consumers through the promotion of competition.

6.42 As set out in Section 3, we consider that access service competition has increased significantly in recent years. Consumers has benefited from innovation in services and reductions in retail prices.

6.43 Several respondents to the First Consultation stated that there have been significant benefits from LLU based competition in broadband. To date, the majority of this has been from SMPF, but MPF is becoming more prevalent and has the potential to become more important to broadband competition in the short and medium term. This might suggest that a case could be made for delaying or reducing any increase in the MPF charge on the grounds of the effect on competition. Also, MPF can potentially deliver gains from deeper competition in voice in a way that WLR cannot. Again, this could support a case for a cautious approach to allowing increases in the MPF charge.

6.44 However, sustainable and effective competition requires that – in the long term –entrants must be able to compete without special protection. This suggests that prices should be set in the longer term to cover efficiently incurred costs, and that relative prices should not distort the choices among products made by CPs.

6.45 In conclusion, the balance of the arguments for efficiency, at this stage in the market's development, suggests that differences between charges should reflect underlying costs. We consider that this is broadly achieved with CCA FAC.

Dynamic efficiency – investment incentives

6.46 In addition to considering the potential impact on competition, we also need to consider another important aspect of dynamic efficiency, namely the need to ensure that investment incentives are not distorted by the regulatory process, including how it evolves over time.

6.47 In particular, it is important to avoid a situation in which changes in regulation undermine the viability of investments previously made partly in response to the regulatory regime. The need to provide investors with a stable regulatory background is an important consideration. In Ofcom's view this means we should take give weight to how we have set charges in the past, and to stakeholders' reasonable expectations for charges in the future. It also argues for avoiding excessively volatility in pricing. This would tend to argue for any increase in prices necessary to achieve full cost recovery to be smoothed so as to allow investors' reasonable expectations about the regulatory regime to be realised. The need for regulatory certainty, therefore, tends to provide support for a CCA FAC basis for determining charges in the longer term, but with any increase being phased in gradually.

6.48 However, this does not necessarily rule out an increase in the MPF charge in 2009/10 that might be above a steady glide path. The current charge controls has been fixed in nominal terms since 2005. When they were set, we signalled our intention to review them within the first few years of operation. As set out in Figure 4.1, if the MPF charge had been linked to inflation since it was set, it would have risen by around £10 compared to its current level. CPs arguably might have anticipated that changes to the current structure of nominal charges would take place. But the need to provide a stable regulatory regime does suggest a cautious approach to price changes.

Approach to modifying charges

6.49 Based on the projections set out in Section 5, the price for MPF already appears to be below its CCA FAC. The current price for residential WLR is likely to be below its cost before 2012/13 but does not appear to have been significantly out of line to date. The price for business WLR appears to be higher than its cost.

6.50 In light of the issues set out in this Section, we have considered various approaches to modifying prices to close the gap between existing prices and the CCA FAC. In considering the appropriate approach we have considered both the case for general price increases and the need – suggested by the CCA FAC evidence – for increases in the price for MPF relative to the price for WLR (which we refer to below as "rebalancing" of the prices).

6.51 The potential approaches can be summarised as follows:

- Adjust prices for each service to equal their CCA FAC in 2009/10 ("Immediate rebalancing");
- Adjust prices for each service over time, so that they equal the CCA FAC by 2012/13 ("Full rebalancing over four years");
- Adjust prices for each service so that they move towards the CCA FAC such that the gap between price and CCA FAC is reduced by, say, half by 2012/13 ("Partial rebalancing over four years"); and
- Adjusting prices across all services at a similar rate such that the relative levels of each price is maintained, while costs overall are recovered ("No rebalancing").

6.52 We consider these options below, with a focus on the implications for MPF prices.

Immediate rebalancing

6.53 This option involves an immediate upward adjustment of the MPF rental charge to equal its CCA FAC. Of the four options, it would result in the highest charge for MPF in 2009/10. This approach would remove what Openreach has described as "a distorting arbitrage between MPF and WLR+SMPF which is unsustainable."

6.54 On the other hand, we consider there to be significant disadvantages with this option. We see the biggest disadvantage as being the potential to undermine future investment incentives. A large increase in the MPF charge could be perceived as taking advantage of the fact that LLU investment is now largely sunk. As described in Annex 5, we consider it unlikely that LLU operators would exit exchanges they have already unbundled in the short and medium term, even with the rapid increase in charges envisaged by this option. However, large increases could have a significant impact on the returns expected by CPs at the time these investments were made.

6.55 This option would also represent a departure from previous practice. Ofcom has historically tended to adopt a glide path approach to setting charge ceilings, partly in order to smooth changes and provide customers with predictability. Without very strong reasons for making a change now, we consider that such a change from previous regulatory practice could undermine the objectives of giving certainty to both Openreach and its customers. As a result, it could also conflict with the objective of promoting efficient, sustainable competition in the delivery of both broadband and traditional voice services.

6.56 It is important that the regulatory regime gives investors the confidence to make efficient investment. Efficient investment is essential to ensure the availability, quality and choice of services that consumers require. We consider this option would undermine confidence in the regulatory regime with the consequent impact on future investment incentives. Primarily for this reason, we find this option unattractive and consider it unlikely to be in consumers' ultimate interests.

Full rebalancing over four years

6.57 In general, glide paths – where the charge in the last year of the period being considered is set to be equal to our forecast of FAC, and a glide path is set to allow prices to change from the current charge to the future level - have the advantages of giving greater stability and predictability, and providing positive cost efficiency incentives for the regulated company.

6.58 The incentive to reduce costs under a glide path approach should ultimately mean lower prices for consumers. This is consistent with the objective of preventing excessive charging.

6.59 We consider a key advantage of this option is that it is consistent with what Ofcom has done previously with charge controls. As such, it should give potential investors confidence in the stability and predictability of the regulatory regime, furthering the objective of providing regulatory certainty for both Openreach, its customers and, ultimately, consumers.

6.60 We also consider that this option is broadly consistent with the objective of promoting efficient, sustainable competition in the delivery of both broadband and traditional voice services. In the long term, we believe that the differentials between different wholesale products should be cost based, as this will allow CPs to choose the efficient mix of wholesale inputs. We consider that setting charges based on FAC is broadly consistent with this. However, we consider it is appropriate to have some adjustment period to reach that level.

6.61 There may be some welfare losses in terms of encouraging inefficient investment as a result of not adjusting the MPF charge sufficiently rapidly, given that the current differentials between charges are not consistent with the difference in costs. However, these losses may be reduced if there is a clear signal that the MPF charge will need to rise in the future. They may be reduced further if there are bigger changes made in earlier years of the control. Within an approach that lead to full rebalancing over four years we might also consider different rates of price increases in different years of the control to deal with this.

Partial rebalancing

6.62 This option involves phasing in the increase in the MPF charge to FAC over a longer period (possibly of eight years). The effect of a longer period would be that the difference between price and cost will have been halved after four years.

6.63 This option would be attractive if it resulted in greater competition that generated increased dynamic efficiency gains that outweighed any static efficiency losses. For example, if relatively low MPF prices would lead to more exchanges being unbundled and the benefits of competition at those exchanges was likely to outweigh any static losses, reducing the extent of the rebalancing of prices might be justified.

6.64 However, we do not think it is appropriate for Ofcom to be the arbiter of what constitutes the most appropriate level of roll-out that is in consumers' interests. Rather, our intention is to set current charges and signal the likely direction of future price movements such that CPs can make decisions about whether to invest in further LLU. However, we note that a high level of LLU roll-out has already occurred and that the static costs of duplication increase in smaller exchanges (on a per consumer basis).

6.65 Moreover, even if we believed that the dynamic benefits from some further unbundling outweighed any static losses, it would not be efficient to set charges specifically to favour new entrants for a long period of time. For example, some CPs are currently choosing between MPF and WLR & SMPF as the wholesale inputs to provide services in voice and broadband retail markets, and their decision will be affected by the differential between the two. In the long term, we believe that such a differential should be cost based, so as to encourage efficient investment decisions. It would not be efficient to set charges to maintain a differential that was not cost based for an extended period of time. So even if we now believed that there should be some moderation in the increase in the MPF charge, we would not want this to apply over a very extended period. This raises the issue of how long any adjustment period should be.

6.66 We consider that setting charges so that the differentials between charges remains greater than implied by the cost after four years would result in an inappropriately long period of adjustment. Four years is a relatively long time in terms of LLU investment. For example, in our assessment of the impact of price changes in Annex 5, we have assumed a life of five years for LLU assets, based on informal discussions with various LLU operators. We understand that some LLU operators consider a shorter asset life to be appropriate. On this basis, we consider that this option – i.e. extending rebalancing period beyond four years - is unlikely to further the objective of promoting efficient, sustainable competition.

6.67 Another concern is that this option could undermine Openreach's ability to recover its common costs. This risks undermining investment incentives which would be detrimental to consumers' interests. To help avoid this, a variation on this approach might be to set charges other than the MPF charge higher than they would otherwise be so that across all regulated products Openreach had an opportunity to earn a reasonable rate of return.

6.68 However, this would further distort the choice of wholesale inputs. CPs using WLR and SMPF would face higher charges as a result. Moreover, Openreach's ability to recover its costs would be dependent on the actual mix of demand for services. If the move from SMPF & WLR to MPF were greater than anticipated, then there may be a risk to overall cost recovery and the differential in prices may become unsustainable.

6.69 On balance, we consider this option is unlikely to be in consumers' interest. While in theory it is possible to make a case for a more gradual introduction of the increase in the MPF charge, in practice we do not believe that there is strong evidence that the benefits are necessarily greater than the costs. In the absence of a strong case for change, we believe that it would be inappropriate to divert significantly from the approach we have adopted in the past.

No rebalancing

6.70 Under this option, all prices would be allowed to increase at a similar rate, such that, across the Core Rental Services, Openreach was able to recover the cost of providing those services. As a result, the current percentage differential between the MPF charge and the WLR & SMPF charges would be maintained.

6.71 We do not consider that this option is likely to be in consumers' interests. This is for the same reasons that we do not consider that the partial rebalancing option is likely to be in consumers' interests. No rebalancing would continue a distortion in incentives for investment. With no path for reducing the differential between the MPF charge and the WLR and SMPF charges, CPs' decisions on wholesale inputs would remain distorted. Moreover, Openreach's ability to recover its costs would be very dependent on the actual mix of demand for services. If the move from SMPF & WLR to MPF were greater than anticipated, then there may be a risk to overall cost recovery and the differential in prices may become unsustainable.

Preferred option

6.72 On balance, we consider that option 2 would be most in consumers' interests. Under this option, the MPF charge would increase such that it would reach the level of CCA FAC after four years. This approach is therefore broadly consistent with our normal approach to charges.

6.73 In its simplest form, prices would increase at a constant annual rate. However, in theory, the rate of change could change each year and this option does not, for example, rule out relatively higher or lower increases in the opening year of any control.

6.74 Any proposal for larger than average increases in the early years would have to take account of the benefits of moving prices closer into line with costs sooner rather than later (such as those relating to efficient investment incentives) with the risks associated with rapid price changes (such as the impact on regulatory uncertainty), as identified above. Smaller increases would need to be considered in the context of continuing to encourage entry at potentially inefficient levels.

6.75 In setting charges by reference to a glide path we will also wish to consider the implications for Openreach's returns during the period of the glide path

6.76 We recognise that any increase in the MPF charge may shrink the LLU footprint compared to what it might have been if prices remained at their current level. However, it would not be appropriate to encourage further roll-out if that roll-out is ultimately inefficient and unsustainable. It is not appropriate for Ofcom to be the arbiter of what constitutes the most appropriate level of roll-out that is in consumers' interests. Rather, our intention is to set current charges and signal the likely direction of future price movements such that CPs can make decisions about whether to invest in further LLU. We believe that this is most appropriate in terms of furthering consumers' interests.

6.77 We also recognise that this approach potentially has implications for the value of the investments of CPs using, or planning to use, MPF. However, given that we signalled our intention to review these charges at the time they were first set, CPs arguably would have anticipated that changes to the current structure of nominal charges would take place. We also believe that concern over the impact of changes in the regulated charges on CP profitability is mitigated by the fact that we have sought to employ a methodology in determining the charge controls which is consistent with our previous practice. The proposed approach should also give investors confidence in the predictability of the regulatory regime in the future.

6.78 The impact on LLU operators may also be mitigated by BT's recent proposed reductions in BES prices, and by Ofcom's proposals for the leased line charge controls if those proposals were adopted.

6.79 We do not consider that any of the charge control options we are considering are likely to lead to a significant increase in consumers' total bills. To date, there has been a strong downward trend in retail broadband prices, and this may mitigate the effect of the wholesale charge increases we are introducing. Nevertheless, some increase in total bills is possible. The extent of this will depend on a number of factors. These include: the extent to which CPs are able to absorb any increase in wholesale costs; the extent of competition from CPs that do not use Openreach's exchanges, (especially cable); and the outcome of the Lease Line Charge Control review, which may reduce the wholesale backhaul charges paid by CPs offsetting pressure to increase retail prices (to the extent backhaul is purchased from BT).

6.80 Overall, we consider that raising the charges can nevertheless be in consumers' interests even if retail prices were ultimately to rise somewhat as a result. This is because without such increases Openreach may have insufficient incentives to invest in and maintain the network and in the services which support CPs voice and broadband services. Without such incentives, the quality, and even availability, of services that consumers receive would gradually deteriorate.

Differentiated charging

6.81 Openreach has raised the option of setting different charges for new or existing LLU customers with the effect that new customers would be charged prices closes to the full FAC cost. While this has some benefits in terms of ensuring efficient levels of investment, it has significant implications for competition and in the complexity of implementation.

6.82 Two potential models are possible: new charges for any new customer even when a CP has invested in an exchange; or, new charges only for CPs who have not yet invested in an exchange.

6.83 In both cases new entrants would be at a substantial disadvantage in competing for customers as they would face higher costs and incumbent suppliers would have greater scope to discount to their customers. The latter case in particular risks a substantial bias for the incumbent. We are also concerned that differentiate charges would be administratively complex and confusing for CPs.

6.84 At this time, we are not certain that the benefits of differentiated pricing would outweigh the potential costs. We welcome stakeholder views on possible models for such an approach.

Dealing with uncertainty

6.85 The FAC costs estimates set out in the earlier sections are highly dependent on the assumptions on direction of costs and demand. As we have set out in earlier sections, we are inviting comments from Stakeholders on the assumptions but in the current environment, in particular, medium term predictions have become more difficult.

6.86 The assumptions on volume and mix of services must be considered to be particularly subject to variation in the current economic climate. Substantial variation from the expected volumes (both internal and external) will influence the long term direction of pricing and would be a factor when we come to re-assessing the price controls direction after two years.

6.87 We intend to monitor the key assumptions to ensure that charges remain fair and sustainable.

Conclusion

6.88 For the reasons set out in this Section, we consider that

- The regulated charges for the Core Rental Services should be allowed to move into line with efficiently incurred costs of providing those services;

- Our assessment of the efficiently incurred costs of providing those services should be informed to a large extent by the CCA FAC cost projections set out in Section 5, but should also take account of the implications of the international price benchmarks, which indicate that large price rises would be inconsistent with other regulators' assessment of efficiently incurred costs elsewhere in Europe; and

- Immediate adjustment of prices to equal the underlying costs on a service by service basis would be disruptive to competition and could undermine confidence in the regulatory regime.

6.89 On this basis, we consider that the re-alignment of existing charges for the Core Rental Services should be undertaken by reference to a glide path. The glide path may give rise to different price changes in each year, but should avoid unduly disruptive levels of one-off adjustment in charges. We consider that the direction of the glide path should be designed such that charges are largely in line with efficiently incurred costs within four years.

6.90 In Section 7, we set out some additional considerations to be taken into account in respect of the other services within the scope of this review. In Section 8, we will set out what we consider this means for a modified charge control for MPF and for WLR.

Question 6.1 Do you agree with our assessment that on balance it is appropriate to rebalance the MPF charges towards CCA FAC? If not please set out your own views on the most appropriate approach.

Question 6.2 Do you agree with our assessment that a glide path offers the best approach to the introduction of any new charges, subject to an assessment of starting points and the returns in a given year? If not please set out your own views on the most appropriate approach.

Section 7

Setting prices for the ancillary services

Introduction

7.1 As set out in Section 2, this review considers the cost of providing the Core Rental Services and the Ancillary Services. The main focus of this consultation document so far has been on the Core Rental Services. In this section we consider the appropriate treatment of the Ancillary Services.

7.2 As discussed in Section 2, we only are establishing new charge controls for the LLU services. For WLR, we only propose to update the charge ceilings until the requirement for WLR and charge controls is reviewed within the Narrowband Wholesale Services Market Review.

7.3 As set out in this Section, we propose that the Ancillary Services should be grouped into baskets of services, built around the underlying core service, as follows:

- MPF ancillary services, including new provisions and migrations;
- SMPF ancillary services, including new provisions and migrations; and
- Co mingling services, including services related to the provision of space at BT premises.

7.4 We propose any regulations should:

i) Be easy to understand and straightforward to implement;

ii) Contribute to efficiency in service provision;

iii) Ensure that controls cannot be manipulated by Openreach in a way that puts other CPs at a disadvantage.

7.5 We consider that the principles we establish for dealing with the Ancillary Services would be equally applicable to WLR and our approach to LLU will inform our approach to WLR, should there be a requirement for such charge controls following the Market Review.

Definition of Ancillary Services

7.6 As set out in Section 2, we have defined Ancillary Services to include the services related to the Core Rental Services in the markets where Openreach has been found to have SMP. They include the following types of service:

- SMP services that are subject to price controls. These include some WLR transfers, MPF transfers, connections and network interventions, plus some SMPF connections;
- SMP services that are subject to cost orientation obligations. These include WLR connections, takeovers and some transfers, network

services, ISDN 2 rentals, connections and transfers, MPF connections, room build and hostel rentals, plus some SMPF connections; and

- SMP services that are not subject to cost orientation obligations. These include ISDN 30 rentals, connections and transfers.

Design of individual and baskets controls

7.7 In the First Consultation, we sought views on the design of the controls for the core regulated services, including the Ancillary Services.

7.8 The current price controls take the form of fixed nominal charges for many individual access services. Openreach said that while this provided a degree of certainty to CPs, it was inflexible and raises the risk that individual prices could diverge from costs, given that the control is set for a number of years. In contrast, an overall basket was less likely to be subject to this problem, as individual charges within the basket could be changed to reflect underlying cost changes.

7.9 Openreach suggested an appropriate balance could be struck by grouping together into single baskets each of the core rental services, together with other SMP products that CPs need to purchase from Openreach in conjunction with those services. Openreach proposed separate baskets for MPF, SMPF, WLR and co-mingling that would include the relevant rental services together with the related ancillary services.

7.10 Other respondents raised concerns about broadly defined baskets. Broad baskets might for example allow Openreach to change individual charges in an unpredictable way, to change the balance of prices in a manner that would, potentially, favour downstream units of BT and stifle competition. Broad baskets might also allow Openreach to take advantage of non-price related changes in product volumes (for example, by taking advantage of product life cycles by charging high connection charges when connection volumes are high, then high rentals when connections stabilise).

7.11 To give sufficient predictability and avoid gaming by Openreach, some CPs proposed that many services should have individual controls, including for new provides, transfers/migrations, ceases and connections.

7.12 Some CPs were also concerned that some charges for ancillary services may not be controlled, thus giving Openreach an opportunity to exploit its SMP. Having considered all these responses, we consider that a basket approach has some advantages. It allows for flexibility so individual charges can reflect cost and demand changes, and can also provide incentives to recover common costs efficiently. Baskets are also more practical given the large number of charges, thus reducing the administrative costs of setting charges. It would be a very major exercise to set individual controls for over a large number of services (in excess of one hundred in this case) with any confidence that each charge would be set at an appropriate level.

7.13 However, we also recognise the concerns raised in the responses and the dangers with wide baskets, especially the risk of BT distorting competition by structuring charges to favour its own downstream operations. For example, if there are differences in the services that BT tends to buy relative to other CPs, then Openreach may set low charges for those services BT tends to buy and high charges for services that other CPs tend to buy. In particular, as BT has an incumbent position, it may tend to favour high switching costs and low rental costs, which would be contrary to the interests of new entrants.

7.14 Given these concerns we propose that separate controls remain appropriate for the Core Rental Services (although there may be advantages to including the WLR residential and business services in a single basket). These charges represent a very significant component of total costs for CPs, and CPs need to have confidence in the future levels of these charges. The small number of these charges means that it is practical to set each individually.

7.15 For the Ancillary Services, we propose separate broad baskets for each product family, combined with a limit on the extent to which each individual charge in the basket can rise in each year.

Proposed basket controls for Ancillary Services

7.16 On the basis of the principles set out above and the comments provided by respondents, we are proposing three baskets for the LLU charge controls. These baskets would exclude the Core Rental Service which will be subject to separate controls.

7.17 The proposed baskets, which are set out in detail in annex 7, are:

- MPF ancillary services, including:
  - Provision charges;
  - Project managed migration charges;
  - Modify, cease, amend, cancel and rejection charges; and
  - Assurance charges
- SMPF ancillary services, including:
  - Provision charges;
  - Project managed migration charges;
  - Modify, cease, amend, cancel and rejection charges; and
  - Assurance charges
- Co-mingling services, including:
  - Tie cables;
  - Accommodation; and
  - Power.

7.18 These baskets are broader than some CPs proposed in their responses. For example, we are not proposing to set individual charge controls for connections, ceases and new provides. The sub cap that applies to all individual charge should give some reassurance as Openreach will not be able to increases key charges beyond the overall control levels.

7.19 We believe that this approach strikes a reasonable balance between providing sufficient protection and predictability to CPs against Openreach taking advantage of the basket structure and allowing some flexibility to Openreach to ensure that individual charges reflect costs and recover common costs in an efficient way.

Sub-caps and limits on relative price changes

7.20 As noted in the responses there is a particular sensitivity to the key migration charges. The charges for these services have an impact on the cost of obtaining new customers and can act as a barrier to entry. Also, while it may be convenient to consider these services within the overall ancillary baskets they are costs borne primarily by non BT CPs. We consider, in addition, that too rapid re-adjustment of charges would be disruptive for the buyers of the services.

7.21 Accordingly, we propose to apply sub-caps on the MPF transfer, new provide and cease charges and SMPF transfer and cease charges. These will limit the potential increases in those charges to the overall limit of the basket. These sub-caps will allow Openreach the flexibility to re-balance all charges within the basket.

7.22 Also as discussed above, we accept that too rapid re-adjustment of charges can be unproductively disruptive to the buyers of the services. While we would not wish to lose the flexibility that baskets provide in respect of re-balancing charges efficiently, we consider that this flexibility should be tempered. Specifically, we propose that the relative level of price changes within a basket should be limited so that radical changes in prices in a given year is not possible.

7.23 Specifically, we propose that in any year no price can change at a rate that is a defined percentage above or below the average rate that is allowed for the basket overall. We propose that the percentage ‘sub caps’ should be between 5% and 10% (so, for example, if the basket control allows average increases of RPI + 0, and the sub-cap is 5% no individual price can move by a rate that falls outside of the range between RPI +/- 5%.

Cost of providing the Ancillary Services

7.24 As for the Core Rental Services, we consider that the regulated charges for the Ancillary Services should be informed to a significant extent by our assessment of the efficiently incurred costs or providing those services. Our review of the costs of providing the Ancillary Services is set out in Annex 10.

7.25 Taking a mid-case view from Annex 10 and the basket definitions set out above, we estimate that returns made across the MPF and SMPF baskets would be as follows.

	MPF ancillary services Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	45	42	49	56	83	104
Operating costs	58	56	70	75	82	87
EBITDA	-13	-14	-22	-19	1	18
Depreciation incl. holding gains	2	4	5	6	9	13
EBIT	-15	-17	-26	-25	-8	5
Mean Captial Employed	**52**	**47**	**51**	**54**	**62**	**73**

	SMPF ancillary services Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	206	193	139	125	97	76
Operating costs	332	272	235	196	140	104
EBITDA	-126	-79	-96	-70	-43	-28
Depreciation incl. holding gains	8	11	12	14	17	17
EBIT	-134	-90	-108	-84	-60	-45
Mean Captial Employed	**48**	**48**	**66**	**70**	**67**	**62**

	Co-mingling services Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	95	94	128	143	138	176
Operating costs	43	61	120	131	128	165
EBITDA	52	32	8	12	10	11
Depreciation incl. holding gains	4	6	8	9	10	11
EBIT	48	26	0	3	0	0
Mean Captial Employed	**52**	**57**	**68**	**70**	**68**	**69**

7.26 Based on these cost projections, there would appear to be a case for significant increases in the average price of SMPF and co-mingling services, while the prices of MPF ancillary services should fall significantly if they are to align with the underlying costs of provision. However, at this level of granularity and low levels of capital employed, small changes to cost allocation methodologies can have a significant – and, potentially, distorting - impact on the apparent profitability of the services.

7.27 In light of these considerations, and consistent with our aim not to cause undue disruption to the markets, we propose setting charge controls for each of these baskets based on the following basis:

- Each basket – MPF ancillary services, SMPF ancillary services and co-mingling services – will be subject to a separate control (in the form of an RPI-X control);

- The control to be applied to each basket will be based on the average price changes across all of these baskets necessary to allow prices to rise to meet the projected costs of providing all services across all baskets.

- The control on each basket will be separate, but the level of permitted annual increases will be the same for each basket.

- Within each basket, no individual price will be subject to a sub-cap, as described above.

7.28 Our mid-case estimate of the aggregate costs across these baskets is as follows:

	MPF & SMPF ancillary services plus Co-mingling					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	346	329	315	324	317	356
Operating costs	433	389	424	401	350	355
EBITDA	-86	-61	-109	-77	-32	1
Depreciation incl. holding gains	15	21	25	29	35	41
EBIT	-101	-81	-134	-106	-68	-40
Mean Captial Employed	**152**	**152**	**184**	**193**	**197**	**204**

7.29 Based on this analysis, it would appear that total revenues need to increase by around £60m in order to allow Openreach to cover its cost of capital. On this basis, we believe that the evidence on Openreach's costs supports an average increase in the charges for each of these baskets, probably at a rate close to RPI.

Services outside proposed controls

7.30 There are a number of services which we do not at present consider are subject to the cost orientation requirements of the SMP LLU remedy. This includes time related charges.

7.31 We accept that there is some argument, as presented by some respondents, that such services are directly linked to the SMP services and should be included in the same controls. Our view is that there is a continuum in the services provided by Openreach with a varying degree of proximity to the underlying SMP services. As set out in this document we have reviewed the cost allocation of all services provided by Openreach and intend to ensure that in our determination of the costs for the new SMP charges all services carry an appropriate share of common costs.

7.32 The risk of over-regulating Openreach service provision is that it could inhibit innovation in service provision and the opportunity for Openreach to react flexibly to customer demands for enhanced services levels or additional services. However, we welcome the views of respondents on this approach.

7.33 Annex 8 sets out the range of all LLU related services including which are proposed for inclusion in baskets and which are not considered for inclusion.

Question 7.1 Do you agree with the proposed basket treatment of the non core rental services subject to cost orientation? Do you agree with the principles for basket construction set out? If not please set out your preferred approach and why.

Question 7.2 Do you have any comments on our proposed set of LLU charges subject to specific or basket charge controls?

Question 7.3 Do you agree with the statements on cost orientation and the proposed baskets for the services set in Annex 7? Is the list comprehensive?

Question 7.4 Other than the core rental services and the MPF and SMPF services identified for a sub-basket cap do you believe there are other charges which require specific attention?

Section 8

Proposals

Introduction

8.1 As explained in this document we believe that the evidence on Openreach's costs supports a general case for increases over time in the charges for the regulated access services.

8.2 Further, we now consider that there is relatively greater need for an increase in the price of MPF rentals. The MPF rental price is currently less closely aligned with underlying costs than other Openreach services. There is also a case for some price rises across the ancillary MPF and SMPF services and co-mingling services. However, we have also explained that other factors need to be taken into account to determine if and how prices need to change, including international benchmarking and the impact price changes might have on competition, consumers and investment.

8.3 As explained above, we are modifying the price for MPF and SMPF for the next two years at this stage, and for WLR, for 1 year.

8.4 Informed by these considerations, this section sets our proposals

Prices should move towards the underlying FAC by 2012/13

8.5 Our decision on the appropriate pricing regime will be informed by responses to this consultation. We will take account of these responses in determining the appropriate assumptions to be made in our cost calculations. These assumptions will drive our final assessment of the efficiently incurred costs of providing the regulated services. We will attach significant weight to this assessment of costs in determining whether and, if so, how much prices need to change. We will also take account of stakeholder responses in respect of the impact of price changes to inform our assessment of how quickly prices may need to change.

8.6 As set out in Section 5, we have estimated that the efficiently incurred costs of providing each of the Core Rental Services. The estimates of unit costs set out in table 8.1 are based on the ranges developed in Section 5 and explained in Annex 10, including our view on the appropriate range for the cost of capital.

Table 8.1: unit cost projections for the Core Rental Services

Service	Current price	Projected unit cost in 2012/13
WLR residential	£100.68	£105.44 -£122.99
WLR business	£110.00	£101.42 -£118.14
MPF	£81.69	£96.52 - £111.15

SMPF	£15.60	£16.20 – £18.06

8.7 Note that, broadly, the top end of the range for one service is based on a similar set of assumptions as the top end of the range for another. Therefore, if the final set of assumptions supports unit cost estimates towards the high or low end of the range for one service, it is likely to support a similar outcome for the other services.

Prices should move by reference to a glide path

8.8 For the reasons set out in Section 6, we consider that it is appropriate to set charges on the basis that - if the rates of change were to continue beyond the next two years - they would reach the FAC by 2012/13.

8.9 Unless there are compelling reasons not to, we would ordinarily set a glide path to allow a constant real annual percentage price change each year. At the end of the period the price would equal the target charge (in this case the FAC).

8.10 If we were to adopt this approach, we would expect the annual price changes to be along the following lines:

Table 8.2: estimated glide paths if constant rate of increase applied and WLR prices allowed to converge

Service	Indexation over 4 years to allow price to increase to low and high end of our estimated costs
WLR residential	RPI – 1.8% to RPI +2.1%
WLR business	RPI –5.0% to RPI -1.2%
MPF	RPI +1.3% to RPI +5.0%
SMPF	RPI -2.1% to RPI +0.7%

8.11 Because the underlying costs for residential and business WLR (and the underlying services they utilise) are similar, we consider it appropriate to allow the prices of residential and business WLR to converge towards a common price. By aggregating the cost information for the two WLR services (as set out in Annex 10), we estimate that the average unit cost for the WLR service will be between £104.72 and £122.10 by the end of the period.

8.12 The glide paths set out in Table 8.2 would ensure that – by the end of the 4 years – Openreach is expected to be in a position where it could earn a reasonable rate of return. However, in respect of the Core Rental Services, this approach may have the unwanted effect of allowing Openreach to earn excessive returns on the Core Rental Services in the short term. These excessive returns in the early years are a consequence of two factors.

8.13 First, as our analysis in Annex 10 indicates, Openreach is likely to be making a reasonable rate of return across the Core Rental Services in 2009/10 even if prices stayed at their current levels. Any net increase in the average price would therefore increase the returns above that level.

8.14 Secondly, unit costs increase more rapidly at the end of the period than at the beginning. As explained in Annex 10, this is due largely to the impact of the rapid volume and mix changes projected for the later years plus the continuing unwind of regulatory adjustments. If costs increase more in the later years than at the beginning, but the glide path allows for annual increases at a constant rate, it follows that the prices must increase more sharply than costs in the early years if there are to equal the costs by the end of the period.

8.15 The potential effect of allowing all prices to increase by reference to a constant glide path towards the underlying FACs is shown in graph 8.1. For illustrative purposes we have taken a mid case derived from the Ofcom high and low case cost scenarios (set out in Annex 10). The graph shows that, after 4 years the annual increases suggested above should allow Openreach to make a reasonable rate of return. However, in the short term, the glide paths could enable Openreach to make returns in excess of the high end of range for Openreach's cost of capital.

Graph 8.1: Illustration of returns on Core Rental Services if glide paths with constant gradient applied to prices

8.16 It is therefore appropriate to consider how glide paths might be designed to allow prices to reach the FAC by 2012/13 without inadvertently allowing excessive returns in the early years.

Profile of glide path: charges in 2009/10

8.17 As set out above, allowing average prices to increase in the first year in line with the average annual increase required to recover costs after four years is likely to result in excessive returns for Openreach in the early years. This would therefore support a case for average increases at a rate below the implied four-year average rate in the first year.

8.18 However, as set out in Section 5, as well as a case for average price rises over the next four years, there is also a case for increases in the price of MPF relative to WLR. We describe this in Section 6 as the need for “rebalancing”. As explained in Section 6, there are various reasons why we consider rebalancing of the charges to be important in order to promote efficient and sustainable competition in the delivery of broadband and voice services.

8.19 It is therefore necessary to allow prices to move in a way that:

- allows Openreach to recover its costs in the long term;
- does not inadvertently lead Openreach to make excessive returns in the short term;
- starts to rebalance the MPF and WLR prices.

8.20 To achieve the above, we propose the following approach to setting charges in 2009/10:

- The MPF price should be allowed to increase towards the 2012/13 FAC.
  - o The low end of the range should be based on the average annual increase required to match the low end of our FAC estimate for MPF in 2012/13. This would give a price of around £85 in 2009/10.
  - o The high end of the range should take account of the need for the charges to be rebalanced sooner rather than later. Our reasoning for this is that it may increase the likelihood that inefficient decisions by CPs are avoided as set out in Section 6.
  - o On this basis, a price closer to the current cost of providing the service would be appropriate. The mid point of our FAC estimates for MPF in 2009/10 is around £91.
- In respect of the WLR prices,
  - o To ensure that across the Core Rental Services as a whole, Openreach is not allowed to make excessive returns in the first year, the average reduction (in real terms) in 2009/10 would need to be greater than the average rate suggested by glide path set out in Table 8.2.
  - o Prices that are expected to rise in the long term should not be required to fall in the short term. Therefore, we consider that nominal prices for residential WLR should not be reduced below the current charge of £100.68 in 2009/10. This, therefore, sets the low end of our range of plausible prices for residential WLR in 2009/10. For similar reasons, we consider that the current charge for SMPF (£15.60) sets the low end of our range of plausible prices for SMPF in 2009/10.
  - o Prices that are likely to fall in the long term should not be allowed to increase in the short term. Therefore, we consider that nominal prices for business WLR should not be allowed to increase above the current charge of £110.00 in 2009/10. This, therefore, sets the high end of our range of proposed prices for business WLR in 2009/10.

- o Prices should not be allowed to increase to a level that exceeds the underlying unit costs in 2009/10. As set out in Section 5, we estimate that the unit cost for residential WLR will be around £104 in 2009/10. This, therefore, sets the high end of our range of plausible prices for residential WLR in 2009/10.

- o Where these principles do not apply, we would expect the prices in 2009/10 to broadly in line with those indicated by the glide paths set out in Table 8.2.

8.21 On this basis, we propose that the charges for the Core Rental Services in 2009/10 will be within the ranges set out in Table 8.3.

Table 8.3: Proposed prices in 2009/10 for the Core Rental Services

Service	Proposed charge in 2009/10
WLR residential	£100.68 to £104.40
WLR business	£106.00 to £110.00
MPF	£85.00 to £91.00
SMPF	£15.60 to £16.20

Profile of glide path: charges in 2010/11 for MPF and SMPF

8.22 As explained above, we propose that charges should be set by reference to a glide path that would reach the FAC by 2012/13. Table 8.2 sets out the annual price changes necessary to achieve this if the same real increase – or “X”- was applied each year. However, for the reasons set out above, we do not propose to follow this approach. Specifically, we intend to set a starting charge in 2009/10. It is therefore necessary to determine how prices need to change after 2009/10 if they are to align with the FAC by 2012/13.

8.23 The final combination of 2009/10 charge and subsequent indexation in 2010/11 will be determined such that – if an equivalent annual indexation were to apply until 2012/13 - it would deliver a price that equals our final assessment of the projected efficient fully allocated cost of each service in the final year.

8.24 For the purposes of illustration, in calculating the proposed indexation ranges for 2010/11 indexation shown in the table below, we have assumed that these start from the mid-point of the respective range for the proposed 2009/10 charges. The indexation ranges shown would, if applied to this mid-point starting charge, allow prices to approach fully allocated costs by 2012/13.

8.25 Over four years the range of outcomes indicated by table 8.4 is equivalent to the range of outcomes indicated by Table 8.1.

Table 8.4: estimate glide paths for MPF and SMPF

Service	Proposed charge in 2009/10	Proposed indexation in

		2010/11
MPF	£85.00 to £91.00	RPI +0.0% to RPI +5.0%
SMPF	£15.60 to £16.20	RPI -2.5% to RPI +1.5%

Implications for WLR

8.26 We have recently initiated a review of the wholesale narrowband market. Amongst other things, this will consider the requirement for the continuation of the WLR remedy and an associated charge control. It will also determine the need for an ongoing charge control in respect of WLR.

8.27 We will take account in that review as appropriate, and subject to other relevant evidence and views, our current assessment of the costs of WLR which indicates that any future control on WLR rentals would, on average (i.e. across the combined population of business and residential lines), need to allow prices to change at a rate of between RPI-3% and RPI+3%. This range has been calculated on the same basis as the ranges for MPF and SMPF.

Proposals for other services

8.28 As set out in the First Consultation, Openreach provides a range of other services, related to the provision of rental services. These are currently subject to price control and/or cost orientation obligations. We propose that these services should be subject to price controls applied to appropriately defined baskets.

8.29 We consider that the baskets should be designed to be straightforward to understand and implement, while minimising the risk of inappropriate incentives or disruption to the markets.

8.30 In broad terms, we have grouped these services into three baskets based on the underlying services – WLR services[14], MPF services and SMPF services – plus a fourth basket for services relating to the occupation of space in BT buildings. We are not proposing specific price changes within the baskets as we do not consider there to be a case for significant changes at this time. We currently expect to apply a similar control to each basket, with prices being allowed to increase at a rate close to inflation.

Tests for modifications of SMP conditions and directions from the Communications Act

8.31 As noted in section 2 in order to modify or impose new SMP conditions and directions we need to satisfy the a number of tests set out under the Communications Act. We consider that our proposals meet the tests set out in the Act. Our reasoning is set out below for each of the changes and additions proposed as set out in Annex 8.

[14] If a control on a WLR services basket was considered appropriate following the outcome of the Wholesale Narrowband Market Review

New SMP condition: Part I (LLU)– notification under ss.48 and 86 with (at Schedule 1) proposed setting of new SMP condition (charge control) and (at Schedule 2) proposed modification to Condition FA3

8.32 Section 3 of the Act imposes general duties on Ofcom, in carrying out its functions, to further the interests of citizens in relation to communications matters and of consumers in relevant markets, where appropriate by promoting competition. The Section also requires us to consider the interests of consumers in respect of choice, price, quality of service and value for money

8.33 We consider that our proposed LLU charge control conditions fulfil these general duties under section 3 of the Act as they ensure that charges for wholesale services are set at a level that will enable communication providers other than BT to compete in the provision of downstream services. Existing charge controls and directions have promoted competition in this way to the clear benefit of consumers (as set out in section 3) in respect of choice, price and quality of service and value for money. Our review confirms that such controls are necessary to sustain this level of competition.

8.34 Section 4 of the Act sets out the Community requirements on Ofcom which flow from Article 8 of the Framework Directive. In considering which, if any, SMP services conditions to propose, Ofcom has taken account of all of these requirements. In particular, Ofcom has considered the requirement to promote competition and to secure efficient and sustainable competition for the benefit of consumers.

8.35 We have placed particular emphasis on the promotion of competition, which we consider is likely to be the most effective way of furthering citizen and consumer interests in the markets under review.

8.36 We will always seek the least intrusive regulatory measures to achieve its policy objectives, in accordance to its duty under section 6 of the Act to minimise the burden of regulation.

8.37 In addition to the overarching objective referred to above, we have taken into account a number of secondary objectives, including

- *Prices*: to ensure that services are available at prices that are reasonably related to the efficient costs of supply, preferably as a result of effective competition; and

- *Investment and innovation*: to promote efficient investment in the development of new and innovative service.

8.38 We carried out a full regulatory impact assessment in relation to the implementation of LLU charge controls as required by section 7 of the Act. This is set out in Annex 5 to this consultation documents published.

Section 87 and 88 tests

8.39 Section 87(1) of the Act states that where Ofcom has made a determination that a dominant provider has significant market power in an identified services market, Ofcom shall set such SMP conditions authorised by section 87 of the Act as Ofcom considers it appropriate to apply to that dominant provider in respect of the relevant network or relevant facilities and apply those conditions to that person. Section 87(9) authorises the setting of SMP services conditions imposing on the dominant provider rules concerning the recovery of costs.

8.40 As BT has been identified as having SMP in the wholesale line access where are able to set conditions which allows for controls on charges provided they allow for an appropriate recovery of costs

8.41 Moreover, section 88 states that Ofcom should not set a price control condition except where it appears to it from the market analysis that there is a relevant risk of adverse effects arising from price distortion and it also appears that the setting of the condition is appropriate for the purposes of:

- Promoting efficiency;
- Promoting sustainable competition; and
- Conferring the greatest possible benefits on the end-users of the public electronic communications services.

8.42 Ofcom considers that imposition of this LLU condition satisfies section 88 of the Act, since without it there is a real risk of adverse effects arising from price distortion by BT with an have adverse consequences for end users of pubic electronic communications services.

8.43 Ofcom further considers that the charge control condition is appropriate for the purposes of promoting efficiency and sustainable competition and conferring the greatest possible benefits on the users of public electronic communications services. This is based on our experience in the evolution of the market as set out in Section 3.

8.44 In respect of efficiency, in the absence of competitive pressures, BT would have limited incentives to seek to reduce its costs of providing wholesale LLU services.

8.45 In setting the LLU control we are using a RPI+X formulation so that BT is encouraged to greater efficiency in the costs of providing wholesale services by requiring it not increase its charge by more than a fixed amount each year. In coming to a view of the likely efficiency of BT's costs, we have looked at a range of evidence including benchmarks from other markets (Section 88(4)(a)) and we have had regard to the appropriate cost accounting methods (as provided for Section 88(4)(b)).

8.46 The RPI-X also provides incentives for BT to seek further efficiency savings by allowing it to keep any returns associated with efficiency gains over and above those forecast when the charge control is set. The benefits of lower costs can then be passed onto customers.

Section 47 tests

8.47 As discussed above, as well as being appropriate, any amendments to an SMP condition must also satisfy the tests set out in section 47 of the Act, namely that the amendment must be:

- Objectively justifiable in relation to the networks, services or facilities to which it relates;
- Not such as to discriminate unduly against particular persons or a particular description of persons;
- Proportionate as to what the condition is intended to achieve; and
- In relation to what it is intended to achieve, transparent.

<u>Our proposals are objectively justifiable</u>

8.48 BT's dominance in the access markets allows it to unilaterally set charges that, in the absence of any controls, would have adverse impacts on both the ability of companies to compete in the downstream provision of services and on consumer choice and value for money. Our proposals have been structured to deliver the lowest possible charges to competitors for the wholesale services while ensuring that BT is able to recover costs, including a reasonable return on investment.

8.49 The structure of the controls are such that BT has an incentive to continue to seek efficiency gains and it able to benefit from efficiency achieved that are in excess of that anticipated in the review.

<u>Our charge control conditions will not unduly discriminate</u>

8.50 The proposed charge controls will not discriminate unduly against a particular person or particular persons because any provider of communications networks, services or associated facilities, including BT, can access the services at the charge levels set out in this paper. The charges are set to ensure a fair return and price level for all customer groups.

<u>Our proposed LLU charge control conditions are proportionate</u>

8.51 The proposed new controls and directions are proportionate because the regulations act on the minimum set of charges required to delivery the bottleneck services.

8.52 They are focussed on ensuring that there is reasonably price for those access services which are critical to the development of a competitive market. BT is, however, allowed to recover a reasonable return on investment and on-going effort and has incentives to continue to investment and develop the network. Moreover, the proposed maximum charges BT is allowed to set over the period of the control has been formulated using information on BT's costs and a consideration of how these costs will change over time.

8.53 As set out in section 2, our review has shown that the circumstances relating to the current charge ceilings as fixed in nominal terms and unlimited in their duration are exceptional. Businesses operating in any markets are normally expected to recover all efficiently incurred costs. The financial evidence, which we have carefully analysed in detail, shows that the prevailing level of Openreach's regulated charges would not be sustainable. In our opinion, there is also a risk that maintaining that level even on a shorter term could jeopardise the attainment of our objectives. This is because there is a risk that delay in addressing the charges could lead to BT underinvestment in maintenance and service support, and would continue to encourage other communications providers to invest without appropriate information with respect to the long term costs of the investment.

Our charge control conditions are transparent

8.54 We are consulting fully on our proposals for the proposed LLU charge controls in this document. Our Final Statement document will set out our analysis of any responses and our basis for final decisions.

8.55 Further, we have clearly set out the proposed controls and their impact on charges for the duration of the controls. We have also set out in details the requirements on BT for the provision of data to support our monitoring of these controls.

8.56 Ofcom will therefore ensure that it has met the requirement for transparency set out in section 47 of the Act.

8.57 In proposing the LLU charge controls and directions, set out above, Ofcom is, therefore, satisfied that it has considered all of the relevant requirements of the Act.

Removal of direction: Part II (LLU) – notification under s.49 with proposed withdrawal of MPF charge ceiling Direction and Part III (LLU) – notification under s.49 with proposed withdrawal of Specified LLU Services charge ceilings Direction

8.58 We will deal with parts together as they address the set of LLU service when taken together that are being replaced by the new SMP condition.

8.59 As discussed above, as well as being appropriate, any amendments to an SMP condition must also satisfy the tests set out in section 47 of the Act, namely that the amendment must be:

- Objectively justifiable in relation to the networks, services or facilities to which it relates;
- Not such as to discriminate unduly against particular persons or a particular description of persons;
- Proportionate as to what the condition is intended to achieve; and
- In relation to what it is intended to achieve, transparent

Section 49 tests

Our proposals are objectively justifiable

8.60 In order to implement the new SMP condition we are required to remove the existing controls on the LLU charges.

Our charge control conditions will not unduly discriminate

8.61 The removal of the existing directions does not discriminate between any parties.

Our proposed changes are proportionate

8.62 It is impossible to institute the new condition without removal of the existing directions.

Our changes are transparent

8.63 We clearly set out in Annex 8 the removal of the directions the rationale for which is set out above. We have been specific in which controls have been removed and we believe, therefore, the changes are fully transparent.

Modification of direction: Part IV (WLR) – notification under s.49 with proposed modification to WLR charge ceiling Direction

Section 49 tests

Our proposals are objectively justifiable

8.64 As noted earlier for LLU BT's dominance in the access markets allows it to unilaterally set charges that, in the absence of any controls, would have adverse impacts on both the ability of companies to compete in the downstream provision of services and on consumer choice and value for money. Our proposals have been structured to deliver the lowest possible charges to competitors for the wholesale services while ensuring that BT is able to recover costs, including a reasonable return on investment.

Our charge control conditions will not unduly discriminate

8.65 The proposed charge controls will not discriminate unduly against a particular person or particular persons because any provider of communications networks, services or associated facilities, including BT, can access the services at the charge levels set out in this paper. The charges are set to ensure a fair return and price level for all customer groups.

Our proposed WLR charge ceilings are proportionate

8.66 The proposed new controls and directions are proportionate because the regulations act on the minimum set of charges required to delivery the bottleneck services.

8.67 Again, as with LLU, they are focussed on ensuring that there is reasonably price for those access services which are critical to the development of a competitive market. BT is, however, allowed to recover a reasonable return on investment and on-going effort and has incentives to continue to investment and develop the network. Moreover, the proposed maximum charges BT is allowed to set over the period of the control has been formulated using information on BT's costs and a consideration of how these costs will change over time.

8.68 As set out in section 2, our review has shown that the circumstances relating to the current charge ceilings as fixed in nominal terms and unlimited in their duration are exceptional. Businesses operating in any markets are normally expected to recover all efficiently incurred costs. The financial evidence, which we have carefully analysed in detail, shows that the prevailing level of Openreach's regulated charges would not be sustainable. In our opinion, there is also a risk that maintaining that level even on a shorter term could jeopardise the attainment of our objectives. This is because there is a risk that delay in addressing the charges could lead to BT underinvestment in maintenance and service support, and would continue to encourage other communications providers to invest without appropriate information with respect to the long term costs of the investment.

8.69 We will be considering the long term requirement for WLR in the next Narrowband Wholesale Market Review.

Our charge control conditions are transparent

8.70 We are consulting fully on our proposals for the proposed WLR charge ceilings in this document. Our Final Statement document will set out our analysis of any responses and our basis for final decisions.

8.71 Further, we have specified precisely the ranges within which the charges will be set and the means in which they will finally be determined.

8.72 Ofcom will therefore ensure that it has met the requirement for transparency set out in section 49 of the Act.

8.73 In proposing the LLU charge controls and directions, set out above, Ofcom is, therefore, satisfied that it has considered all of the relevant requirements of the Act.

Modification of notification period: Part V (LLU) – notification under s.49 with proposed consent to reduce price notification period and Part VI (WLR) - notification under s.49 with proposed consent to reduce price notification period

8.74 Again we will deal with both these parts together as they address the same issues.

Section 49 tests

Our proposals are objectively justifiable

8.75 We have proposed a start date for the new controls of 1 April 2009 with a one week notice requirement for BT. We believe that this is objectively justifiable as other communications providers are aware of the proposal to change charges and will be given formal notification of the new charges in the final Statement. We have set the 1 April state date based on our current proposed timeframe for implementation. Obviously, this is subject to this consultation and we would note the need to amend the start date in the event that we are not able to prepare the final statement in reasonable time for a 1 April start.

Our start date and notice will not unduly discriminate

8.76 The date and notice will apply to all parties. We believe that given the involvement of stakeholders in this consultation period, they will be in a position to respond to the revised notification equally.

Our proposed changes are proportionate

8.77 All parties are aware of the proposed changes. The start date and notification allow a quick adjustment of charges to the appropriate level. Given we are proposing a smooth transition of charges over a number of years we do not believe that the new charges will be unduly disruptive and, therefore, a quick introduction is proportionate to the impact.

Our changes are transparent

8.78 We are consulting fully on our proposals for the revised notification period. We have set out in detail the revised notification period and the proposed start date. Ofcom have, therefore, ensured that it has met the requirement for transparency set out in section 47 of the Act.

Question 8.1 Please set out your views on the proposals set out in Section 8, together with the potential implications of the those proposals for CPs and for consumers, and the factors you consider we should take into account when determining the final pricing regime.

Question 8.2 Do you agree with our assessment that the proposed changes to conditions and directions meet the tests set out under the Act?

Question 8.3 Please provide any other comments you may have in response to the proposals set out in this document.

Annex 1

Responding to this consultation

How to respond

A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 17 February 2009**.

A1.2 Ofcom strongly prefers to receive responses using the online web form at http://www.ofcom.org.uk/consult/condocs/openreachframework/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.

A1.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email markham.sivak@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.

A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Markham Sivak
Floor 4
Competition Policy
Riverside House
2A Southwark Bridge Road
London SE1 9HA

Fax: 020 77834109

A1.5 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.

A1.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 4. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

Further information

A1.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Markham Sivak on 020 77834659.

Confidentiality

A1.8 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.

A1.9 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.

A1.10 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

A1.11 Following the end of the consultation period, Ofcom intends to publish a statement in March 2009.

A1.12 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

A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.

A1.14 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.

A1.15 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:

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 2

Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A2.2 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

A2.3 We will be clear about who we are consulting, why, on what questions and for how long.

A2.4 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.

A2.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A2.6 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.

A2.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A2.8 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 3

Consultation response cover sheet

A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.

A3.2 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.

A3.3 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.

A3.4 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/.

A3.5 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	☐	Name/contact details/job title	☐
Whole response	☐	Organisation	☐
Part of the response	☐	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 4

Consultation questions

Sub heading

A4.1 The questions set out in this document are collated below.

Question 2.1 Do you agree with the stated scope of the review in the context of the proposed market reviews for Fixed Narrowband Market Review and Wholesale Line Access? If not please provide your reasons.

Question 2.2 Do you agree with the proposed objectives for this review? If not please provide your reasons.

Question 3.1 What do you consider to be the key developments in access service competition and has your assessment changed since the First Consultation?

Question 3.2 How should we take account of these developments and possible future developments when developing our final proposals?

Question 4.1 To what extent should our assessment of Openreach's financial performance to date inform our final decisions for a new financial framework?

Question 5.1 With reference to Annex 11, what are your expectations for future levels of demand for fixed lines and the mix of this demand between MPF and WLR?

Question 5.2 With reference to Annex 12, do you agree with our approach to estimating Openreach's cost of capital? If not, please provide evidence to support your view.

Question 5.3 With reference to Annex 14, do you agree with our approach to estimating Openreach's ability to deliver further efficiency gains in the future? If not, please provide evidence to support your view.

Question 5.4 Do you have any comments on the absolute levels of costs or cost trends projected in Section 5 and Annexes 9 and 10?

Question 5.5 Please provide any comments and evidence you may have to inform our assessment of the cost projections and key assumptions set out in Section 5 and in Annex 10

Question 6.1 Do you agree with our assessment that on balance it is appropriate to rebalance the MPF charges towards CCA FAC? If not please set out your own views on the most appropriate approach.

Question 6.2 Do you agree with our assessment that a glide path offers the best approach to the introduction of any new charges, subject to an assessment of starting points and the returns in a given year? If not please set out your own views on the most appropriate approach.

Question 7.1 Do you agree with the proposed basket treatment of the non core rental services subject to cost orientation? Do you agree with the principles for basket construction set out? If not please set out your preferred approach and why.

Question 7.2 Do you have any comments on our proposed set of LLU charges subject to specific or basket charge controls?

Question 7.3 Do you agree with the statements on cost orientation and the proposed baskets for the services set in Annex 7? Is the list comprehensive?

Question 7.4 Other than the core rental services and the MPF and SMPF services identified for a sub-basket cap do you believe there are other charges which require specific attention?

Question 8.1 Please set out your views on the proposals set out in Section 8, together with the potential implications of the those proposals for CPs and for consumers, and the factors you consider we should take into account when determining the final pricing regime.

Question 8.2 Do you agree with our assessment that the proposed changes to conditions and directions meet the tests set out under the Act?

Question 8.3 Please provide any other comments you may have in response to the proposals set out in this document.

Annex 5

Impact Assessment

Introduction

A5.1 The analysis presented in this annex represents an impact assessment, as defined in section 7 of the Communications Act 2003 (the Act).

A5.2 Stakeholders should send any comments on this impact assessment to us by the closing date for this consultation.

A5.3 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 requires 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. However, 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. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

The citizen and/or consumer interest

A5.4 Ofcom's overarching aim is to further the interests of citizens and consumers. Where appropriate, Ofcom does this by promoting competition.

A5.5 This review considers the charge ceiling on Openreach for wholesale line rental, unbundled local loops and related services. These are important wholesale inputs that feed into services retailed to consumers. The main retail markets affected are the retail broadband internet access markets and the fixed narrowband retail exchange line markets. Voice call markets may also be affected, as most CPs who purchase wholesale line rental or fully unbundled local loops also provide calls to consumers. BT has SMP in these markets and has a large market share, so that the large majority of households could potentially be affected by the charge controls that this review proposes. Over 80 per cent of households with a fixed line have a connection ultimately provided by BT, provided either through WLR or MPF.

A5.6 As set out in the Communications Act, consumers have an interest in choice, price, quality of service and value for money from the products they purchase.

Structure and overview of this impact assessment

A5.7 This impact assessment first considers the appropriate objectives for this review. It then considers high level options. We conclude from this that some changes to the existing controls are appropriate. We then consider the nature of any changes. We do not focus in this Impact Assessment on how the efficient level of total costs is assessed. There are many difficult issues in such an assessment, which are discussed in the main text and other annexes.

A5.8 Rather, this impact assessment focuses on the *relative* level of charges. In particular, we consider whether the MPF charge ceiling should rise relative to other core rentals, and if it should rise, how fast it should rise. We consider a range of factors that could influence the appropriate level and speed of any MPF charge ceiling increase, including both static and dynamic efficiency considerations. We discuss these factors in general terms, and then consider a range of specific options for changing the charge controls. We consider the relative merits of each specific option, drawing on the earlier discussion of the various considerations.

A5.9 Our preliminary conclusion is that consumers' interests will best be met by:

- setting individual so that they reach the level of fully allocated costs (FAC) in four years; and

- phasing in changes gradually over time.

A5.10 We consider that this will allow Openreach to recover its efficiently incurred costs, and hence encourage efficiency investment. And it does so in a way that is sustainable in the longer term, in the sense that it will tend to allow Openreach to recover its efficiently incurred costs even if the volume mix is different from forecast. In the longer term, we consider that it is important for static efficiency for alternative wholesale inputs that are used to provide the same retail services (such as MPF and WLR+SMPF) to make broadly comparable contributions to common costs. We believe that FAC is broadly consistent with this.

A5.11 We consider that the changes to charges should be gradually phased in. But we are not making a precise proposal on the nature of the path at this stage. To decide on the path, we believe it will be important to take into account Openreach's ability to recover its costs, LLU operators' legitimate expectations when they made their LLU investments and the detrimental impact of distortions to CPs' choice of wholesale inputs during the glide path period.

Ofcom's policy objectives

A5.12 As set out in the First Consultation and discussed in Section 2 of this consultation, we consider that the objectives for a new pricing framework for Openreach should be:

- to promote efficient, sustainable competition in the delivery of both broadband and traditional voice services;

- to prevent excessive charging and the abuse of SMP by Openreach;

- to provide regulatory certainty for both Openreach and its customers; and

- to ensure that the delivery of the regulated services is sustainable, in that the prevailing prices provide Openreach with the opportunity to recover all of its relevant costs (where efficiently incurred), including the cost of capital.

A5.13 We consider that these objectives best meet consumers' interests.

High level options considered

A5.14 At the highest level, there are three options we consider:

- removal of all or some of the current controls;
- continuation of the current charge ceilings (that is, no action); and
- restructuring the existing controls and charge ceilings.

A5.15 In the First Consultation we set out the second two options and briefly discussed why we regarded the removal of all charge ceilings as inappropriate. We continue to consider that the removal of controls would be clearly detrimental to consumers' interests. BT has SMP in the relevant markets.[15] Without charge ceilings, it would have the ability to set excessive charges for the relevant wholesale services.

A5.16 Whilst ex post regulation could in theory be used to control SMP, it would not give CPs the clarity on what charges will be that they need to make decisions about which wholesale products to buy from CPs, including whether or not to make investments in LLU. Without such clarity, CPs may be placed at a significant disadvantage in competing with BT in the wholesale broadband access markets and fixed narrowband wholesale exchange line markets. Ultimately, we believe this would feed through to higher prices and less choice for consumers. Therefore we consider it would be detrimental to their interests. Given Ofcom's objective to promote the interests of consumers, we therefore consider that the retention of charge ceilings is required.

A5.17 We set out this view in the preliminary impact assessment in the First Consultation and no respondents questioned it.

A5.18 We also note that the EC Recommendation[16] on product and service market susceptible to ex ante regulation (the "EC Recommendation") includes a similar market as one of the markets susceptible to ex ante regulation (as 'Market 4'). This is consistent with the view that ex post regulation would be inadequate in that market, which suggests that continuing with charge controls may be appropriate. The narrowband wholesale exchange line markets (to which the WLR charge relates) are not included in the markets listed in the EC Recommendation as being susceptible to ex ante regulation. However, the explanatory note accompanying the EC Recommendation states that National Regulatory Authorities (NRAs) may be able to regulate markets which differ from those identified in the Recommendation where this

[15] For the wholesale local access market, we found BT to have SMP in December 2004. We have undertaken an assessment of whether there have been any material charges since then, and we consider that there have been none at this time. For the wholesale narrowband markets, BT was found to have SMP in our November 2003 market review, but we are not required to ensure that there have been no material changes for this market (because we are issuing a direction to BT rather than changing an SMP condition). Ahead of the conclusion of the Wholesale Narrowband Market Review , we propose to reset the level of the WLR charges but not to impose a new charge control. The appropriateness of a charge control in the future may be considered further, following the conclusion of the review.

[16] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:344:0065:0069:EN:PDF

is justified by national circumstances. One of the three criteria for justifying ex ante regulation is that the application of competition law alone would not adequately address the market failures. We set out in the 2003 review of the narrowband wholesale exchange line markets[17] the reasons why we consider that ex post regulation was inadequate. We consider that the same reasons still hold.

A5.19 We continue to regard the first high level option as being against consumers' interests.

High level option 2: continuation of the current charge ceilings

A5.20 Our review of Openreach's financial performance and the underlying costs of provision of the regulated services is set out in Sections 4 and 5. As set out in Section 4, we consider that the current pricing regime needs to be modified to ensure it continues to promote efficient and sustainable competition. We conclude in Section 5 that the financial evidence supports a general case for price increases and there is a relatively greater need for an increase in the price of the MPF rental charge.

A5.21 We consider that raising the wholesale charges is ultimately in consumers' interests. We consider this to be the case even if retail prices were to rise as a result. This is because without such increases BT may have insufficient incentive to invest in and maintain the network. Without such an incentive, the quality, and even availability, of services that consumers receive would gradually deteriorate.

A5.22 We do not consider that any of the charge control options we are considering are likely to lead to a significant increase in consumers' total bills. This is partly because the increases we are considering are only part of the retail bills consumers pay. In 2007, average household expenditure on fixed voice and internet was estimated to be around £380 per year.[18] We are proposing changes that for MPF are up to RPI + + 5 per cent. For other Core Rental Services the proposed changes are smaller. This applies to charges that represent around a quarter of a typically annual fixed voice and internet bill. As an extreme upper limit, this would imply wholesale charges increasing by around £16 per annum (including VAT) by 2010/11.

A5.23 The extent to which our proposals result in upward retail price pressure will depend on a number of factors. These include the extent to which CPs are able to absorb any increase in wholesale costs, the extent of competition from CPs that do not use BT's exchanges, especially cable, and the impact of BT's BES charge reductions and the outcome of the Leased Line Charge Control review, which may reduce the wholesale backhaul charges paid by CPs offsetting pressure to increase retail prices (to the extent backhaul is bought from BT). Also, there has been a strong downward trend in retail broadband prices, and this may not be completely off-set by the wholesale charge increases we are proposing. On balance, we do not anticipate any

[17] See section 8 of the consultation document: http://www.ofcom.org.uk/static/archive/oftel/publications/eu_directives/2003/fix_narrow0803_1.pdf

[18] Figure 5.52 of Ofcom's 'The UK Communications Market 2008' shows our estimates of average monthly household expenditure on internet and broadband expenditure to be £9.45 and on fixed voice to be £22.56 (including VAT). Together these imply £384.12 per annum.

increases being a large proportion of total retail prices. This holds even if charges were set at the upper end of our estimated range.

A5.24 Retail price increases for low income consumers may be a particular concern. However, we note that there is a Universal Service Obligation on BT to ensure that all customers can afford to have access to a telephone service. BT implements this through BT Basic, which allows those on Income Support, Income-based Job-Seeker's Allowance and Guaranteed Pension Credit access to much cheaper line rental of £13.50 a quarter (including VAT), including an allowance of £4.50 to spend on calls. BT Basic is not linked directly to any wholesale charge and it will not change with the WLR charge. Instead, changes in BT Basic will be linked to general inflation. Taking broadband services does not affect eligibility for BT Basic.

High level option 3: restructuring the existing controls and charge ceilings

A5.25 As we reject the first two high level options, the rest of this impact assessment considers the third high level option of restructuring the existing controls and charge ceilings. The charge ceilings that currently apply to most of the services we are considering were set on a CCA FAC basis[19]. However, there are other bases for setting prices.

A5.26 It may be helpful to consider other methods of setting charges under two broad headings, according to their approach to common cost recovery. Firstly, there are approaches which are based largely on accounting costs, under which charges are set to recover an amount of common costs determined by application of accounting rules of cost attribution. CCA FAC and LRIC plus EPMU (long-run incremental costs plus an equal proportionate mark-up for common costs) fall into this category. The second group of approaches differ from these in allowing economic factors to affect the amount of common costs recovered from each service.

A5.27 We focus particularly on whether there are economic efficiency reasons for not increasing the MPF charge to the FAC level. This addresses issues raised in some responses to the First Consultation, which argued that any increase in the MPF charge should be moderated. In considering the appropriate basis for setting charges we draw on the objectives set out earlier.

Fully Allocated Costs

A5.28 In its response to the First Consultation, Openreach suggested that – based on a 10% cost of capital - an immediate £16 per annum increase in the MPF rental charge was necessary, followed by an RPI+X regime. This would involve the charge increasing immediately from £81.69 to £97.69, an increase of around 20 per cent, to reflect BT's estimate of the FAC for MPF. Openreach argues that the current price differentials between MPF and WLR and SMPF have resulted in a distorting arbitrage which is

[19] This means that charge ceilings were set based on a Current Cost Accounting (CCA) methodology for valuing assets with Fully Allocated Costs (FAC). CCA is an accounting methodology where assets are valued and depreciated according to their current replacement cost. FAC means that all the costs are distributed between the relevant services, including those common costs that are not directly attributable to the service.

unsustainable. Openreach has also argued that the costs should be based on a 12% cost of capital; on this basis the step change would need to be greater than £16.

A5.29 As set out in Section 5, our forecasts of efficiently incurred FAC for MPF is considerably lower than Openreach's, as is the case for the other charges. In this impact assessment we do not discuss our forecasts for an efficient level of FAC, which are set out in full elsewhere in the consultation. Rather, this impact assessment concentrates on considering whether FAC is the most appropriate standard for setting costs, and, if so, how quickly charges should move to FAC.

Accounting approaches to setting charges

A5.30 CCA FAC and LRIC+EPMU are two different ways of apportioning common costs. Both methods result in all Openreach's common costs being apportioned among its various services, and hence if applied consistently to Openreach's regulated services should allow Openreach an opportunity to earn its cost of capital. There is little to choose between them on efficiency grounds, as both involve accounting rules for recovering common costs from different products, without regard to the implications for efficiency. In contrast to historic cost accounting (HCA), both CCA FAC and LRIC+EPMU reflect forward looking costs rather than prices when assets were purchased, thus giving better signals for investment and entry. (As we do not consider HCA FAC further, for simplicity we refer to CCA FAC simply as FAC in what follows).

A5.31 Setting charges on either FAC or LRIC+FPMU could be regarded as meeting the objectives of preventing excessive charging, whilst also ensuring the delivery of the regulated services is sustainable by allowing Openreach an opportunity to recover all of its relevant efficiently incurred costs, including the cost of capital.

A5.32 When the current MPF charge ceiling was set in November 2005, FAC was preferred to LRIC+EPMU. We considered that LRIC+EPMU "has the disadvantage of involving a time consuming operation which BT carries out on an irregular basis. Ofcom has little visibility of how BT generates costs from its LRIC model, and this extra iteration by BT of its financial data is not subject to external audit scrutiny. Performance monitoring on a LRIC+EPMU basis against BT's actual financial performance is not straightforward, as routinely prepared wholesale service profitability information is prepared on a FAC basis. By contrast, FAC uses data that can be reconciled to the regulatory financial statements, which have been audited and are in the public domain. Given that LRIC+EPMU is not conceptually superior to FAC as a cost basis for setting charges, but that FAC has transparency benefits, Ofcom has used FAC as the appropriate basis for setting the fully unbundled rental charge ceiling …".[20] It was also noted that this was the approach that had been adopted for BT's network charge controls. In January 2006 the WLR charge ceiling was also set on a consistent basis using FAC.

A5.33 For these reasons, FAC is likely to be preferred to LRIC+EPMU. In what follows we consider whether there might be reasons for departing from FAC,

[20] See paragraphs 3.9 and 3.10 of
http://www.ofcom.org.uk/consult/condocs/llu/statement/llu_statement.pdf

especially with regard to the MPF charge ceiling. While the discussion focuses on FAC, the discussion would also be generally applicable to LRIC+EPMU.

Economic approaches to setting charges

A5.34 Above we distinguished between accounting-based approaches and economic approaches to charge setting, on the basis that the latter take account of efficiency considerations in deciding how common costs should be recovered. To the extent it is possible to do so, we would like to set charges in a way that maximises efficiency, taking account of both static and dynamic efficiency considerations. This will ultimately tend to maximise benefits to consumers as a whole.

A5.35 There is a range of static and dynamic efficiency considerations, which often pull in different directions. Some considerations suggest that less common cost should be recovered from a particular charge, while other considerations argue for more common cost being recovered from that charge.

A5.36 In the following sections we discuss the various static and dynamic considerations. Our conclusions are as follows:

- **own price elasticity of demand** – while precise quantification is impractical, it is likely that taking account of own price elasticity of demand, when considered in isolation, points to a somewhat lower contribution from MPF than WLR, which would probably argue for MPF being less than FAC. However, while this may be true in the short term, this effect is likely to reduce in the future, if MPF is used for voice only services. But this result needs to be consider alongside other static efficiency considerations;

- **other static efficiency considerations** – the most important problem we perceive with considering only own price elasticity of demand is that we also need to consider the interactions between demand for MPF, WLR and SMPF. We consider the potential distortion to CPs' choice of wholesale products to be the most important static efficiency consideration. Setting charges so that the differential reflects differences in underlying costs would allow CPs to choose between MPF and SMPF on their merits. We consider that setting charges on a FAC basis is wholly consistent with achieving this;

- **dynamic efficiency** considerations:

    - **encouraging greater competition** - there are potential gains from encouraging greater competition in voice and broadband based on MPF. But for competition to be sustainable and effective, in the longer term entrants must be able to compete without special protection. At this stage in the market's development, we do not consider the argument to deliberately set charges to promote competition to be strong;

    - **Openreach's ability to recover common costs in total** – this might argue for a more rapid increase in charges to reach FAC if that were required in order to allow the recovery of efficient costs, including a return on capital employed;

- **avoiding the creation of regulatory uncertainty** - to ensure good investment incentives, we need to behave in a predictable way, and avoid not being viewed as opportunistic or short-termist. This argues for giving weight to how we have set charges in the past, and to stakeholders' reasonable expectations of future charges. This argues for phasing in any increase. We regard avoiding regulatory uncertainty as crucial for investment incentives, and hence consumers' interests; and

- **glide paths** have advantages over rapid adjustments in charges in terms of leading to greater stability and predictability and also because they give good incentive to reduce costs particularly towards the end of a price control period.

A5.37 In the following, we initially discuss these issues in general terms. Where possible, we have tried to provide some quantitative assessment of the size of the different effects.

A5.38 To make the analysis more focussed, we then consider four particular charge control options. They range from an immediate re-balancing of charges with a one-off increase in the MPF charge to no closing of the current differential between MPF and WLR. For each of the charge control options, we consider the impact on particular stakeholders, especially consumers.

Static efficiency

A5.39 The best way to achieve economic efficiency is to set prices equal to marginal cost. Setting prices above this level could mean that customers who would have been prepared to pay more than the marginal cost of providing the service may be excluded. As a result some welfare enhancing transactions do not take place: some consumers will be deterred from purchasing the relevant services despite the fact that they place more value on those services than they cost to provide.

A5.40 However, for prices to be sustainable in the longer term, the company providing the service must – across all its services – be able to recover its fixed and common costs as well as the marginal cost of providing individual services. Prices must therefore – on average – be higher than their marginal cost where there are some costs that are either common across all services or fixed in nature. This will inevitably reduce static efficiency relative to the ideal situation of marginal cost pricing. We refer to this effect below as a static distortion.

A5.41 Static distortions from raising prices above marginal costs can be minimised by taking account of differences between the way demand for each product is affected by changes in price. Specifically, static distortion will be reduced if prices are set to recover a relatively high proportion of fixed costs from services whose demand is relatively unresponsive to changes in price (i.e. is less "elastic") and less from those whose demand is relatively responsive to price.

A5.42 The set of prices that minimise static distortions are known as Ramsey prices. Below, we consider how prices might be set to minimise distortions by taking into account the responsiveness of demand to a product's own price ('own price elasticity'). However, this is only partial, as to minimising static distortions by setting Ramsey prices we should also consider how the prices of the products we are considering affects the demand for other products ('cross price elasticity'). This is complicated by the fact that we are considering different wholesale products which can be combined to provide the same retail products (for example, both MPF and WLR+SMPF can be used to provide voice and broadband services), and differences in contribution will affect the choice of wholesale products. Further complications could arise from the fact that competition in downstream markets is imperfect.

A5.43 As we describe in later sections, we consider that the most important static efficiency consideration is likely to be the potential distortion to competition if the level of contribution from WLR+SMPF is significantly different to that for MPF.

Own price elasticity of demand

A5.44 In its response to the First Consultation, Carphone Warehouse included an analysis by Frontier Economics that considers Ramsey pricing. Carphone Warehouse subsequently submitted a second paper by Frontier Economics with revised illustrative Ramsey price estimates. Using the FAC for each product produced by BT and shown in the First Consultation, Frontier Economics produced some illustrative Ramsey price estimates, as shown in the table below.

Figure A5.1 Frontier Economics illustrative Ramsey price estimates

	2006/07		2011/12	
£/user/annum	**FAC/ LRIC+EPMU**	**Ramsey prices**	**FAC/ LRIC+EPMU**	**Ramsey prices**
WLR	97	101	127	145
MPF	94	77	113	93
SMPF	18	16	23	23

A5.45 In order to make its calculations, Frontier Economics needed to make a number of simplifying assumptions, including:

- only own-price elasticity effects are considered;
- the own-price elasticity of demand for wholesale MPF appears to be derived from a retail elasticity of demand that is a weighted average of elasticities of demand for narrowband and broadband;
- own-price elasticities of demand for the wholesale products are derived from the retail elasticity estimates by applying a dilution factor to reflect

the fact that the price of the wholesale input is "diluted" by other cost items in the retail price. This simple adjustment is however valid only under certain quite restrictive assumptions, including assuming there is no alternative input at the wholesale level; and

- the range of empirical estimates of the elasticity of demand for broadband is very wide and its minimum overlaps the range of narrowband elasticities, although the mean estimate of the former is significantly higher. The studies referred to were from a number of developed countries, and especially the US, rather than relating specifically to the UK. Also, some of the studies relate to the early years of broadband development, when conditions may have been different to today.

A5.46 Given the simplifying assumptions, we are cautious in adopting a similar approach. The cross-price elasticities between these different wholesale products may be significant, and ignoring them may lead to misleading results. Also, the assumption in the transformation from retail elasticities to wholesale elasticities that there is no alternative wholesale input is unrealistic given that these products may to some extent be regarded by CPs as substitutes.

A5.47 We therefore do not think that significant weight should be attached to the precise numbers that Frontier Economics have put forward. But we think it is likely that currently demand for MPF is driven more by broadband than voice and that demand for broadband is likely to be more price sensitive than voice. On its own, this might suggest it would be more efficient to set a slightly lower mark up on marginal costs for MPF than for WLR. This approach would support an approach that set the MPF charge slightly lower than FAC and the WLR charge slightly above its FAC, at least in the short term.

A5.48 In the longer term, however, some of the assumptions underlying this may become less tenable. In the longer term, demand for MPF is likely to be driven by demand for voice services as well as broadband. In particular, as BT moves to 21CN, it may use MPF for voice only services. It is also possible that those CPs who have already invested in LLU primarily in order to supply broadband may choose to use MPF for voice only services, given that the additional costs of supplying such voice only services are relatively low. Therefore even though this argument may have some weight in the short term, we consider it will become less important over time.

Other static efficiency considerations

A5.49 The most important problem we perceive with considering only own price elasticity of demand is that we also need to consider the interaction between demand for MPF, WLR and SMPF.

A5.50 In particular, we need to consider whether, if the MPF charge were set to make a significantly lower contribution to common costs than WLR+SMPF, this would create distortions in competition that would reduce static efficiency. We consider two potential static efficiency losses:

- if a low MPF charge were to encourage CPs to unbundle more exchanges, this would involve the duplication of equipment in more exchanges, leading to greater static welfare losses; and

- if the MPF charge is too low relative to the charge for alternative inputs which could be used to provide retail voice and broadband services, this may distort downstream competition.

A5.51 We discuss these in turn below. We consider that the potential distortion to competition if the MPF charge is set relatively low compared to SMPF and WLR is likely to be the most important consideration for static efficiency.

Duplication at exchanges

A5.52 LLU inevitably involves some duplication of equipment at exchanges. This leads to some static inefficiency. But this may nevertheless be in consumers' interests. It can be more than offset by the dynamic benefits of increased competition, We discuss the dynamic benefits of competition in later sections.

A5.53 The precise scale of the static losses is difficult to estimate with precision. But there is no doubt that there are some static welfare losses and that, on a per line basis, these costs generally tend to be higher at smaller exchanges.

A5.54 Most of the duplication costs represent sunk costs, at least in the short and medium term. This means that for exchanges that have already been unbundled, the loss of economies of scale at existing exchanges may not be that relevant to considerations for setting relative charges in the future. We may only want to consider these costs to the extent that a relatively low MPF charge may encourage *further* unbundling. Given that there are currently around 1,800 unbundled exchanges, the likely static welfare losses per user from further unbundling may be considerable, as future exchanges that are unbundled are likely to be smaller where the loss of economies of scale are more costly. In practice, the speed of unbundling exchanges has already slowed dramatically and we believe that future plans for roll-out are limited.

A5.55 Given that the largest exchanges have mostly already been unbundled, the increasing cost of duplication at small exchanges may suggest caution in setting prices specifically with the aim of increasing further unbundling, though this needs to be considered in conjunction with the other considerations.

Distortions to competition

A5.56 Duplication at exchanges is not the only possible source of static efficiency losses from an MPF charge that is set relatively low compared to the SMPF+WLR charges. Even at exchanges that have already been unbundled, there may still be further static efficiency losses if the decision to use MPF is distorted. This is because:

- at the wholesale level, those LLU operators who have unbundled exchanges to provide SMPF may invest further so as to be able to use MPF; or

- at the retail level, consumers may switch away from suppliers using WLR and SMPF to suppliers using MPF inputs.

A5.57 At the wholesale level, some CPs are faced with a decision between using MPF or using WLR & SMPF as wholesale inputs to provide the same retail services (i.e. voice and broadband). In order for this decision to be undistorted – other things being equal – the differences in charging should reflect the difference in the incremental costs, or alternatively, the charge for MPF should make the same contribution to common costs recovery as the WLR & SMPF charges.

A5.58 If the differential is cost based, then LLU operators could choose between MPF and SMPF & WLR on their merits. LLU operators may want to switch to MPF because it always them more flexibility in the voice service they offer and because of genuine differences in incremental cost between WLR & SMPF compared to MPF. For example, providing voice and broadband services using MSANs and MPF involves less jumpering and less duplication of equipment (such as line cards) in exchanges compared to SMPF and WLR.

A5.59 While MPF may offer benefits, LLU operators may need to incur costs in moving from using WLR and SMPF, including:

- investments in voice platforms and also perhaps additional equipment in exchanges in order to be able to provide voice services through the use of MPF;

- the switching costs of moving consumers from WLR & SMPF to MPF (while it may not necessarily reflect the true resource cost, Openreach's current regulated charge for a single migration is around £35); and

- possible additional backhaul costs - although voice uses little bandwidth, it may require greater resilience requiring a more expensive backhaul configuration.

A5.60 CPs other than BT currently have around 3.5 million SMPF lines. A number of LLU operators are currently migrating or are considering migrating from SMPF to MPF. The scale of any potential welfare losses will vary between LLU operators. For example, some LLU operators may need to develop a voice platform and to make significant further investments in exchanges in order to be able to offer voice services, whilst other LLU operators may already have a voice platform and have equipment in exchanges that is already capable of providing voice services.

A5.61 We note that when BT switches from using SMPF to MPF through 21CN products, these potential static losses from distorted charges do not arise to any significant extent. BT will anyway have invested in a voice platform and will not have to install additional equipment in exchanges in order to be able to provide MPF rather than WLR and SMPF. On an end-to-end basis within BT, after 21CN there will be no substantive physical distinction between the use of MPF and the use of SMPF and WLR.

A5.62 At the retail level, consumers may switch to CPs offering MPF based products away from CPs offering products that use WLR and SMPF, or use WLR only. This could be inefficient if consumers were only persuaded to switch to a CP because that CP was able to offer a lower price because it was using a wholesale input that had an artificially low price relative to wholesale inputs used by other CPs. CPs using MPF might be able to undercut rivals even though they had higher internal costs or were offering a worse service. It could be argued that as all CPs are able to choose which wholesale inputs they wish to use, the extent of any distortion is likely to be minimal. However, this is misleading because not all CPs are equally well placed to use different wholesale inputs. Distorted wholesale prices could therefore distort competition to favour CPs who are well placed to take advantage of MPF in a way that increases costs to society overall.

A5.63 For an efficient outcome for society, CPs should be choosing between MPF and WLR+SMPF based on an assessment of the incremental costs of MPF plus their own additional costs compared to the incremental costs of using WLR+SMPF. This would be achieved if the difference in charges were comparable to the differences in incremental cost for Openreach.

A5.64 For any individual line, the upper bound of the static welfare loss from distortions to competition might be regarded as the entirety of the gap between (a) the differences in the long run incremental costs of MPF compared to WLR+SMPF and (b) the differences in charges. For total static welfare loss, the extreme upper bound from distortions to competition might be regarded as the entirety of this gap multiplied by the volume of MPF lines used by CPs other than BT.

A5.65 We do not consider that BT own use of MPF is relevant. Because BT is still a vertically integrated company, the level of the internal wholesale transfer price (that is, whether the charge is for MPF or WLR&SMPF) is unlikely to affect the retail prices that BT charges. We believe that BT is unlikely to change its retail prices as a result of a notional switch to using MPF. However, it may reduce its retail prices as a result of other CPs switching to MPF, if this is lower cost and intensifies competitive pressure downstream. However, we will be able to see the extent of this, and quantify the potential efficiency loss, by considering only the MPF used by other CPs.

A5.66 The table below shows an estimate of the gap between the charges and the LRIC estimates. The LRIC estimates are taken from the (unaudited) LRIC figures in BT's 2007/08 regulatory accounts. This indicates that the difference in contribution between MPF and WLR and SMPF in 2007/08 is around £6 per user per annum.

Figure A5.2: Differences in contribution

£ per annum per line	MPF	WLR Res + SMPF	Difference
Current charge	81.69	116.28	34.59
BT's estimate of 2007/08 LRIC (unaudited)	65	93	29
Gap between differences in LRIC and differences in charges			6

Source: BT's 2007/08 regulatory accounts

A5.67 We have not reviewed the LRIC figures BT has produced and do not necessarily regard them as being robust. We note that in 2006/07 the differential was £15 per annum per line. The differential reported in BT regulated accounts therefore appears to be volatile year to year.

A5.68 If we were to assume that the difference in contribution were £6 per user per annum, then based on the current volume of MPF lines of around 1.5 million, then this might currently imply an upper limit of £9m per annum for the possible cost of the distortion. If this differential in contribution were to remain unchanged, and the volume of MPF lines used by other CPs increased to 4 million by 2012/13, then the upper estimate of this cost might be £24m per annum. However, such upper limits are likely to very significantly overstate the potential scale of this static welfare loss:

- some CPs would have switched to MPF, and some consumers would have switched to a CP using MPF, even if the MPF charge were higher. Providing voice and broadband services using MSANs and MPF involves less jumpering and less duplication of equipment in exchanges compared to SMPF and WLR;
- MPF is not simply a wholesale substitute for SMPF and WLR. As discussed earlier, MPF may be more associated at the retail level with broadband, the demand for which is more price sensitive than voice, which would tend to argue for a lower MPF charge; and
- despite the differences between the MPF charges and the WLR & SMPF charges, which has existed for some years, most LLU operators still use the latter. This suggests that the cross-price responsiveness discussed earlier may be fairly low. If so, the risk of efficiency losses resulting from the maintenance of a differential which does not fully reflect cost differences may also be relatively low.

A5.69 The likely size of any actual welfare loss is therefore unclear. However, the existence of this potential loss would tend to argue for reducing the current difference between the charge for MPF and those for SMPF & WLR. Charging on the basis of FAC is likely to be broadly consistent with removing these possible distortions. The implications of these other static efficiency factors are in sharp contrast to the implications of considering only own price elasticity, which tends to point to maintaining, or even increasing, the differential between the MPF and SMPF & WLR charges. We consider that the potential distortion to competition to be the most important static consideration.

Dynamic efficiency considerations

A5.70 Even if there were, on balance, static efficiency losses from the current charge levels, it may nevertheless be in consumers' interests not to change charges rapidly. This would be the case if there were dynamic efficiency considerations that outweighed the static efficiency losses.

A5.71 The three aspects of dynamic efficiency we have considered are:

- Potential gains from increased competition;
- Good investment incentives; and
- Glide paths as a way of giving cost reduction incentives.

A5.72 Our preliminary conclusion on encouraging competition is that we do not consider this argument to be strong at this stage in the market's development. In contrast, we view the need to give good investment incentives as being crucial to the future development of the industry, and to consumers' interests. We also attach some weight to giving good cost reduction incentives.

Potential gains from encouraging competition

A5.73 Competition is widely considered to be much more effective at delivering benefits to consumers than regulation. Competition tends to give dynamic efficiency benefits through greater innovation and experimentation leading to the success of service propositions that are attractive to consumers, and tends to put greater pressure on costs. This is the reason why Ofcom's duty to further the interests of consumers in relevant markets says that where appropriate this should be through the promotion of competition.

A5.74 However, this does not mean that it is always efficient to promote competition. For example, if new entrants are unable to compete once price distortions favourable to them are removed, then promoting competition may make little sense. In the following sections, we consider the possible benefits of promoting competition.

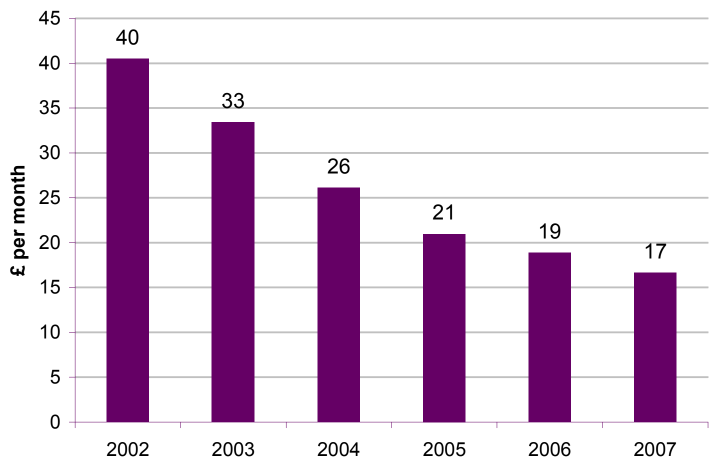
Potential gains from encouraging deeper competition in broadband

A5.75 Our view is that in the short and medium term MPF is likely to become increasingly important to the future of broadband competition. Some LLU operators currently using mainly SMPF may be doing so as a stepping stone to full MPF. Indeed, their initial investment in LLU may have been predicated on ultimately using MPF.

A5.76 This move from SMPF to MPF is consistent with BT's and our own volume forecasts. It is also consistent with the responses made by a number of CPs to the First Consultation. It may be that concerns about the quality of the migration process are one factor currently holding back a faster move to MPF. Another factor may be the uncertainty around the MPF charge caused by this review.

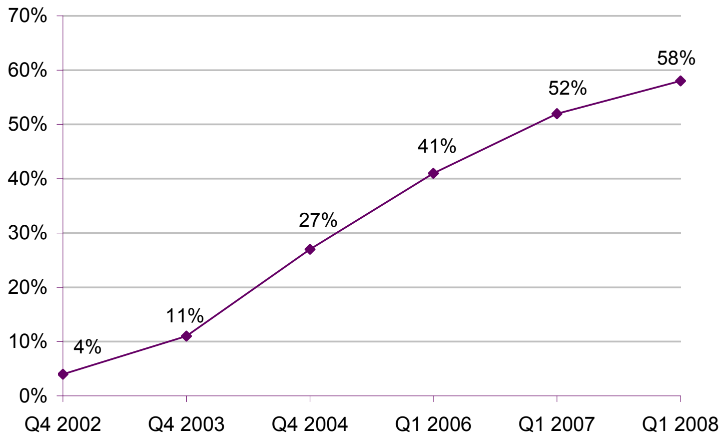
A5.77 The potential benefits for consumers from greater competition in broadband include lower price, better quality and more choice. As shown in the following chart, prices have fallen significantly in recent years, at a time when headline connection speeds have been increasing. The penetration of broadband has increased over the same period, as shown by the second chart below.

Figure A5.3: Residential monthly broadband price (annual average)



Source: Ofcom / operators

Figure A5.4: Household penetration of broadband



Source: Ofcom research, see page 333 of The UK Communications Market 2008

A5.78 These gains for consumers are consistent with the trends described in Ofcom's evaluation of the impact of the Telecoms Strategic Review (TSR) of December 2007[21]. A key output of the TSR were the Undertakings made by BT, which led to creation of Openreach and a level playing field between other parts of BT and independent CPs in terms of access to Openreach's wholesale products. The intention being to help the development of competition in downstream markets, especially through LLU. However, as the TSR evaluation notes, it is hard to assess what difference the Undertakings have made because it is very hard to assess what would have happened in the absence of the Undertakings.

A5.79 This difficulty in making a fair comparison also applies when we try to determine the benefits to consumers from LLU based competition. The number of LLU lines began to grow in 2006 and then began to increase very rapidly in 2007. While prices, headline speeds and penetration have all improved over this period, it is clear from the above graphs that there have been strong improving trends since at least 2002, which is many years before the Undertaking and the growth of LLU. It would be unrealistic to think that none of the benefits since 2006 would have occurred even without the increased competition from LLU. The additional contribution that LLU based competition has made to the benefits experienced by consumers is therefore difficult to estimate, though there have clearly been some benefits in terms of service development, as described below.

A5.80 In their responses to our First Consultation, some CPs set out what they saw as the benefits of LLU based competition. These included, amongst other things:

- more pricing, service and bundling innovation since there is less dependence on buying discrete inputs from BT each of which has a separate price;

[21] http://www.ofcom.org.uk/telecoms/btundertakings/tsr_statement/tsr_statement.pdf

- higher levels of timely and efficient investment as competition has driven CPs to invest, for example the adoption of ADSL2+ was led by LLU operators rather than BT; and

- greater pressure on costs since more of the value chain is exposed to competition.

A5.81 While we do not consider it possible to calculate the likely size of the dynamic efficiency benefits with any degree of accuracy, we nevertheless believe that these gains are likely to be considerable. It was because we believed these gains are considerable that we concluded in the Telecoms Strategic Review to promote competition at the deepest level where it is sustainable and effective.

A5.82 That there has been a significant improvement in the degree of competition in the wholesale broadband market is evident from our review of the wholesale broadband access market.[22] Largely as a result of the growth of LLU, we have been able to deregulate the wholesale broadband access market in that part of the UK referred to as 'Market 3'[23], which covers nearly 70 per cent of the population.

A5.83 However, most of the broadband competition from LLU is currently through SMPF, rather than MPF. LLU operators currently account for around 3.5 million SMPF lines and only 1.5 million MPF lines. This raises the question of how important the level of the MPF charge is for broadband competition, given that SMPF is currently the dominant form of LLU.

Modest increases in the MPF charge unlikely to change LLU footprint significantly

A5.84 An increase in the MPF charge could have a number of impacts. Firstly, it reduces the incentive for LLU operators to switch from SMPF to MPF. Secondly, it may discourage CPs from unbundling more exchanges, thereby making the 'LLU footprint' smaller than it would otherwise be. For example, in its response to the First Consultation, Carphone Warehouse said that TalkTalk had already halted network expansion due to the uncertainty over MPF charges. Reduced unbundling will reduce the intensity of LLU based competition where another CP would have entered an exchange that has already been unbundled and will reduce the total number of exchanges at which there is at least one LLU competitor. To give some idea of the possible scale, the largest 2,200 exchanges cover around 3 per cent more of the population than the largest 1,900 exchanges. While we recognise that there are various considerations determining which exchanges are unbundled in addition to size, we nevertheless consider 3 per cent to be a high estimate of the percentage of the population connected to exchanges which might have been unbundled had current charge levels remained in place.

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[22] http://www.ofcom.org.uk/consult/condocs/wbamr07/statement/

[23] Market 3 is defined in the wholesale broadband access statement as being 'those geographic areas covered by exchanges where there are currently 4 or more Principal Operators present AND exchanges where there are forecast to be 4 or more Principal Operators but where the exchange serves 10,000 or more premises'.

A5.85 As well as considering whether further growth in the LLU footprint may be inhibited, we also need to consider whether the LLU footprint might shrink as a result of a rise in the MPF charge, because of LLU operators exiting some exchanges. There are significant sunk costs involved with unbundling exchanges, including the initial exchange set up costs, MSAN costs, backhaul connection costs and the costs of migrating end users. CPs may therefore not necessarily exit exchanges, at least in the short term, even if they failed to earn returns sufficient to cover their initial investments.

A5.86 However, CPs may choose not to make further investments (e.g. in replacing equipment at the end of its life, in upgrading backhaul or in promotional activity to attract a large customer base) and may run down their LLU service offerings. However, the size of further investments may not be so large as to necessarily imply that CPs will exit exchanges. As described below, we have tried to explore this through modelling.

A5.87 Using our model of LLU investment, we have estimated forward looking costs, ignoring sunk costs. We believe that they are significantly lower than the total costs that the CPs would initially have considered in making their investments. For a 'marginal exchange', by which we mean an exchange for which the business case for unbundling is finely balanced, the total costs of MPF may initially have been around £170 to £200 per user per annum for a CP with reasonably scale (to cover wholesale costs, ignoring retailing costs and the cost of calls). The on-going costs (even including further investments, such as backhaul upgrading) might only be £140 to £160 per user per annum, a difference of £30 to £40 per user per annum. While consultation responses may provide more information with which to assess this, at this stage we consider it unlikely that CPs would exit exchanges in the medium term even if there were a sizeable increase in the MPF charge. This suggests that modest increases in the MPF charge are unlikely to have a material effect on the wholesale broadband access Market 3, in which we recently deregulated wholesale broadband access.

A5.88 While sizeable increases in the MPF charge may not result in LLU operators exiting exchanges already unbundled, it could significantly impact on their profitability, which we discuss further below.

Potential gains from encouraging deeper competition in voice

A5.89 LLU operators moving from SMPF to MPF has the additional advantage of possibly allowing deeper sustainable and effective competition in voice. Voice competition is currently underpinned by a separate set of remedies, such as Wholesale Line Rental, Carrier Pre Select and the network charge control. As MPF allows competition for broadband and voice, it holds out the possibility in the longer term of making the specifically narrowband remedies unnecessary because it is possible to rely on competition at a deeper infrastructure level. While this is a possible outcome, it is not clear currently how likely it is.

A5.90 A number of responses to the First Consultation stressed the importance of the price differential between MPF and WLR & SMPF on the incentive on LLU operators to switch to using MPF. If competition in voice services based on MPF is likely to be sustainable in the longer term, then there may be a case for maintaining a sufficient differential between MPF and WLR & SMPF in order to encourage a greater shift from SMPF to MPF.

A5.91 If voice competition based on MPF were to become sustainable, it may offer scope for competition to lead to pressure on costs and innovation in services. In its response to the First Consultation, Sky said that the having control of its end users' telephony service would allow a CP to offer customised products and services, including, amongst other things, enhanced voicemail, feature management, VoIP solutions, wideband voice and TV audio.

A5.92 We note that in the future it is likely to be possible for CPs to buy BT Wholesale's Wholesale Voice Connect (WVC) product as an alternative to Wholesale Line Rental and Carrier Pre Select, though this will require more investment by CPs. WVC offers CPs greater flexibility in the design and features of the voice services compared to the existing WLR product. However, WVC is still being developed, and is not planned for introduction until 2010. Also, WVC will not offer the same technical flexibility to CPs that would be available to them from using MPF, and flexibility in charging structure will be more limited because of BT's describe wholesale charges for individual services.

A5.93 To the extent that WVC gives CPs the ability to offer innovative voice services without using MPF, then the potential benefits of voice competition using MPF are reduced. However, voice competition using MPF might still offer additional benefits in terms of exposing more of the supply chain to competition.

Impact of longer term move to NGA

A5.94 On 15 July 2008 BT announced plans to invest £1.5bn to upgrade the broadband services that seven to ten million homes could receive by 2012. These plans will deliver a mix of fibre-to-the-cabinet (FTTC) covering six to seven million homes plus FTTH deployments including new build areas. The majority of this deployment is scheduled to take place in 2011/12. Longer term, we might expect these developments to be extended to reach more of the population.

A5.95 These developments are likely to reduce the value of LLU investments and ultimately make it redundant. This could reduce the value of promoting broadband and voice competition based on MPF. If the establishment of MPF based competition in broadband and voice were to make no difference to the extent of competition after FTTH and FTTC become prevalent, this would mean that the benefits from MPF based competition would be transitory. This would not mean that any benefits should be discounted completely, as they may nevertheless last for some years, but that they would be smaller than they would otherwise be.

A5.96 However, we consider that the establishment of an LLU business is likely to help a CP in the future when they move to any successor products. They will have a customer base and will have greater experience in providing voice and broadband. Therefore the development of competition in broadband and voice using MPF might have some longer term benefits for competition even after MPF become redundant.

Conclusion on promoting competition

A5.97 While it may sometimes be justifiable to actively promote competition by setting prices specifically to assist entry, this can only ever be a temporary measure. If new entrants cannot compete in the longer term without entry assistance, then the competition would not be sustainable and effective, and it would almost certainly have been inefficient to have encouraged such entry in the first place. Sustainable and effective competition requires:

- that entrants must be able to compete in a market without special protection in that market (other than by ex post competition law) though this may be on the basis of non-discriminatory access to upstream inputs; and
- charges for regulated inputs should be consistent with overall cost recovery for the regulated firm which means that different regulated charges should be set in a consistent way.

A5.98 CPs are currently choosing between MPF and WLR & SMPF as the wholesale inputs to provide the same retail services (i.e. voice and broadband). In the medium term, if MPF becomes increasing used for voice only services, then CPs will make decisions between whether to use MPF or WLR as wholesale inputs to provide voice services. It is the differential between the relevant charges that will drive their decision. Even if we believed that the dynamic benefits from MPF based competition outweighed the static losses, we would not want to set charges to maintain a differential that was below cost in the longer term.

A5.99 In addition, switching from WLR to MPF could in the longer term threaten overall cost recovery if MPF makes a smaller contribution to cost recovery. Setting MPF below FAC would only be sustainable in the long term if other charges were maintained at above FAC. But even if this were desirable, it may be unsustainable where the services covered are substitutes, as over time users will increasingly switch to the cheaper service. And in any case, it is unclear whether the additional dynamic benefits which might result from further encouragement of MPF use would outweigh the possible increasing static losses.

A5.100 In conclusion, we do not consider the argument to deliberately set charges to promote competition to be strong at this stage in the market's development.

Investment incentives

A5.101 A crucially important aspect of regulation is to create a climate within which investments can be made. We consider two aspects of this below:

- Openreach's ability to recover common costs in total; and
- Avoiding the creation of regulatory uncertainty

A5.102 We view these aspects of dynamic efficiency as being central to protecting consumers' interests.

Openreach's ability to recover common costs in total

A5.103 We need to consider whether there is sufficient incentive for investment in the continued provision of services. This is a crucial consideration for consumers' interests because without such an incentive the quality of the local access network is likely to deteriorate. A key part of this is whether Openreach is able to recover its common costs in total.

A5.104 While the current MPF charge is below the FAC, it is above BT's estimate of the LRIC (as set out in the 2007/08 regulatory financial statements). Openreach should therefore still have an incentive to invest in the local loop provided it can recover its common costs in aggregate. Even if Openreach did struggle to earn a reasonable rate of return, BT may still be able to do so. This is because there are substantial common costs between Openreach and the rest of BT. It may be possible for the difference in common costs to be recovered through larger contributions from other services, at least in the short term. In particular, Openreach's local loops support the provision to customers of BT's retail services, many of which are highly profitable.

A5.105 A major factor impacting on the finances of Openreach is the change in the mix of services, in particular volumes moving from WLR & SMPF to MPF. In terms of the impact on BT, as opposed to just Openreach, the distinction between external MPF and internal MPF is important. When CPs other than BT switch from buying WLR & SMPF to MPF, this results in lower profitability for BT Group. However, when a downstream unit of BT switches from using WLR & SMPF to MPF, this might be regarded as a change in the level of internal transfers within BT, but without any necessary impact on the overall results for the group. However, this may be undermined in the longer term if the intensity of retail competition (especially from competitors using low MPF charges) forces retail prices down to a point where common costs can no longer be recovered in full.

A5.106 From the point of view of ensuring an incentive to invest and maintain the local loop, it might seem sufficient to consider this only at the BT level and to ensure that BT has such an incentive. However, the spirit of the Undertaking and equality of access may suggest considering Openreach as a separately entity rather than BT, which might argue for ensuring that Openreach is able to earn a reasonable rate of return when considered independently. Such an understanding might mean that confidence in the regulatory regime would be undermined if Openreach were not able to earn a reasonable rate of return.

A5.107 Considering Openreach independently also means that the charges will be sustainable if increasing competition downstream erodes BT's ability to recover more costs in retail markets.

A5.108 In a later section, we set out the expected return on capital employed for the Core Rental Services. We do this for each of the specific charge control options we consider.

Avoiding the creation of regulatory uncertainty

A5.109 It is vital that the regulatory regime gives investors confidence and is not viewed as being opportunistic and short-termist. The regime needs to be transparent and predictable. If there were a breakdown of confidence in the way Ofcom regulates, then efficient investment may be deterred, leading to poorer availability or quality of communication services. Ultimately this would be very detrimental to consumers.

A5.110 We believe that ensuring confidence in the regulatory regime is a particularly important consideration for this review. LLU operators have only recently invested significant sums in unbundling exchanges, and the profitability of these investments will be affected very directly by this review. BT continues to invest in the existing local access infrastructure and has announced a major investment programme in superfast broadband. Other CPs are also exploring possible investments in NGA infrastructure. If there were a perception that Ofcom behaves in an unpredictable way that could undermine the business case for this investment.

A5.111 While we consider that we should give very considerable weight to retaining confidence in the regulatory regime, what this implies in practice is not completely clear. One perspective could be that a predictable regime should ensure that charge ceilings are not excessively volatile. This is particularly pertinent to the MPF charge because significant investments have been made on the basis of the current charge level, with no signal when the bulk of the investment was made that the charge may need to rise significantly in the future. A rapid increase in the MPF charge could therefore undermine confidence in the regulatory regime.

A5.112 We also consider it important to use a consistent methodology over time, where it is appropriate to do so. Ofcom's usual practice, and that of Oftel previously, has been to set charges using an RPI-X approach such that charges reach the required level by the end of the control period, with a 'glide path' from the current charge level. This means that the changes in charges have been introduced gradually. One reason for this glide path approach is precisely that it leads to greater stability and predictability by avoiding sudden large movements in charges. Ofcom has recently tended to set the target for charge ceilings at the end of the control period on the basis of FAC. The current MPF charge ceiling was set largely on an FAC basis in November 2005. An RPI-X charge control was not introduced at that time because of the considerable uncertainty of the take-up of the services, which were then very new. Based on this past behaviour, the most reasonable expectation may therefore be for Ofcom to set the MPF charge ceiling on the basis of a glide path so as to reach the FAC level at the end of the control period.

A5.113 For each of the specific price control options we consider, we compare the result to what might be considered the usual Ofcom approach, and how different CPs (including BT) may view the particular option proposed.

Glide paths as a way of giving cost reduction incentives

A5.114 The reason Ofcom generally prefers glide paths rather than one-off price adjustments is partly because they lead to greater stability and predictability (as discussed above), and also because they improve cost reduction incentives, particularly towards the end of a control period.

A5.115 The situation for the MPF charge is somewhat different to the situation for most price controls. Rather than the current charge being above the target cost level, the current MPF charge is currently *below* it. However, the general arguments for stability and improving incentives appear to apply just as much when the current charge is low as when it is high. A rapid increase in charges would signal that cost increases would quickly be reflected in prices, reducing incentives to control costs in future.

Particular charge control options

A5.116 In the following sections, we consider four specific charge control options. These options have been selected to explore the impact of different ways of approaching the issue of rebalancing the core rental charges. While being far from the only options that could be considered, we consider they capture a reasonable range.

A5.117 Option 2 represents the mid-point of the range for the charge controls we are proposing. Where we have relied in some of the other options on FAC forecasts, we have used the mid-point of our forecast range. In both cases, we have chosen the mid point not because we necessarily think it is the most likely outcome, but to make the analysis more tractable and the presentation of results clearer.

A5.118 The four options we have considered are:

1. **Immediate rebalancing**

   - the MPF charge is set equal to the forecast FAC in 2009/10, followed by an RPI+X, regime where the X has been calculated so that the charge in 2012/13 is equal to the forecast FAC in that year;

   - As set out in Section 5, the mid point of FAC estimates would indicate that the FAC of MPF will be around £90 in 2009/10. However, this estimate may overstate the actual cost as it understates the potential for catch-up efficiency gains in the first year (by spreading them over 4 years). As such the FAC estimate in the first year is likely to exceed the efficient level.

   - All other charges are on the basis of RPI-X with the X set such that the charge reaches FAC by 2012/13 (with the differential between WLR residential and WLR business set to be removed by 2012/13);

2. **Full rebalancing over 4 years**

   - the MPF charge is set at £88 in 2009/10 followed by at RPI+2.5 such that it reaches the forecast FAC by 2012/13;

   - all other charges set as in option 1;

3. **Partial rebalancing**

   - the MPF charge is set on an RPI-X profile such that half of the current gap between the charge and FAC is closed by 2012/13;

   - all other charges set as in option 1 and 2;

4. No rebalancing

- all four core rentals increase by RPI+1.5%, such that revenue in 2012/13 is forecast to be the same as it would be with the charge controls based on FAC (calculated assuming volumes mid way between our high and low scenarios).

A5.119 For each of these four options, we consider the impact on particular stakeholders, especially consumers.

Financial implications of each charge control option

Increase in maximum MPF charge

A5.120 The implications for the MPF charge of the different options are shown in the table below, in nominal prices.

Figure A5.5 Path of core rental charge ceiling under options considered

nominal prices	March 2009	2009/10	2010/11	2011/12	2012/13
Option 1: Immediate rebalancing	81.69	90	94	99	104
Option 2: Full rebalancing over 4 years	81.69	88	93	98	104
Option 3: Partial rebalancing	81.69	84	87	90	93
Option 4: No rebalancing	81.69	85	89	93	97

Changes in revenue

A5.121 The following tables sets out the financial implications of the options. The first table shows the revenue impact of the MPF charge alone, while the second table shows the impact of all the proposed charges to the Core Rental Services. The figures in the tables are the extra revenues that Openreach receives (and customers as a whole pay, including downstream BT units) compared to if the charges remain fixed in nominal terms. We have used two sets of volume forecasts for this: the scenario provided by Openreach and our alternative scenario. These two scenarios are described in more detail in Annex 11.

A5.122 While we have shown the effect of each charge control option with both forecasts, we note that in reality the charge control itself may influence the volume forecasts, especially the mix of wholesale products. For example, the higher the MPF charge relative to the charges for WLR&SMPF, the less switching from WLR & SMPF to MPF may occur.

Figure A5.6 Revenue impact of change in MPF charge alone

£ million increase relative to constant £81.69 (in nominal prices)	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Option 1: Immediate rebalancing				
Openreach volume forecast	22	87	222	348
Ofcom's volume sensitivity	19	71	180	287
Option 2: Full rebalancing over 4 years				
Openreach volume forecast	17	76	209	341
Ofcom's volume sensitivity	15	62	170	281
Option 3: Partial rebalancing				
Openreach volume forecast	7	37	105	174

Ofcom's volume sensitivity	6	30	85	143
Option 4: No rebalancing				
Openreach volume forecast	10	51	148	246
Ofcom's volume sensitivity	8	42	120	203

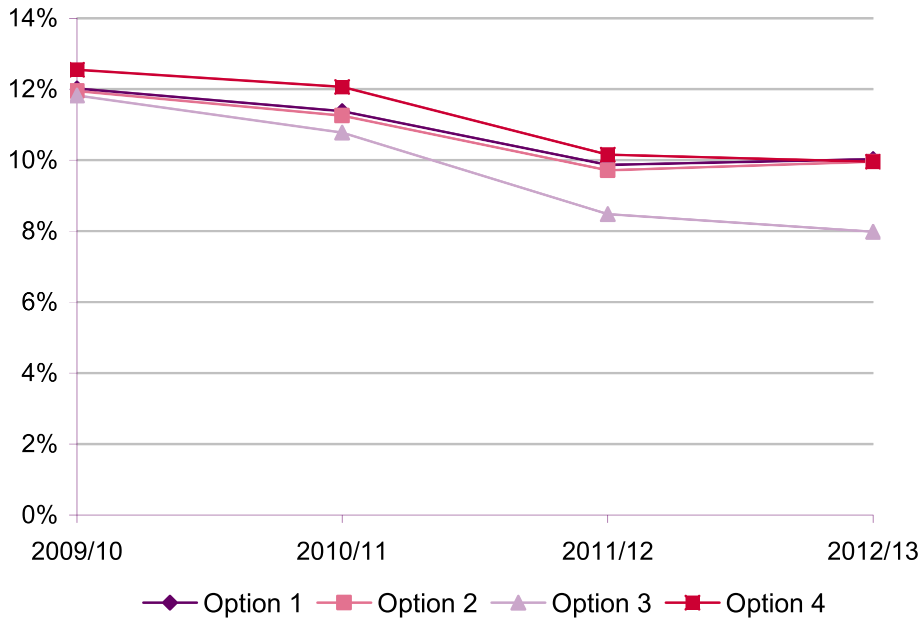
Figure A5.7 Revenue impact of all Core Rental Service changes

£ million increase relative to constant nominal prices (in nominal prices)	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Option 1: Immediate rebalancing				
Openreach volume forecast	82	184	312	433
Ofcom's volume sensitivity	79	177	294	412
Option 2: Full rebalancing over 4 years				
Openreach volume forecast	76	174	299	427
Ofcom's volume sensitivity	75	169	284	407
Option 3: Partial rebalancing				
Openreach volume forecast	67	134	195	259
Ofcom's volume sensitivity	67	136	199	269
Option 4: No rebalancing				
Openreach volume forecast	120	229	317	402
Ofcom's volume sensitivity	120	235	333	432

Impact on Openreach

A5.123 The chart below shows how the different charge control options would impact on the ROCE for the Core Rental Services assuming that costs change in line with the mid point of our FAC forecasts. This is for the mid case of our high and low case cost scenarios.

Figure A5.8 Openreach's ROCE for Core Rental Services (mid case)



A5.124 For all options Openreach's rate of return is forecast to be above or around the mid point of our estimate of its cost of capital of 10 per cent in 2009/10 to 2012/13. However, Option 3 results in Openreach's rate of return falling considerably short of its cost of capital in 2011/12 and 2012/13.

A5.125 We consider the impact on Openreach further when we discuss each option below.

Impact on existing LLU investment

A5.126 We have also explored the financial implications of the options for the existing investments in LLU using MPF using our LLU model. We have done this by considering the percentage increase in total cost.

A5.127 We have focussed on the investments that were made during 2006/07, as investment made in that year represent a considerable proportion of total LLU investments. We assumed that these investments were made half way through 2006/07. Such investments will therefore have two and a half years of broadly constant prices (with the notable exception of the MPF increase in August 2008). We then assume that charges increase from April 2009 in line with our four options. We have explored the implications of the reduction in BES charges recently announced by Openreach.

A5.128 We assume that charges increase from April 2009 in line with our four options. We have explored the implications of the reduction in BES charges recently announced by Openreach. We assumed that a user of MPF supplies between 5 per cent and 10 per cent of the largest 1,100 exchanges are unbundled.

A5.129 The first column in the table below shows the increase in total costs for LLU operators, where the total cost is for wholesale MPF costs including MPF rental and connection charges, commingling charges, backhaul charges and the costs of the CP's equipment installed in the exchanges, but excluding voice call costs and retailing costs. These are calculated by reference to the change in the PV of total costs. The second column shows the increases in costs, net of the recently announced reductions in BES charges, on the assumption that all backhaul is bought from BT. If the proposals in the leased lines charge control are adopted, these offsetting reductions will be even greater.

Figure A5.9 Approximate increase in total costs for LLU investments (for investments made in 2006/07 investment)

	% increase	% increase (net of recently announced BES reductions)
Option 1: Immediate rebalancing	2.6%	1.8%
Option 2: Full rebalancing over 4 years	2.2%	1.4%
Option 3: Partial rebalancing	1.1%	0.3%
Option 4: No rebalancing	1.5%	0.7%

A5.130 While these increases in total cost shown above may look relatively modest, the effect on profitability may be far more significant. This is suggested by the fact that, in response to the First Consultation, some CPs have stressed that margins on LLU investments are very tight.

A5.131 We recognise that there are various simplifying assumptions in our analysis. In particular:

- the results for this part of the analysis are extremely sensitive to some of the inputs, in particular the assumption of a 5 year asset life with no terminal value. If a four year life had been assumed, there would be much less impact on the returns, but if a terminal value had been assumed the impact would have been even greater;

- investments in LLU have been made both before and after 2006/07, including a small number of exchanges continuing to be unbundled in 2008/09. The impact on later investments would be considerably greater than that shown above. On the other hand, the impact on earlier investments will be much smaller. We focussed on 2006/07 because a considerable proportion of the LLU investments were made in that year;

- all backhaul is not bought from BT, which means that the savings from lower backhaul charges will be overstated; and

- we have assumed that no changes in the nominal charges was assumed, which may be unrealistic over such an extended period of time.

A5.132 The impact of the proposed changes on the profitability of LLU investment would depend not just on the impact of the cost increases but also on the extent to which revenue rises as a result. Given that WLR and SMPF charges are also increasing, it seems likely that there would be some increase in revenue.

Immediate rebalancing

A5.133 This option involves an immediate upward adjustment of the MPF rental charge to equal its CCA FAC. Of the four options, it would result in the highest charge for MPF in 2009/10. This approach would remove what Openreach has described as “a distorting arbitrage between MPF and WLR+SMPF which is unsustainable.”

A5.134 On the other hand, we consider there to be significant disadvantages with this option. We see the biggest disadvantage as being the potential to undermine future investment incentives. A large increase in the MPF charge could be perceived as taking advantage of the fact that LLU investment is now largely sunk. From the analysis described earlier, we consider it unlikely that LLU operators would exit exchanges they have already unbundled in the short and medium term, even with the rapid increase in charges envisaged by this option. However, large increases could have a significant impact on the returns expected by CPs at the time these investments were made.

A5.135 This option would also represent a departure from previous practice. Ofcom has historically tended to adopt a glide path approach to setting charge ceilings, partly in order to smooth changes and provide customers with predictability. Without very strong reasons for making a change now, we consider that such a change from previous regulatory practice could undermine the objectives of giving certainty to both Openreach and its customers. As a result, it could also conflict with the objective of promoting efficient, sustainable competition in the delivery of both broadband and traditional voice services.

A5.136 It is important that the regulatory regime gives investors the confidence to make efficient investment. Efficient investment is essential to ensure the availability, quality and choice of services that consumers require. We consider this option would undermine confidence in the regulatory regime with the consequent impact on future investment incentives. Primarily for this reason, we find this option unattractive and consider it unlikely to be in consumers’ ultimate interests.

A5.137 Another potential weakness is that to the extent that MPF is mainly used to support broadband services, which may have higher price elasticity of demand than voice services, then if we consider only own price elasticity of demand this might support moderating the increase in the MPF charge in the short term. However, we consider this effect to become weaker over time, especially as BT moves to 21CN, and even in the short term we consider that the distortion to the choice between WLR& SMPF and MPF is likely to be a more important static efficiency consideration.

A5.138 We believe that this option would largely rule out any further unbundling of exchanges. It might be argued that this will mean that some consumers will forego the potential benefits in terms of greater competition and the dynamic efficiency benefits associated with that competition. However, given the level of roll-out already experienced and the increasing static costs of duplication in smaller exchanges, we do not consider it clear that the total benefits to consumers as a whole of further unbundling outweigh the costs. We therefore do not regard the fact that this option will probably rule out significant further unbundling as a major disadvantage.

Full rebalancing over 4 years

A5.139 This option represents what might be considered to be the approach most commonly adopted by Ofcom and Oftel to setting charges where costs and prices are judged to be out of balance.[24] In setting other recent charge controls we have tended to set the charge in the last year of the period being considered to be equal to our forecast of FAC, and have then had a glide path between the current charge and that level. In general, glide paths have the advantages of giving greater stability and predictability, and providing positive cost efficiency incentives for the regulated company.

A5.140 The incentive to reduce costs under a glide path approach should ultimately mean lower prices for consumers. This is consistent with the objective of preventing excessive charging.

A5.141 We consider a key advantage of this option is that it is consistent with what Ofcom has done previously with charge controls. As such, it should give potential investors confidence in the stability and predictability of the regulatory regime, furthering the objective of providing regulatory certainty for both Openreach, its customers and, ultimately, consumers.

A5.142 We also consider that this option is broadly consistent with the objective of promoting efficient, sustainable competition in the delivery of both broadband and traditional voice services. In the long term, we believe that the differentials between different wholesale products should be cost based, as this will allow CPs to choose the efficient mix of wholesale inputs. We consider that setting charges based on FAC is broadly consistent with this. However, we consider it is appropriate to have some adjustment period to reach that level.

A5.143 We recognise that this option has an impact on the value of the investments of CPs using (or planning to use) MPF. Price increases may reduce the return on their LLU investment. This is a concern, but we consider that it is mitigated by the fact that we would be applying a well-precedented methodology in adjusting charges over time, which might reasonably have been anticipated by the CPs. As a result of adjusting prices to CCA FAC over four years the MPF charge would be lower in the short term than if there was an immediate step change adjustment. Moreover, if the proposals in the leased lines charge control consultation are implemented, they would off-set the impact on LLU operators to some extent.

A5.144 However, there may be some welfare losses in terms of encouraging inefficient investment as a result of not adjusting the MPF charge sufficiently rapidly, given that the current differentials between charges are not consistent with the difference in costs. However, these losses may be reduced if there is a clear signal that the MPF charge will need to rise in the future. They may be reduced further if there are bigger changes made in

[24] In the Leased Lines Charge Control consultation we have considered one-off adjustments. Given the reductions BT has recently announced for ethernet services, we are not proposing additional one-off adjustments. This is with the exception of requiring rapid adjustment for any charges that remain outside the wide range determined by a floor of distributed long run incremental costs and a ceiling of distributed stand alone costs. All the Core Rental Services are within such floors and ceilings. The extent to which the charges considered by the Leased Lines Charge Control consultation are out of line with costs is therefore considerably greater than the products we are considering.

earlier years of the control. Within an approach that lead to full rebalancing over four years we might also consider different rates of price increases in different years of the control to deal with this.

Partial rebalancing

A5.145 This option involves phasing in the increase in the MPF charge to FAC over a longer period (possibly of eight years). The effect of a longer period would be that the difference between price and cost will have been halved after four years.

A5.146 This option would be attractive if it resulted in greater competition that generated increased dynamic efficiency gains that outweighed any static efficiency losses. For example, if relatively low MPF prices would lead to more exchanges being unbundled and the benefits of competition at those exchanges was likely to outweigh any static losses, reducing the extent of the rebalancing of prices might be justified.

A5.147 However, we do not think it is appropriate for Ofcom to be the arbiter of what constitutes the most appropriate level of roll-out that is in consumers' interests. Rather, our intention is to set current charges and signal the likely direction of future price movements such that CPs can make decisions about whether to invest in further LLU. However, we note that a high level of LLU roll-out has already occurred and that the static costs of duplication increase in smaller exchanges (on a per consumer basis).

A5.148 Moreover, even if we believed that the dynamic benefits from some further unbundling outweighed any static losses, it would not be efficient to set charges specifically to favour new entrants for a long period of time. For example, some CPs are currently choosing between MPF and WLR & SMPF as the wholesale inputs to provide services in voice and broadband retail markets, and their decision will be affected by the differential between the two. In the long term, we believe that such a differential should be cost based, so as to encourage efficient investment decisions. It would not be efficient to set charges to maintain a differential that was not cost based for an extended period of time. So even if we now believed that there should be some moderation in the increase in the MPF charge, we would not want this to apply over a very extended period. This raises the issue of how long any adjustment period should be.

A5.149 We consider that setting charges so that the differentials between charges remains greater than implied by the cost after four years would result in an inappropriately long period of adjustment. Four years is a relatively long time in terms of LLU investment. For example, in our modelling, we have assumed a life of five years for LLU assets, based on informal discussions with various LLU operators. We understand that some LLU operators consider a shorter asset life to be appropriate. On this basis, we consider that this option – i.e. extending rebalancing period beyond four years – is unlikely to further the objective of promoting efficient, sustainable competition.

A5.150 Another concern is that this option could undermine Openreach's ability to recover its common costs. This risks undermining investment incentives which would be detrimental to consumers' interests. To help avoid this, a variation on this approach might be to set charges other than the MPF charge higher than they would otherwise be so that across all regulated products Openreach had an opportunity to earn a reasonable rate of return.

A5.151 However, this would further distort the choice of wholesale inputs. CPs using WLR and SMPF would face higher charges as a result. Moreover, Openreach's ability to recover its costs would be dependent on the actual mix of demand for services. If the move from SMPF & WLR to MPF were greater than anticipated, then there may be a risk to overall cost recovery and the differential in prices may become unsustainable.

A5.152 On balance, we consider this option is unlikely to be in consumers' interest. While in theory it is possible to make a case for a more gradual introduction of the increase in the MPF charge, in practice we do not believe that there is strong evidence that the benefits are necessarily greater than the costs. In the absence of a strong case for change, we believe that it would be inappropriate to divert significantly from the approach we have adopted in the past.

No rebalancing

A5.153 Under this option, all prices would be allowed to increase at a similar rate, such that, across the Core Rental Services, Openreach was able to recover the cost of providing those services. As a result, the current percentage differential between the MPF charge and the WLR & SMPF charges would be maintained.

A5.154 We do not consider that this option is likely to be in consumers' interests. This is for the same reasons that we do not consider that the partial rebalancing option is likely to be in consumers' interests. No rebalancing would continue a distortion in incentives for investment. With no path for reducing the differential between the MPF charge and the WLR and SMPF charges, CPs' decisions on wholesale inputs would remain distorted. Moreover, Openreach's ability to recover its costs would be very dependent on the actual mix of demand for services. If the move from SMPF & WLR to MPF were greater than anticipated, then there may be a risk to overall cost recovery and the differential in prices may become unsustainable.

Preferred option

A5.155 On balance, we consider that option 2 would be most in consumers' interests. Under this option, the MPF charge would increase such that it would reach the level of CCA FAC after four years. This approach is therefore broadly consistent with our normal approach to setting charges.

A5.156 In its simplest form, prices would increase at a constant annual rate. However, in theory, the rate of change could change each year and this option does not, for example, rule out relatively higher or lower increases in the opening year of any control.

A5.157 Any proposal for larger than average increases in the early years would have to take account of the benefits of moving prices closer into line with costs sooner rather than later (such as those relating to efficient investment incentives) with the risks associated with rapid price changes (such as the impact on regulatory uncertainty), as identified above. Smaller increases would need to be considered in the context of continuing to encourage entry at potentially inefficient levels.

A5.158 In setting charges in a glide path we will also wish to consider the implications for Openreach's returns during the period of the glide path

A5.159 We recognise that any increase in the MPF charge may shrink the LLU footprint compared to what it might have been if prices remained at their current level. However, it would not be appropriate to encourage further roll-out if that roll-out is ultimately inefficient and unsustainable. It is not appropriate for Ofcom to be the arbiter of what constitutes the most appropriate level of roll-out that is in consumers' interests. Rather, our intention is to set current charges and signal the likely direction of future price movements such that CPs can make decisions about whether to invest in further LLU. We believe that this is most appropriate in terms of furthering consumers' interests.

A5.160 We also recognise that this approach potentially has implications for the value of the investments of CPs using, or planning to use, MPF. However, given that we signalled our intention to review these charges at the time they were first set, CPs arguably would have anticipated that changes to the current structure of nominal charges would take place. We also believe that concern over the impact of changes in the regulated charges on CP profitability is mitigated by the fact that we have sought to employ a methodology in determining the charge controls which is consistent with our previous practice. The proposed approach should also give investors confidence in the predictability of the regulatory regime in the future.

A5.161 The impact on LLU operators may also be mitigated by BT's recent proposed reductions in BES prices, and by Ofcom's proposals for the leased line charge controls if those proposals were adopted.

A5.162 We do not consider that any of the charge control options we are considering are likely to lead to a significant increase in consumers' total bills. To date, there has been a strong downward trend in retail broadband prices, and this may mitigate the effect of the wholesale charge increases we are introducing. Nevertheless, some increase in total bills is possible. The extent of this will depend on a number of factors. These include: the extent to which CPs are able to absorb any increase in wholesale costs; the extent of competition from CPs that do not use Openreach's exchanges, (especially cable); and the outcome of the Lease Line Charge Control review, which may reduce the wholesale backhaul charges paid by CPs offsetting pressure to increase retail prices (to the extent backhaul is purchased from BT).

A5.163 Overall, we consider that raising the wholesale charges as we propose is ultimately in consumers' interests even if retail prices were ultimately to rise somewhat as a result. This is because without such increases Openreach may have insufficient incentives to invest in and maintain the network and in the services which support CPs voice and broadband services. Without such incentives, the quality, and even availability, of services that consumers receive would gradually deteriorate.

Annex 6

Review of the wholesale local access market

Introduction

A6.1 We set out in Section 8 of this document our proposals of imposing a price control in relation to BT's Significant Market Power ("**SMP**") in the market for wholesale local access in the UK excluding the Hull Area. Our proposed setting of a new SMP condition by means of which that control would be imposed, together with a related proposed modification of SMP Condition FA3, is set out in the Notification at Annex 8 to this document.

A6.2 The purpose of this Annex is to summarise briefly a specific requirement that Ofcom must comply with in setting, modifying or revoking SMP conditions, in addition to satisfying the specific tests discussed in Section 8. Specifically, unless Ofcom fully reviews a previous market power determination (including identified market(s)) to find continued SMP, it involves Ofcom being satisfied that there has been no material change in the identified market in relation to which Ofcom has made a market power determination by reference to which Ofcom set the SMP condition in question, since that determination was made or, as the case may be, the condition was last modified. According to section 86(6) of the Act, a change is a material change if it is one that is material to the setting of the condition in question or the modification (or revocation) in question.

A6.3 In light of that summary, the remainder of this Annex sets out our consideration of the application of this no material change requirement in relation to above-mentioned proposals, together with our reasons for why we are minded to conclude that to our satisfaction there has been no such material change in the wholesale local access market within the United Kingdom (excluding the Hull Area) in relation to which Ofcom has already determined BT as having SMP. We last undertook a market review for this market in December 2004[25] (the "**2004 Market Review**"), and we last modified some of the SMP conditions applying to this market in November 2005, following a no material change assessment.

The no material change requirement

A6.4 Under specific circumstances, Ofcom can set, modify or revoke an SMP services condition without conducting a new market analysis process in accordance with sections 79 and 80 of the Act. This is where, as noted above, Ofcom is satisfied that there has not, since the condition in question was set or last modified, or since the relevant market power determination was made (as the case may be), been a material change in the market identified or otherwise used for the purposes of the market power determination by reference to which the condition (if any) was set or last modified.

[25] http://www.ofcom.org.uk/consult/condocs/rwlam/statement/rwlam161204.pdf

A6.5 The alternative way of setting, modifying or revoking an SMP condition, rather than satisfying that material change test, is for Ofcom to review under section 84 of the Act the identified services market used for the purposes of a market power determination in an earlier market analysis, here the 2004 Market Review.

A6.6 Section 84 requires Ofcom to carry out further analyses of the identified services market either:

- where Ofcom considers it an appropriate interval to do so for the purposes of reviewing market power determinations made on the basis of an earlier analysis and/or deciding whether to make proposals for the modification of SMP conditions set by reference to a market power determination made on such a basis (section 84(2)); or

- as soon as reasonably practicable after recommendations are made by the European Commission that affect the matters that were taken into account, or could have been taken into account, in the case of the last analysis of the market in question (section 84(3)).[26]

A6.7 Ofcom considers that, at present, it is not an appropriate interval to carry out a further market analysis of the wholesale local access in the UK excluding the Hull Area for the purposes of reviewing the market power determination applying to BT made on the basis of our earlier analysis in the 2004 Market Review. This is because the purpose of this consultation is to determine whether there is a need to change the existing level and structure of charges for the regulated wholesale access services prior to a further market analysis carried out by Ofcom to consider all remedies imposed on BT pursuant to the market power determination made in the 2004 Market Review on a forward looking basis longer than for which we propose the price control discussed in Section 8 would last. As we have explained in Section 8, we expect to carry out such further market analysis within the next two years, including to review any price control proposals imposed following this consultation.

A6.8 However, in applying the no material change test to present proposals, we have taken into account any expected or foreseeable market developments over the course of a two year period until such a further market analysis has been carried out by Ofcom. (We will be referring to that period in this Annex as the "**interim forward look period**".) In this assessment, we have also taken due account of the European Commission's recommendation on relevant product and service markets, which was initially published in February 2003 (the "**2003 Recommendation**")[27] but which was in effect replaced by a new recommendation on 17 December 2007 (the "**2007 Recommendation**")[28]. In particular, as we took due account of the 2003 Recommendation when the 2004 Market Review was undertaken, we have

[26] Section 79(3) of the Act further requires Ofcom to take due account of all applicable guidelines and recommendations published by the European Commission in making or revising a market power determination in relation to a services market.

[27] http://ec.europa.eu/information_society/policy/ecomm/doc/library/recomm_guidelines/relevant_markets/i_11420030508en00450049.pdf

[28] http://ec.europa.eu/information_society/policy/ecomm/doc/library/proposals/879/l_34420071228en00650069.pdf

taken due account of the 2007 Recommendation to reflect developments since 2003: see in particular **paragraphs A5.87** below.

A6.9 The Commission has also released a draft recommendation on regulated access to Next Generation Access Networks[29], with comments due by 14 November 2008. The draft recommendation's purpose is to foster the application of consistent regulatory remedies to SMP operators throughout the EU in the Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location market (i.e. Market 4 of the 2007 Recommendation) and the wholesale broadband access market (i.e. Market 5 of the 2007 Recommendation). It includes a need to consider national and sub-national markets when defining markets and a need to mandate duct access (and supporting facilities) on SMP. We intend to take due account of the final recommendation on regulated access to Next Generation Access Networks in our further market analysis to be carried out next year as mentioned above.

General approach to market definition

A6.10 The purpose of the market definition exercise is to identify the relevant constraints on the price setting behaviour of firms. There are two main competitive constraints to consider, namely:

- the extent to which customers will substitute other services for those in question (demand-side substitution) in response to a price increase; and
- the extent to which suppliers will switch, or expand, production to supply the relevant products or services (supply-side substitution) in response to a price increase.

A6.11 The 'hypothetical monopolist' or SSNIP test provides a useful tool to identify demand-side and supply-side substitutes which constrain pricing sufficiently. A product or group of products is considered to constitute a separate market if a hypothetical monopoly supplier of that product group could profitably impose a small but significant, non-transitory increase in price ("SSNIP"). If such a price rise would be unprofitable, because customers would switch to other products, or because suppliers of other products would begin to compete with the hypothetical monopolist, then the market definition should be expanded to include the substitute products.

A6.12 Markets are usually defined first on the demand-side. The analysis of demand-side substitution is usually undertaken by considering if other services could be considered as substitutes by consumers, in the event of the hypothetical monopolist introducing a SSNIP above the competitive level.

A6.13 Supply-side substitution possibilities are assessed to consider whether they provide any additional constraints on the pricing behaviour of the hypothetical monopolist which have not been captured in the demand-side analysis. Supply-side substitution is considered to be a low cost form of

29 http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/nga/dr_recomm_nga.pdf

entry which can take place within a reasonable time frame[30] (e.g. up to 12 months). The key point is that, for supply-side substitution to be relevant, not only must suppliers be able, in theory, to enter the market quickly and at low cost by virtue of their existing position in the supply of other services or areas, but there must also be an additional competitive constraint arising from such entry into the supply of the service in question.

A6.14 Therefore, in identifying potential supply-side substitutes, it is important that providers of these services have not already been taken into consideration. There might be suppliers who provide other services but who might also be materially present in the provision of demand-side substitutes to the service for which the hypothetical monopolist has raised its price. Such suppliers are not relevant to supply-side substitution since they supply services already identified as demand-side substitutes. As such, their entry has already been taken into account and so supply-side substitution from these suppliers cannot provide an additional competitive constraint on the hypothetical monopolist. However, the impact of expansion by such suppliers can be taken into account in the assessment of market power.

A6.15 An additional consideration is whether there exist common pricing constraints across customers, services or areas, such that they should be included within the same relevant market even if demand and supply-side substitution are not present. Failure to consider the existence of a common pricing constraint could lead to unduly narrow markets being defined.

A6.16 There are two dimensions to the definition of a relevant market: the relevant products to be included in the market and the geographic extent of that market. The same considerations of the possible constraints on price setting behaviour are relevant to both dimensions of the definition of the relevant market.

A6.17 In considering the wholesale local access market, it is informative first to consider competition in downstream markets for factors relevant to the wholesale local access market. This is because demand for wholesale local access is driven by downstream wholesale demand and ultimately by retail demand. The main relevant downstream retail markets are the fixed narrowband exchange line markets and the broadband internet access market, and the relevant downstream wholesale markets are the wholesale narrowband exchange line markets and the wholesale broadband access market. In considering these downstream wholesale and retail markets, we need to assume that there is no SMP regulation in place in the wholesale local access market. To do otherwise would risk a circular and incorrect approach.

30 See the European Commission's guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C 165/03), as published in the Official Journal of the European Communities on 11 July 2002, at paragraph 52.

Retail markets relevant to wholesale local access market

Fixed narrowband retail exchange line markets

A6.18 The review into fixed narrowband retail exchange line markets undertaken in 2003 (the "**2003 Narrowband Retail Market Review**"[31]) identified a number of different fixed narrowband retail exchange line markets, including, for the UK excluding the Hull area:

- residential analogue exchange line services; and
- business analogue exchange line services;

A6.19 Such markets provide access to two main retail services:

- switched telephony services, based on analogue or digital channels, each with a channel having a bandwidth of 64 kbit/s; and
- narrowband internet access, that is internet access that is not 'always-on' (i.e. it requires internet dial-up), that does not allow simultaneous voice and data calls and has slower downstream speeds than a broadband connection.

A6.20 From the point of view of the wholesale local access market, the considerations in the 2003 Narrowband Retail Market Review that are most relevant are that the fixed narrowband retail exchange line markets are distinct from:

- mobile access; and
- leased lines.

A6.21 The 2003 Narrowband Retail Market Review also considered that narrowband internet access is in a distinct market to broadband internet access, that business and residential services are in different markets, and analogue and digital services are in distinct markets. For the purposes of considering whether there has been any material change in the wholesale local access market, these distinctions are only relevant to the extent that they could feed through to the upstream wholesale local access market. As we consider the business and residential distinction and the analogue and digital distinction explicitly for the wholesale local access market in paragraphs A6.76 and A5.77 below above, we do not consider them specifically for the fixed narrowband retail exchange line markets. While there continues to be switch from narrowband internet access to broadband internet access, we do not consider that there has been any material change relevant for the wholesale local access market.

Fixed narrowband exchange line access vs mobile access

A6.22 The 2003 Narrowband Retail Market Review considered that mobile access is not so much a substitute for fixed narrowband exchange line access as an adjunct to it. Evidence from consumer surveys showed that a majority of mobile phone calls made by consumers are short convenience calls such as

[31] http://www.ofcom.org.uk/consult/condocs/narrowband_mkt_rvw/fixednarrowbandrsm.pdf

calling someone whilst walking home from the station - the type of call that cannot be made from a fixed line. The conclusion was also supported by the fact that more than 90 per cent of UK adults use a fixed access telephone in addition to a mobile phone. If mobile access were a substitute for fixed narrowband exchange line access then this figure would be expected to be much lower.

A6.23 It remains common for users to have both fixed and mobile access. The proportion of households that had both fixed access and mobile access was higher in Q1 2008 at 81 per cent than in Q4 2003 when it was 70 per cent. The proportion of households with only mobiles has increased slightly, from 8 per cent in Q4 2003 to 11 per cent in Q1 2008.[32]

A6.24 In a 2007 survey undertaken for Ofcom, a representative sample of both residential consumers and small and medium sized enterprises (SMEs) were asked their reaction to a SSNIP of 10% on monthly line rental and call costs.[33] The table below shows the results for residential consumers.

Figure A6.1: Impact of SSNIP of 10% on monthly line rental and call costs

	Residential consumers
Continue as currently	67%
Reduce number of landline calls	12%
Switch some calls from fixed line to mobile calls	6%
Switch some calls from fixed line to mobile texts	2%
Switch some calls from fixed line to internet calling	3%
Cancel landline	2%
Other	3%
Don’t know	6%

A6.25 When faced with a 10% increase in call and line rental costs, 67% of residential consumers said they would continue as they were currently. A further 23% said they would reduce the number of landline calls (either by reducing total calls or switching to other means of communicating) but would retain their landline access. Only 2% said they would cancel their landline. The results for SMEs were broadly similar, with 70% saying they would continue as they were, and a further 20% saying they would reduce the number of landline calls, but retain their landline access.

A6.26 As the percentage of people who say they would cancel their landline is very low, these results strongly suggest that there has been no material change in the conclusion of the 2003 Narrowband Retail Market Review that mobile

[32] The UK Communications Market 2008, Ofcom, Figure 5.4.
[33] The survey was undertaken in April and May 2007. The SME survey had a representative sample of 751 UK SMEs (including Northern Ireland), which to qualify for interview had to be actively trading Partnerships or Limited companies with between 2 and 100 employees. The consumer survey involved a representative sample of 1050 UK consumers (again including Northern Ireland). All consumers were aged 18 or above, and had to have a fixed line telephone or a mobile phone which they used at home to make primarily personal calls.

access is not a substitute for fixed narrowband exchange line access on the demand side.

A6.27 On the supply side, the 2003 Narrowband Retail Market Review concluded that there was limited scope for substitution between mobile and fixed narrowband exchange line access services due to the high sunk costs associated with building a fixed narrowband exchange line access network and the economies of scale and density that characterise communications access networks. We consider this is unchanged.

Fixed narrowband exchange lines vs leased lines

A6.28 The 2003 Narrowband Retail Market Review considered that leased lines were not in the same market. Leased lines involve a permanently connected communications link between two premises dedicated to the customers' exclusive use. They therefore do not provide the switched voice and data services that an exchange line provides. Leased lines are significantly more expensive than fixed narrowband exchange lines and are therefore unlikely to be effective in making a small price rise in fixed narrowband exchanges lines unprofitable. This suggests that they are in separate markets. We do not believe that this situation has changed materially since 2003.

A6.29 This is consistent with our statement on the wholesale broadband access market of May 2008 (the "**2008 WBAM Review**")[34] in which we found that leased lines were not in the same market as asymmetric broadband services, based on evidence from relative charges and costs and from consumer surveys.

A6.30 It is also consistent with our views on the business connectivity market. In that review we recognised that there may have been a decline in leased lines, which is probably partly attributable to customers switching to using ADSL over ordinary exchange lines, but considered that such switching is not necessarily sufficient to place those products in the same market. We considered that given the differences in relative prices identified, the extent of switching away from leased lines in fact appears rather limited. The fact that there continues to be significant retail demand for low bandwidth leased lines, despite the availability of other products at often significantly lower prices, suggests that these products are not sufficiently close substitutes to form part of the same market.

Fixed narrowband retail exchange line geographic markets

A6.31 The 2003 Narrowband Retail Market Review identified separate geographic markets for:

- the UK excluding the Hull Area; and
- the Hull Area.

A6.32 In defining these geographic markets, it was recognised that competition in these markets could have local geographic characteristics. If markets were defined very narrowly according to a strict hypothetical monopolist test, this would lead to a proliferation of markets. There is because, on the demand

[34] http://www.ofcom.org.uk/consult/condocs/wbamr07/statement/statement.pdf

side, a customer will want a local loop that goes to its own premise and will not want to take one that goes to different premises. On the supply side, substitution is likely to be limited to suppliers who have made infrastructure investments in the vicinity of the end user's premises. Moreover, such a narrow definition may fail to capture adequately other competitive constraints. In particular, such a hypothetical monopolist test takes no account of the geographic pricing constraints faced by specific firms in reality.

A6.33 The wider geographic markets were justified on the grounds that BT's prices for narrowband exchange line services are uniform throughout the UK excluding the Hull Area, which remains the case. BT's decision to set national tariffs for ISDN2 access and ISDN30 access is a commercial one. For analogue services, BT is required to set geographically uniform tariffs. In the 2003 Narrowband Retail Market Review, we considered that it was appropriate to include the potential effect of this requirement when defining the relevant geographic market because the requirement was a Universal Service Obligation which was not dependent on an SMP finding in the market.

A6.34 Where firms adopt uniform pricing across local areas, local competitive pressures will have an impact only to the extent that they affect that single uniform price. Moreover, to the extent that local factors do influence that price, the effect will be transmitted beyond the particular area where the competitive pressure originally arose to all the areas subject to the uniform price. The Hull Area is not subject to this constraint, since BT does not operate in this area.

A6.35 We are therefore minded to conclude that there has been no material change in these considerations since the market review.

Broadband internet access retail market

A6.36 At the time of the 2004 Market Review , the majority of local loop connections were used to provide voice and dial-up internet access only. Since then, broadband has grown considerably. In Q1 2008, 58 per cent of all households had broadband internet access, compared to 11 per cent in Q4 2003.[35]

A6.37 In the 2008 WBAM Review, we considered the retail broadband access market and concluded that:

- cable-based broadband access services are in the same market as ADSL-based services, on the basis of market evidence and consumer research into reactions to hypothetical price increases;
- broadband access and narrowband access are in separate markets, on the basis of firstly a range of qualitative arguments, including the advantages of broadband's distinctive functionality over narrowband which surveys showed consumers considered important, and secondly consumer research into reactions to hypothetical price increases;

[35] The UK Communications Market 2008, Figure 5.59.

- symmetric and asymmetric broadband internet access services are in separate markets, because of the large differences in costs in the UK and the low value that customers of asymmetric broadband access place on symmetric broadband access;

- residential and business customers are in the same market, because, amongst other things, there is no clear break between higher quality and lower quality products, in terms of price or quality; and

- mobile and fixed broadband internet access services are in separate markets, as discussed further below.

A6.38 In considering whether mobile access is in the same market, we concluded that mobile access using a mobile device is not an effective demand-side substitute. Mobile devices have considerably less functionality compared to using a PC and fixed broadband access.

A6.39 We also considered an end-user accessing the internet using a PC and a mobile network operator's data card. However, we noted that it is only very recently that 'affordable' mobile broadband products have been offered in the UK and thus their long-term sustainability was unknown.

A6.40 Since the 2008 WBAM Review, mobile broadband has continued to grow strongly. However, we do not believe that many consumers consider mobile broadband to be a *substitute* for fixed broadband. A survey in Q1 2008 found that 68 per cent of mobile broadband users have it in addition to a fixed-line connection.[36]

A6.41 The definition of the retail broadband access market product in the 2008 WBAM Review was unchanged from the previous wholesale broadband access market review of 2004 as far as these points are concerned.[37]

A6.42 On the geographic coverage of the retail market, we stated in the 2008 WBAM Review that the existence of geographic variations in product offerings and prices suggested that geographic markets were emerging at the retail level. However, it was not necessary for Ofcom to reach firm conclusions on the precise geographic definition of the retail market because this were not a determining factor for the assessment of the geographic nature of the markets for wholesale broadband access. Similarly, we do not need to consider the geographic coverage of the retail broadband access market in order to asses whether there have been any material changes in the wholesale local access market, as the geographic nature of the retail broadband access market was not a determining factor for the geographic definition of the wholesale local access market in the 2004 Market Review.

[36] The UK Communications Market 2008, Figure 2.13.

[37] http://www.ofcom.org.uk/consult/condocs/wbamp/wholesalebroadbandreview/broadbandaccessreview.pdf

Downstream wholesale markets relevant to wholesale local access market

A6.43 The fixed narrowband wholesale exchange line markets and the wholesale broadband access market provide the link between the retail markets discussed above and the wholesale local access market. We consider these two wholesale markets in turn below.

Fixed narrowband wholesale exchange line markets

A6.44 The 2003 market review of the fixed narrowband wholesale exchange line markets[38] found the wholesale markets to be analogous to those identified at the retail level. As the demand for fixed narrowband wholesale exchange line services is a derived demand from the retail level, considerations at the retail level were found to feed through to the wholesale level. The geographic extent of the wholesale markets were also found to be the same as for the retail market, namely a market covering the UK excluding the Hull area.

A6.45 One change that has occurred since 2003 is that there has been significant growth in LLU which could potentially affect the fixed narrowband wholesale exchange line markets. However, we are here considering the definitions of the fixed narrowband wholesale exchange line geographic markets for the purposes of analysing the wholesale local access market. We therefore need to assume that there is no regulation in place in the wholesale local access market. Without a regulatory requirement, we consider it unlikely that BT would offer LLU, and therefore the growth in LLU is not relevant when considering the fixed narrowband wholesale exchange line markets for the purposes of analysing the wholesale local access market.

Wholesale broadband access markets

A6.46 In the 2008 WBAM Review, we concluded on product definition that wholesale cable-based broadband access services were in the same market as ADSL-based services. In reaching this conclusion, we considered that it was inappropriate to conduct the analysis on the assumption that BT would continue to provide a viable ADSL wholesale product in the absence of regulation, because it was not clear that it would do this. In the absence of ADSL wholesale product, there would clearly be no direct competition for broadband services between ADSL and cable at the wholesale level.

A6.47 However, it is still possible to consider the question of market definition at the wholesale level because competition would take place further downstream at the retail level. An increase in the price of wholesale ADSL based broadband services will tend to feed through to higher retail ADSL based broadband services. As there is competition at the retail level between ADSL based and cable based broadband, this will tend to mean lower volumes for ADSL based broadband at both the retail and wholesale level. The 2008 WBAM Review concluded that the competition with cable at the retail level was sufficient to act as an indirect constraint on pricing for wholesale ADSL based broadband services.

38 http://www.ofcom.org.uk/consult/condocs/narrowband_mkt_rvw/nwe/fixednarrowbandstatement.pdf

A6.48 There is also potentially a more direct constraint. For the market definition exercise it is assumed that there is no regulation in the market being considered and competitive conditions. In these circumstances, it is possible that both cable operators and BT might have an incentive to offer a wholesale product. The 2008 WBAM Review considered that if this were the case they would be expected to exercise a competitive constraint on one another and hence be in the same product market.

A6.49 We did not regard mobile broadband access as in the same market as cable-based and ADSL-based services, for the reasons discussed above under the retail market for broadband access.

A6.50 We also considered in the 2008 WBAM Review the potential impact of other technologies, including:

- WiFi;
- broadband Fixed Wireless Access (BFWA);
- worldwide Interoperability for Microwave Access (WiMax);
- mesh networks;
- satellite;
- powerline Technology; and
- free space optics.

A6.51 We concluded that these technologies were not sufficiently widespread or utilised to have any real impact in the wholesale broadband access market within the period of the 2008 WBAM Review. We recognised, however, that it is possible that some of these technologies may emerge as a competitive threat in the longer term, though that would be beyond the period we are considering for this interim forward look.

A6.52 On the geographic market for wholesale broadband access, the 2008 WBAM Review concluded that there were a number of different geographic markets. This was as a result of the significant changes that had occurred since the previous wholesale broadband access market review carried out in 2003/04.[39] Most significantly, LLU operators have used LLU to offer retail and wholesale broadband services. LLU operators have focussed their initial network deployment on the more densely populated areas where the commercial case is strongest. We considered that this concentration of LLU operators in dense areas meant that market conditions in wholesale broadband access vary considerably between different geographic areas.

A6.53 As we are looking at the wholesale broadband access market from the point of view of considering the wholesale local access market, we need to assume that there is no LLU remedy in the wholesale local access market. If this were the case, it is not clear that there would be more than one geographic market (outside of the Hull area). As discussed in paragraph A6.86 below, the fact that with the LLU remedy there are a number of

[39] http://www.ofcom.org.uk/consult/condocs/wbamr07/wbamr07.pdf

geographically different wholesale broadband access markets does not have any necessary implications for the upstream wholesale local access market.

Wholesale local access market

A6.54 The analysis above has considered the markets downstream of the wholesale local access market. We are minded to conclude that there have not been any material changes in the downstream markets from the point of view of the SMP finding in the wholesale local access market. In light of that view, we now turn to our consideration of the wholesale local access market itself. The following analysis considers first the wholesale local access product market and then the geographic market.

Wholesale local access product definition

A6.55 In the 2004 Market Review we defined the wholesale local access market as encompassing fixed local access connection with a twisted metallic pair (i.e. a local loop connection) and also cable connections. Cable connections combine traditional twisted metallic pairs with a co-axial cable capable of supporting high bandwidth television and broadband delivery. This market definition is unusual in that it is technology-specific.

A6.56 This market definition was made by first hypothesising a wholesale local access market consisting only of the local loop connections, and then considering possible substitutes that might act as a competitive constraint on that narrowly defined market. The most plausible substitutes considered in the 2004 Market Review were:

- cable connections;
- fibre connections direct to end users' premises;
- fixed wireless links; and
- mobile technology.

A6.57 We consider these four substitutes remain the most plausible substitutes, and we therefore focus our assessment on whether there have been any material changes in relation to them.

A6.58 A wider range of possible alternative technologies (such as, for example, powerline technology and satellite) were considered by Ofcom as part of the 2008 WBAM Review. We concluded that these other technologies were not sufficiently widespread or utilised to have any real impact in the wholesale broadband access market within the period considered by the 2008 WBAM Review. They are therefore unlikely to have any impact on the wholesale local access market within the period covered by this interim forward look.

Cable

A6.59 Virgin Media is the largest provider of cable access in the UK. It does not offer wholesale local access to third parties,[40] but competes in the downstream retail markets of broadband access and fixed narrowband retail services. Competition with cable in these retail markets could act as an effective constraint on the wholesale pricing of loop-based local access. So if the price for loop-based wholesale local access were increased, this could result in the prices of the retail broadband and narrowband services being provided over the local loop increasing. This increase in the price of the retail products being provided over loop-based local access could result in end-users switching to retail products provided over cable access. This would reduce the demand for loop-based wholesale local access, and could mean that the original price increase in the wholesale local access was unprofitable. This process is known as indirect substitution.

A6.60 The extent to which such indirect substitution would effectively undermine a hypothetical price increase for loop-based wholesale local access is affected by:

- the degree to which the wholesale SSNIP would be passed through to retail customers by the relevant service provider; and

- whether the scale of the resulting reduction in (derived) wholesale demand would be sufficient to render the original price wholesale increase unprofitable.

A6.61 As concluded in the 2004 Market Review, we continue to believe that local wholesale access represents a substantial component of an exchange line product and there is scope for substitution at the retail level which could be expected to lead to a significant switch in retail demand away from the local-loop products. The 2004 Market Review concluded that the wholesale market for local access should include both loop-based and cable-based local access. While LLU prices have fallen significantly since 2004 (for example, the annual full LLU rental price has fallen from £105.09 in 2004 to £81.69 today, though under our proposals it would rise again), retail broadband prices have also fallen and retail level competition has increased. This suggests that wholesale local access is likely to have remained a substantial component of an exchange line product, meaning that the indirect substitution via retail markets is likely to remain an effective constraint on the wholesale pricing of loop-based local access. We therefore do not believe there have been any material changes affecting this decision.

A6.62 In the 2004 Market Review, we noted that, even if the indirect substitution constraints provided by cable were not effective enough to make a price rise in local loop access unprofitable, this would mean that the market would be defined more narrowly as being only local loop. Narrowing the market definition in this way would only strengthen a determination that BT has

[40] Virgin Media does provide a broadband internet access product to AOL. This is to date the only contract, and the control that AOL has over the dimensioning of the product is very limited. In our wholesale broadband access market review we set out our view that the product offered by Virgin Media is much more aligned to a resale/ intermediate product rather than a wholesale broadband access product.

SMP in the market for wholesale local access in the UK excluding the Hull Area.

Fibre

A6.63 The 2004 Market Review considered the possibility that local access could be provided by means of fibre connections direct to end users' premises. There are currently fibre connections to a small number of business end users. Fibre could act as a pricing constraint on local loop and cable access either directly with wholesale access being offered by operators with locally-positioned equipment in place of loops or cable to provide connections with end users, or through indirect substitution through downstream retail markets as discussed in relation to cable above.

A6.64 However, very few residential premises are connected to fibre and, even for business users, the number of applications where loop-based and fibre based local access are deployed as alternatives is fairly small.

A6.65 We also stated in the 2004 Market Review that, where fibre infrastructure exists in the vicinity of end users premises, there are unlikely to be enough fibres available to replace loop based connections to even a small fraction of residential or business premises, unless a significant investment in local multiplexer equipment were to be made. Moreover, fibre does not exist in the vicinity of many residential premises currently served by loop-based or cable-based connections.

A6.66 We therefore concluded that a 5 per cent to 10 per cent increase in the wholesale price of loop-based and cable-based access would be unlikely to induce a significant switch at the retail level to fibre-based local access.

A6.67 Since the 2004 Market Review, there has been considerable interest in the deployment of fibre. Plans include, amongst others:

- BT announced its pilot of fibre-to-the-home ("**FTTH**") services for newly-built homes in Ebbsfleet, Kent in January 2008. The first customers moved into premises in September 2008, and the aim is to offer FTTH to all 10,000 homes that are being built. On 15 July 2008 BT announced plans to invest £1.5bn to upgrade the broadband services that seven to ten million homes could receive by 2012. These plans will deliver a mix of fibre-to-the-cabinet ("**FTTC**") covering six to seven million homes plus FTTH deployments including new build areas. The majority of this deployment is scheduled to take place in 2011/12. In August 2008, Openreach issued a consultation on the wholesale access product it plans to offer over these networks.

- H2O Networks Ltd has[41] announced plans to build fibre networks in Bournemouth from September 2008 and Dundee from January 2009, utilising municipal sewers, with "six to ten" additional projects to follow.

A6.68 In considering the possible implications of these developments, we need to distinguish between FTTC and fibre-to-the-premises ("**FTTP**"). The 2004 Market Review definition of wholesale local access already includes connections to premises that rely on FTTC, as these ultimately rely on

[41] http://www.h2onetworksdarkfibre.com/

metallic connections for the final link to the end user.[42] Increasing use by BT of FTTC in place of all-copper loops within its local access network therefore does not necessarily represent a material change in the market.

A6.69 The situation with FTTP is different as this is outside the current market definition. As at the time of the 2004 Market Review, the number of FTTP connections currently is still very limited. However, the number of FTTP connections is likely to grow in the future. However, even with the planned FTTP deployments, for the duration of the interim forward look period the number of fibre connections is likely to remain relatively modest compared with over 30 million existing local loop and cable connections. This makes it unlikely that the threat of fibre at new building developments could act as an effective constraint on the price of existing local loops and cable connections in the immediate future. We therefore do not think that planned FTTP developments will represent a material change for the duration of our interim forward look.

Fixed wireless

A6.70 The 2004 Market Review considered whether wireless local access (including WiMax technology) could act as a pricing constraint on local loop and cable access. This could be directly with wholesale access being offered by operators with locally-positioned fixed wireless equipment to provide connections with end users, or indirectly through downstream retail markets.

A6.71 In the 2004 Market Review, we said that the roll-out and take-up of fixed wireless had been very limited, and that fixed wireless would therefore be unable to act as a competitive constraint on pricing in the loop-based or cable-based local access market at the current time.

A6.72 We do not believe that the situation has materially changed since then. While there are some trials of WiMax technologies, these remain very limited and are unlikely to become sufficiently widespread or utilised to act as a competitive constraint on the wholesale local access market during our interim forward look period.

Mobile access

A6.73 The 2004 Market Review set out that substitution could theoretically occur directly, with a mobile connection replacing the fixed link between the end user and an operator’s local equipment (e.g. a DSLAM at an MDF site) similar to fixed wireless access, or indirectly through downstream retail markets with downstream mobile voice and broadband substituting for similar services provided over fixed networks.

A6.74 Potential competition with mobile access through downstream narrowband and broadband services has been considered in the analysis of downstream markets above. To recap, we are minded to conclude that there has not been any material changes to the retail markets since the 2004 Market Review, from the point of view of considering the wholesale local access market. Similarly, we believe that the wholesale provision of mobile local access services would not constrain the profitability of a 5% to 10% increase

[42] This is clear from the fact that sub-loop unbundling is a remedy.

in wholesale fixed local access prices. Technologies which would enable direct substitution of the local loop or cable access with a mobile link from the local exchange equipment to the end user are not currently deployed in the UK.

A6.75 We believe this is unlikely to change during our interim forward look period, and that there mobile local access is not part of the same relevant market.

Analogue and ISDN lines

A6.76 The 2004 Market Review noted that the differences between analogue and ISDN lines are concentrated in the equipment connected to either end of the local loop and in the supplementary services supplied. Therefore, at the wholesale local access level, the local loop itself is no different. We continue to believe that it was appropriate to define a single market for wholesale local access, including lines which are used for analogue and ISDN. This situation has not changed.

Residential and business

A6.77 The 2004 Market Review stated that there were plausible arguments for and against having separate markets for wholesale local access products for business and residential use. We decided it was appropriate to define a single wholesale local access market for supply to both residential and business customers. The main reason for this was that the local loops and cable connections provided for residential wholesale local access are essentially identical to those for business use (unlike in the provision of exchange lines services, where business and residential customers might be expected to have different demands for supplementary services). We believe that there have been no material changes to this situation.

Wholesale local access geographic market

A6.78 Having considered the relevant product market, we now turn to the issue of defining the relevant geographic market. The 2004 Market Review (as well as the November 2005 'no material change' assessment[43]) concluded that there were two distinct wholesale geographic markets, namely:

- the UK excluding the Hull Area; and
- the Hull Area.

A6.79 We nevertheless recognised that the broad UK geographic market was characterised, to some extent, by local characteristics including some variation in the degrees of competitive pressure. This geographic variation in competition pressure was partly as a result of the cable companies operating in particular geographic areas.

A6.80 We reached the view that there were two markets after considering relevant competitive constraints. We consider the competitive conditions below and are minded to conclude that there has been no material change in the wholesale local access market with regard to its geographical dimension.

[43] See Annex 4 of http://www.ofcom.org.uk/consult/condocs/llu/statement/llu_statement.pdf

A6.81 The 2004 Market Review recognised that the provision of a local loop or cable connection to particular premises is an inherently local activity. There is little scope for direct demand-side substitution to loops offered elsewhere. A wholesale local access customer can only purchase a loop or cable connection for a particular end-user if the supplier can provide a connection to the relevant end user's premises.

A6.82 Supply side substitution is also likely to be limited to suppliers who have made investments in the vicinity of the end user's premises. Some overlap in the 'catchment' areas that can be serviced by the infrastructure at a given location may arise, with substitution possible for at least those consumers in the overlap between catchments. However, we concluded that this mechanism is unlikely to result in an extensive broadening of the relevant market.

A6.83 These features could result in a very narrow definition of the geographic market. Given the difficulties of demand side substitution and supply side substitution, a hypothetical monopolist test could result in an individual end user's premises being a market. Such a narrow definition may fail to capture adequately other competitive constraints.

A6.84 Another way of considering the relevant geographic market is by considering the homogeneity of competitive conditions. If the competitive conditions between two areas are broadly the same then the two areas can be regarded as being in the same market. The 2004 Market Review regarded competitive conditions to be sufficiently similar to define a single market in the UK excluding Hull. Since the 2004 Market Review, we believe that there has been no material change in the homogeneity of competitive conditions. In particular, no significant change appears to have occurred in the geographic coverage of cable since the 2004 Market Review, which is one of the main factors that could potentially lead to local differences in competitive conditions.

A6.85 We therefore minded to conclude that the geographic markets are unchanged and will remain so for the duration of our interim forward look period. We therefore consider that the UK excluding the Hull Area remains a single market defined by local characteristics including some variation in the degrees of competitive pressure as a result of cable having been rolled out in some areas.

A6.86 As described earlier, in the 2008 WBAM Review we found a number of different geographic markets for wholesale broadband access, reflecting significant differences in competitive conditions. These variations in competitive conditions in downstream markets do not imply different markets for the upstream wholesale local access market. The different geographic markets in the wholesale broadband access market are largely due to competitive pressures resulting from using the wholesale local access remedy of LLU as an input.

Relationship between wholesale local access market definition and the 2007 Recommendation

A6.87 The 2003 Recommendation defined the following as a relevant market (i.e. Market 11) in which ex ante regulation may be warranted:

> "Wholesale unbundled access (including shared access) to metallic loops and sub-loops for the purpose of providing broadband and voice services."

A6.88 We noted in the 2004 Market Review that this definition appeared to include access to metallic loops supplied by cable operators but not to other physical media such as coaxial cable or fibre connections used by such operators to provide broadband services. Given the substantial deployment of cable systems in the UK market and the competitive constraint, albeit currently indirect, this places on wholesale services offered by local loop providers, we considered it appropriate to include cable access in the relevant product market. Cable access includes the combination of traditional metallic loops with a co-axial cable.

A6.89 The 2007 Recommendation has amended the relevant market definition (i.e. Market 4) as follows:

> "Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location"

A6.90 This definition appears to include FTTP as it is no longer restricted to metallic loops and sub-loops as in the previous market definition.

A6.91 We explicitly considered whether FTTP acted as a competitive constraint on local loop and cable connections in the 2004 Market Review. We concluded that it did not, because of very limited deployment of FTTP and the fact that this was not expected to change over a two or three year time horizon.

A6.92 In this assessment of whether there has been any material change, we have considered the impact of FTTP on the market definition and also on the assessment of BT's SMP. The current role out of FTTP remains very limited in the UK. As discussed in paragraph A6.67 above, current plans for FTTP development are limited. Given the likely lead times in rolling out FTTP and the current stock of local loops, we do not believe that FTTP will act as a pricing constraint on local loops for the duration of the interim forward look.

Significant market power in wholesale local access market

A6.93 In the 2004 Market Review, our assessment of dominance focused on assessing the strengths of three distinct sources of actual or potential competitive constraint, namely:

- existing competitors;
- potential competitors (i.e. the entry threat); and
- countervailing buyer power

A6.94 We consider each of these factors below and that we are minded to conclude that there have been no material changes since the 2004 Market Review, and that BT continues to have SMP.

Exiting competitors

A6.95 The local access network remains one of the least competitive segments of communications networks. In the market outside the Hull area, BT's market share of local access has been around 83% to 84% since 2000, as shown in the table below.

Table A6.2 Market share of local access connections for the UK excluding Hull Area

	BT	Virgin Media / ntl & Telewest	Other
2000	84%	13%	3%
2001	84%	14%	3%
2002	84%	13%	3%
2003	83%	13%	4%
2004	83%	14%	3%
2005	83%	14%	3%
2006	84%	13%	3%
2007	83%	13%	3%

Source: Ofcom estimates from operator data. Figures are for end of quarter.
Note: This table shows the ownership of exchange line connections (including both analogue and digital lines), except that due to data availability, up to the end of 2003, WLR lines are included in 'other'. From 2004, all lines owned by BT are included in the BT market share, regardless of whether they are WLR or LLU lines.

A6.96 BT's market share has therefore remained constant since the 2004 Market Review, and is expected to remain constant during our interim forward look period.

A6.97 One change that has occurred since the 2004 Market Review is that the two main cable companies ntl and Telewest merged in March 2006. They subsequently merged with Virgin Mobile, becoming Virgin Media. Combined, Virgin Media has around 13% to 14% of the market. There was little overlap between the geographic areas covered by ntl and Telewest and they therefore did not compete with one another before the merger in terms of local access. The OFT did not refer the merger to the Competition Commission because it did not believe there would be any substantial lessening of competition in any market.[44] There has been no significant impact on BT's market share since the merger. We do not regard this merger as a material change to the conditions on BT.

A6.98 The above table gives information about the proportion of local access connections actually supplied by each of the major operators. However, such shares might understate the competitive pressures in the market place. In particular, even where customers do not choose to obtain services from the cable operator, the presence of a cable offering may constrain BT's pricing of wholesale local access. Virgin Media's 2006 annual report says that its cable network passes approximately 51% of UK households. Consequently, Virgin Media is an option for a substantially greater number of households than are currently serviced by it. Nevertheless, Virgin Media currently provides services to substantially less than 50% of the households which its network passes. Moreover, the share of the market represented by

[44] http://www.oft.gov.uk/shared_oft/mergers_ea02/2005/ntltelewest.pdf

cable has been fairly constant for the last few years. We are therefore minded to conclude that there has been no material change in this situation since the 2004 Market Review.

Potential competitors (i.e. the entry threat)

A6.99 Even if the market were subject to limited actual competition, the operators in that market may be subject to effective constraint if it is easy for new operators to enter the market in response to any attempt to exploit market power.

A6.100 The 2004 Market Review found that the barriers to entry for the wholesale local access market are high. It would therefore be very difficult for a new operator to enter the market.

A6.101 The establishment of a similar wholesale local access network to BT's would entail very significant capital investment. Given the scale of the work required to duplicate even a portion of BT's extensive network, implementation would take a considerable period of time.

A6.102 The 2004 Market Review said that the development of fixed wireless technologies appeared a more likely route for new entry, but that these were unlikely to impose a constraining effect on fixed local access for the time horizon of that review. We do not believe that the situation has changed materially, which we believe will remain the case during the interim forward look period, and the potential development as well as deployment of such technologies is unlikely to be such as to impose a constraining effect on fixed local access.

A6.103 Since the 2004 Market Review, there has been some limited new entry. For example, in South Yorkshire, the regional authority is developing FTTC. New deployments of FTTP by companies such as H2O Networks Ltd could also exert some competitive restraint on BT, even through these are currently defined as being outside the market. However, these developments are very limited in comparison to the volume of BT local loops. We are therefore minded to conclude that there have been no material changes in the threat of entry compared to the 2004 Market Review.

Countervailing buyer power

A6.104 For countervailing buyer power to be effective, the customers of wholesale local access services must be able to make a credible threat to switch their demand away from BT.

A6.105 The 2004 Market Review noted that, in practice, the main purchaser of wholesale local access services from BT is BT itself. It did not seem likely to us that BT's own downstream operations would utilise any buyer power they possess to undermine BT's market position in the upstream market. BT Wholesale remains the largest customer of Openreach's wholesale local access services. While BT Wholesale share of purchases has fallen with the growth of LLU, it remains by far the largest buyer.

A6.106 While in theory some wholesale customers might be able to threaten to switch their service provision to using cable-based access, if the cable operators were to start to offer an equivalent to LLU, the extent of such switching would be limited given BT's significant presence in the downstream markets and the constraint that the cable network can only reach around 50% of homes.

A6.107 We believe there have been no changes in the possibility of countervailing buyer power since the 2004 Market Review, and that no purchasers would be able to exert this power. We believe that this will remain the case for the interim forward look period.

Provisional conclusion on SMP

A6.108 The 2004 Market Review set out that a change in the competitive conditions would require:

i) a radical increase in the competitive appeal of the services provided by the cable operators;

ii) the emergence of a credible new entrant in the supply of wholesale local access services; or

iii) a transformation in the buyer side of the market.

A6.109 We believe that none of these scenarios have occurred since 2004. We are therefore minded to conclude that there have been no material changes in the finding of BT having SMP.

Annex 7

Service categories

A7.1 Set out below are the full list of LLU services identify their current prices, when and if charges were set for them and whether or not we currently consider them subject to cost orientation. For each LLU, where appropriate the proposed basket is indicated.

A7.2 Also set out below are the WLR services currently subject to a charge control and for which we will be modifying the charge condition.

Service	Charge as at 1 Jan 09	Set in	Cost Orientation (Y/N)	Proposed basket (and cap. if appropriate)
SMPF				
SMPF - rental	£15.60 pa	Dec 04 Ofcom LLU Statement21	Y	
SMPF (No Tam)[45]	£19.19 – per disconnection	Dec 04 Ofcom LLU Statement	Y	
Provision and Rental Charges				
SMPF Connection charge	£34.86 connection	Dec 04 Ofcom LLU Statement	Y	SMPF ancillary
SMPF Expedite	£100.00		N	
Frames Selectable Provisioning Dates on basic SMPF provide orders	£9.00		N	
Bulk Line Checker (per CD ROM)	£750.00		N	
Project Managed Migration Charges				

[45] This product is redundant, so we have not included in the SMPF basket.

SMPF Bulk Migrations charge Normal – Delivered during a 24 hour period	£25.39		Y	SMPF ancillary
Shared MPF Same SP Bulk Migrations charge – Out of hours Monday – Saturday	£30.39		N	
Shared MPF Same SP Bulk Migration charge – Out of hours Sunday	£34.39		N	
Modify, Cease, Amend, Cancel and Rejection Charges				
SMPF Tie Pair Modification (3 working day lead time Re-termination)	£42.07		Y	SMPF ancillary
SMPF Tie Pair Modification (Next working day Re-termination)	£52.79		N	
SMPF Tie Pair Modification (Multiple Re-termination)	£35.88		Y	SMPF ancillary
SMPF Cease charge	£4.90		Y	SMPF ancillary
SMPF MDF Remove Jumper Order Singleton Charge	£22.90		Y	SMPF ancillary
SMPF MDF Remove Jumper Order Bulk Charge	£19.06		Y	SMPF ancillary
SMPF Order rejected at initial validation	£1.00		Y	SMPF ancillary
Cancellation of SMPF orders for Provide, Simultaneous provide, Migration, Modification or Amend	£9.00		Y	SMPF ancillary
Amend orders. Allowable change to SMPF Order	£11.00		Y	SMPF ancillary
Assurance Charges				
SMPF standard line test (RWT)	£3.75	Dec 04 Ofcom LLU Statement	Y	SMPF ancillary
SMPF Special Fault Investigation	£144.00		N	

SMPF Flexi Cease Fault Investigation Charges	£62.17		Y	SMPF ancillary
SMPF loop resistance measurement	£94.00		N	
SMPF insertion loss measurement	£94.00		N	
SMPF Enhanced Care per annum	£37.54		N	
MPF				
Provision and Rental Charges				
MPF - rental	£81.69 per annum	Nov ’05 Ofcom LLU Statement22	Y	
MPF Connection charge - Singleton migrations	£34.86 connection	Dec 04 Ofcom LLU Statement	Y	MPF ancillary and cap
MPF Connection Charge – Stopped Line Provide	£40.49		Y	MPF ancillary
MPF Connection charge – New Provide – Standard	£99.95		Y	MPF ancillary and cap
MPF Expedite	£140.00		N	
MPF Enhanced Provision	£85.00		N	
Frames Selectable Provisioning Dates on MPF stopped Line provision	£9.00		N	
Project Managed Migration Charges				
MPF Same CP Mass Migration charge – Normal hours	£27.54		Y	MPF ancillary

MPF Same CP Mass Migrations charge – Out of hours Monday – Saturday	£32.54	N	
MPF Same CP Mass Migrations charge – Out of hours Sunday	£36.54	N	
Modify, Cease, Amend, Cancel and Rejection Charges			
MPF Tie Pair Modification (3 working day lead time Re-termination)	£34.74	Y	MPF ancillary
MPF Tie Pair Modification (Next working day Re-termination)	£44.74	N	
MPF Tie Pair Modification (Multiple Re-termination)	£30.05	Y	MPF ancillary
MPF Cease charge	£4.90	Y	MPF ancillary and cap
MPF MDF Remove Jumper Order Singleton Charge	£12.77	Y	MPF ancillary
MPF MDF Remove Jumper Order Bulk Charge	£8.92	Y	MPF ancillary
MPF Order rejected at initial validation	£1.00	Y	MPF ancillary
MPF Order rejected at detailed evaluation	£10.00	Y	MPF ancillary
MPF Order returned for amendment	£10.00	Y	MPF ancillary
Cancellation of MPF orders for Provide, Migration, Modification or Amend	£9.00	Y	MPF ancillary
Amend orders. Allowable change to MPF Order	£11.00	Y	MPF ancillary
Standalone Shift of Network Termination Point	£95.55	N	
Additional Network Termination Points	£72.58	N	

Assurance Charges				
MPF Standard line test (RWT)	£39.00		Y	MPF ancillary
MPF Special Fault Investigation	£144.00		N	
MPF loop resistance measurement	£94.00		N	
MPF insertion loss measurement	£94.00		N	
MPF insertion loss measurement requested at provision	£150.00		N	
MPF Enhanced Care per annum	£37.54		N	
Enhanced Care Plus on Demand	£164.50		N	
Co-mingling				
Tie Cables				
Internal tie cables (1)	£19.48 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Internal tie cables (1)	£476.89 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Internal tie cables (2)	£14.08 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Internal tie cables (2)	£376.83 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Internal tie cables (2) jointing	£143.92 fixed charge per cable	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Handover Distribution Frame charge per 100 pair tie cable	£22.59		Y	Co-mingling
Handover Distribution Frame Extension to provide additional 1500 tie pair capacity for MCU1	£192.74		Y	Co-mingling

Additional Handover Distribution Frame to provide additional 4800 tie pair capacity for B-BUSS7	£1,457.37		Y	Co-mingling
Standalone Handover Distribution Frame (HDF) 9	£1,999.09		Y	Co-mingling
Standalone Handover Distribution Frame (HDF) 18	£2,093.14		Y	Co-mingling
MDF licence fee	£23.64 pa per cable	Dec 04 Ofcom LLU Statement	Y	Co-mingling
20 CN Enhanced Specification LLU Internal Tie Cable (1) for Co-location and Co-mingling - connection	£890.00		Y	Co-mingling
20 CN Enhanced Specification LLU Internal Tie Cable (1) for Co-location and Co-mingling - rental	£75.00		Y	Co-mingling
21CN-100 pair enhanced Internal Tie Cable-HDF connected - connection	£890.00		Y	Co-mingling
21CN-100 pair enhanced Internal Tie Cable-HDF connected - rental	£75.00		Y	Co-mingling
21CN-32 pair standard Internal Tie Cable-HDF connected - connection	£400.00		Y	Co-mingling
21CN-32 pair standard Internal Tie Cable-HDF connected - rental	£34.00		Y	Co-mingling
21CN-64 pair standard Internal Tie Cable-HDF connected - connection	£510.00		Y	Co-mingling
21CN-64 pair standard Internal Tie Cable-HDF connected - rental	£43.00		Y	Co-mingling
21CN-32 pair standard Internal Tie Cable-Bare Ended Coil - connection	£390.00		Y	Co-mingling
21CN-32 pair standard Internal Tie Cable-Bare Ended Coil - rental	£33.00		Y	Co-mingling
21CN-64 pair standard Internal Tie Cable-Bare Ended Coil - connection	£490.00		Y	Co-mingling
21CN-64 pair standard Internal Tie Cable-Bare Ended Coil - rental	£42.00		Y	Co-mingling

21CN-100 pair standard Internal Tie Cable-Bare Ended Coil - connection	£800.00	Y	Co-mingling
21CN-100 pair standard Internal Tie Cable-Bare Ended Coil - rental	£68.00	Y	Co-mingling
21CN-32 pair enhanced Internal Tie Cable-HDF connected - connection	£420.00	Y	Co-mingling
21CN-32 pair enhanced Internal Tie Cable-HDF connected - rental	£36.00	Y	Co-mingling
21CN-64 pair enhanced Internal Tie Cable-HDF connected - connection	£540.00	Y	Co-mingling
21CN-64 pair enhanced Internal Tie Cable-HDF connected - rental	£46.00	Y	Co-mingling
21CN-100 pair enhanced Internal Tie Cable-HDF connected - connection	£890.00	Y	Co-mingling
21CN-100 pair enhanced Internal Tie Cable-HDF connected - rental	£75.00	Y	Co-mingling
21CN-32 pair enhanced Internal Tie Cable-Bare Ended Coil - connection	£410.00	Y	Co-mingling
21CN-32 pair enhanced Internal Tie Cable-Bare Ended Coil - rental	£34.00	Y	Co-mingling
21CN-64 pair enhanced Internal Tie Cable-Bare Ended Coil - connection	£520.00	Y	Co-mingling
21CN-64 pair enhanced Internal Tie Cable-Bare Ended Coil - rental	£44.00	Y	Co-mingling
21CN-100 pair enhanced Internal Tie Cable-Bare Ended Coil - connection	£850.00	Y	Co-mingling
21CN-100 pair enhanced Internal Tie Cable-Bare Ended Coil - rental	£72.00	Y	Co-mingling
EvoTam connection for 32 pair (SMPF only)	£166.55	N	
EvoTam connection for 64 pair (SMPF only)	£333.11	N	

EvoTam connection for 100 pair (SMPF only)	£520.48		N	
Test Head Connection including site visit	£672.74		N	
Test head Connection excluding site visit	£321.49		N	
Test Port Rental	£27.36		N	
Test Access Product (Test Session)	£0.13		N	
LLU Internal Tie Cable – early cancellation fee				
early cancellation fee applied to all LLU Internal Tie Cables cancelled by CPs between year 1 and 14.[46]	See price list for details - 7 x annual rental to 0.5 x annual rental by 0.5 increments		Y	
BT provided cables (100 pairs)	£104.93 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
BT provided cables (100 pairs)	£1,340.11 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
BT provided cables (100 pairs) (additional 100m)	£71.24 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
BT provided cables (100 pairs) (additional 100m)	£209.35 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
BT provided cables (500 pairs)	£168.43 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
BT provided cables (500 pairs)	£2,191.83 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
BT provided cables (500 pairs) (additional 100m)	£131.98 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
BT provided cables (500 pairs) (additional 100m)	£209.35 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling

[46] We have excluded these cancellation charges from the co-mingling basket, as the charges are by reference to other charges separately regulated. If BT were to change the formulation of the cancellation charges, then we may need to review this.

BT provided cables (additional 100m)	£89.60 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
BT provided cables (additional 100m)	£422.28 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Operator provided cables (100 pairs)	£24.68 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Operator provided cables (100 pairs)	£1,188.02 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Operator provided cables (500 pairs)	£27.44 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Operator provided cables (500 pairs)	£1,689.03 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Operator provided cables (additional 100 pairs)	£13.18 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Operator provided cables (additional 100 pairs)	£406.18 connection	Dec 04 Ofcom LLU Statement	Y	Co-mingling
Hand-over Distribution Frame option per 100 pair Frame capacity	£108.40		Y	Co-mingling
Accommodation				
Distant location				
Distant location full survey	£911.24		Y	Co-mingling
Missed joint survey or testing appointment	£17.00		Y	Co-mingling
Provision of co-location: Operator Equipment Room				
Co-location order rejection – no space available	£213.00		Y	Co-mingling
Co-location full survey	£5,397.00		Y	Co-mingling

Provision of co-location: Co-mingling

Site visit charge to be allocated to all orders not in conjunction with the installation of a base product.	£275.00		Y	Co-mingling
Co-Mingling order rejection – no space or insufficient space available	£435.00		Y	Co-mingling
Forecast administration charge	£282.49		Y	Co-mingling
Co-Mingling set up fee (per sq metre)	£230.00		Y	Co-mingling
Comingling Shared Point of Presence Administration Fee	£220.00		Y	Co-mingling
Ancillary Service Structure Fixed price to service 1-3 Rack Space Units	£4,620.20		Y	Co-mingling
Ancillary Service Structure Fixed price to service 4-6 Rack Space Units	£5,746.56		Y	Co-mingling
Ancillary Service Structure Fixed price to service 7-9 Rack Space Units	£7,249.67		Y	Co-mingling
Low Capacity Unit (LCU)	£3,305.51		Y	Co-mingling
Medium Capacity Unit 1 (MCU with 1 customer rack space unit)	£3,824.99		Y	Co-mingling
Medium Capacity Unit 2 (MCU with 2 customer rack space units)	£4,059.54		Y	Co-mingling
B-BUSS3 (Broadband Britain Umbilical Services Structure with 3 customer rack space units)	£6,305.11		Y	Co-mingling
B-BUSS7 (Broadband Britain Umbilical Services Structure with 7 customer rack space units)	£7,465.04		Y	Co-mingling
AC final distribution	£311.02 pa rental	Dec 04 Ofcom LLU Statement	Y	Co-mingling

Cooling per kw	£1,382.12	Y	Co-mingling
Initial UBASE rack including 5400 pair capacity Handover Distribution Frame or Cable Management Frame	£7,948.78	Y	Co-mingling
Initial or Additional UBASE standard rack (no Handover Distribution Frame or Cable Management Frame included)	£6,121.08	Y	Co-mingling
Provision of first Rack Space Unit (RSU) provided at time of initial order or when ordered at a subsequent date	£322.00	Y	Co-mingling
Provision of each additional RSU	£64.00	Y	Co-mingling
Upgrade of existing MCU1 product to MCU2	£874.00	Y	Co-mingling
Upgrade of existing BBUSS3 Point Of Presence to BBUSS7	£1,930.00	Y	Co-mingling
MCU Max Initial build	£4,077.43	Y	Co-mingling
MCU Max upgrade to existing MCU1 / MCU2	£2,342.25	Y	Co-mingling
MCU Max Upgrade from MCU1 / MCU2 Out of Hours Connection Fee	£900.00	Y	Co-mingling
MCU Max Aux upgrade to existing MCU1 / MCU2	£5,981.94	Y	Co-mingling
MCU Max Aux Upgrade from MCU1 / MCU2 Out of Hours Connection Fee	£1,350.00	Y	Co-mingling
Basic Single Rack	£2,944.45	Y	Co-mingling
Complete Single Rack	£3,889.14	Y	Co-mingling

HDF Cabinet Doors per pair provided at Initial Build	£620.05	Y	Co-mingling
Cancellation schedule			
PRODUCT ONLY BUILD – Cancellation of order within 1 – 10 working days of order placement[47]	33% of total order charges	Y	
PRODUCT ONLY BUILD – Cancellation of order within 11 – 30 working days of order placement Site Access (Note 21)	66% of total order charges	Y	
PRODUCT ONLY BUILD – Cancellation of order within 31 – 45 working days of order placement Handover	100% of total order charges	Y	
PRODUCT PLUS ENABLING BUILD – Cancellation of order within 1 – 20 working days of order placement Handover	25% of total order charges	Y	
PRODUCT PLUS ENABLING BUILD – Cancellation of order within 21 – 30 working days of order placement Handover	50% of total order charges	Y	
RODUCT PLUS ENABLING BUILD – Cancellation of order within 31 – 45 working days of order placement Handover	75% of total order charges	Y	
PRODUCT PLUS ENABLING BUILD – Cancellation of order within 46 – 60 working days of order placement Handover	100% of total order charges	Y	
Terms and conditions of licence			
Licence Fee per square metre per annum (Notes 4, 9 and 11)	Bespoke	Y	

[47] We have excluded these cancellation charges from the co-mingling basket, as the charges are by reference to other charges separately regulated. If BT were to change the formulation of the cancellation charges, then we may need to review this.

Services				
Security rental per sq. metre	£20.76		Y	Co-mingling
Service Charge per square metre per annum	£48.00		Y	Co-mingling
Extra power sockets, runways, lighting, cooling, standby power connection	Bespoke		Y	
Operator Equipment Room – Non-standard Equipment Servicing Charge – Bespoke room (Notes 6 and 14)	Bespoke		Y	
MDF Site Access				
Escorted Access				
BT's Normal Working Hours, planned	40.66		Y	Co-mingling
BT's Normal Working Hours, unplanned	60.99		Y	Co-mingling
Outside BT's Normal Working Hours, planned	51.36		N	
Outside BT's Normal Working Hours, unplanned	77.04		N	
Security & Working Practices Audit Note	£2,500.00		N	
BASIS (BT Assisted Site Delivery Service) fixed charge	£325.00		Y	Co-mingling
Site Access	£308.47		Y	Co-mingling
Handover	£256.15		Y	Co-mingling

Security partitioning annual rental per site charge	£116.90		Y	Co-mingling
Ancillary Bolt On POP Enhancements (Note 28)	Bespoke		N	
Power				
Electricity Supply				
Rental per kW per annum (charges will appear in billed units of decawatts (100W))	£11.69		Y	Co-mingling
Non-essential Service system supply	£11.69 pa rental	Dec 04 Ofcom LLU Statement		
Usage per kWh	9.68p		N	
Provision of sub meter	£793.27		N	
DC Power Options				
1kw DC power option for LCU, rental per annum	£468.80		N	
1.5kw DC power option provided at initial build - rental per annum	£577.20		N	
3kw DC power option provided at initial build rental per annum	£651.20		N	
4kw DC power option provided at initial build rental per annum	£1,579.20		N	
8kw DC power option provided at initial build rental per annum	£1,812.00		N	
4.5kw DC power option provided at initial build rental per annum	£675.41		N	
6kw DC power option provided at initial build rental per annum	£709.26		N	

7.5kw DC power option provided at initial build rental per annum	£750.13	N	
9kw DC power option provided at initial build rental per annum	£791.00	N	
Additional rectifier provided at initial build to provide n+1 capacity for LCU, MCU1 or MCU2 products or per 1.5kw capacity incremental step for the UBASE product	£74.00	N	
Additional rectifier provided at initial build to provide n+1 capacity for B-BUSS3 or B-BUSS7 products	£116.40	N	
500W UPS provided at initial build for LCU MCU1 or MCU2	£186.00	N	
1050W UPS provided at initial build for B-BUSS£ or B-BUSS7	£249.20	N	
700VA AC Inverter provided at initial build	£468.94	N	
1500VA AC Inverter provided at initial build	£670.80	N	
Additional battery string provided at initial build to provide 1 hour reserve at 4kw load for B-BUSS3 product only	£248.00	N	
Additional battery string provided at initial build to provide 1 hour reserve at 8kw load for B-BUSS7 product only	£496.00	N	
Provision of Standby Epower ("ESS")			
Survey for capacity upgrade	£325.28	Y	Co-mingling
Rental of existing capacity per kW per annum (charges will appear in billed units of decawatts (100W))	£145.28	Y	Co-mingling

Essential system supply	£145.28 pa rental	Dec 04 Ofcom LLU Statement		
Provision of sub meter	£793.27		N	
Standby Electricity				
Rental per kW per annum	£19.28		Y	Co-mingling
Usage per kWh	8.20p			
Access Locate				
Access Locate Accommodation (1)	As Per 2.1.1 LLU			
Access Locate Power (2)	As Per 2.1.2 LLU			
Contract conversion From RANF to Access Locate. Administration charge (3)	220.00		N	
Access Locate plus				
Access Locate Plus (4)	Bespoke *		N	

Service	**Charge as at 1 Jan 09**	**Set in**	**Cost Orientation (Y/N)**
WLR (analogue)			
WLR analogue residential	£100.68 per annum	Jan ’06 Ofcom WLR Statement[23]	Y
WLR analogue business	£110.00 per annum	Jan ’06 Ofcom WLR Statement	Y

WLR existing line transfer residential	£2.00	Jan ’06 Ofcom WLR Statement	Y
WLR existing line transfer business	£2.00	Jan ’06 Ofcom WLR Statement	Y
WLR new line residential	£88.00	Jan ’06 Ofcom WLR Statement	Y
WLR new line business	£88.00	Jan ’06 Ofcom WLR Statement	Y

Annex 8

Draft revised LLU charge control conditions and proposed modification to the WLR direction

Part I – Proposed setting of, and modification to, SMP conditions

NOTIFICATION UNDER SECTIONS 48(2) AND 86 OF THE COMMUNICATIONS ACT 2003

Background

1. On 16 December 2004, the Office of Communications (**"Ofcom"**) published a document entitled 'Review of the wholesale local access market — Identification and analysis of markets, determination of market power and setting of SMP conditions — Explanatory statement and notification' (the **"2004 Notification"**).[48]

2. At Annex 1 to the 2004 Notification, Ofcom published a notification identifying, in accordance with section 79 of the Communications Act 2003 (the **"Act"**), the services market of wholesale local access services within the United Kingdom, but not including the Hull Area[49], in which Ofcom determined that, for the purposes of making a market power determination under the Act 2003, BT[50] has significant market power.

3. As a result of that market power determination, in accordance with section 48(1) of the Act, Ofcom set on BT pursuant to section 45 of the Act the SMP services conditions set out in Schedule 1 to the 2004 Notification, including Condition FA3 which imposes obligations on BT with regard to cost based charges, which conditions also apply to the provision of Co-Location.

4. On 30 November 2005, Ofcom published a document entitled 'Local loop unbundling: setting the fully unbundled rental charge ceiling and minor amendment to SMP conditions FA6 and FB6'.[51]

6. On 30 May 2008, Ofcom published a document entitled 'A New Pricing Framework for Openreach' for initial consultation to review whether there is a need to change the existing level and structure of charges for the regulated wholesale access

[48] http://www.ofcom.org.uk/consult/condocs/rwlam/statement/rwlam161204.pdf
[49] The expression **"Hull Area"** means the area defined as the 'Licensed Area' in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc (see paragraph 11(b) of the 2004 Notification).
[50] The expression **"BT"** means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989 (see paragraph 11(b) of the 2004 Notification).
[51] http://www.ofcom.org.uk/consult/condocs/llu/statement/llu_statement.pdf

services.[52] That document stated that any specific proposals on this matter would be set out in a further consultation document.

Proposals in this Notification

7. Ofcom hereby, in accordance with section 48(2) of the Act, proposes, in relation to the services market identified in paragraph 1(a) of the 2004 Notification (as referred to in **paragraph 2** above), to set SMP Condition FA3(A) to apply to BT as set out in **Schedule 1** to this Notification.

8. Ofcom is proposing, in accordance with section 86(1)(b) of the Act, to set that SMP Condition FA3(A) by reference to the market power determination made in relation to the services market identified in paragraph 1(a) of the 2004 Notification in which Ofcom is satisfied there has been no material change since the determinations was made.

9. Ofcom hereby, in accordance with section 48(2) of the Act, further proposes, in relation to the services market identified in paragraph 1(a) of the 2004 Notification, to modify SMP services Conditions FA3 in Part 2 of Schedule 1 to the 2004 Notification as set out in **Schedule 2** to this Notification in respect of its application to BT.

10. Ofcom is proposing, in accordance with section 86(4)(a) of the 2003 Act, to modify that SMP Condition FA3 by reference to the market power determination made in relation to the services market identified in paragraph 1(a) of the 2004 Notification in which Ofcom is satisfied there has been no material change since SMP Condition FA3 was set.

11. The effect of, and Ofcom's reasons for making, these proposals are contained in Section 8 of the explanatory statement accompanying this Notification.

12. Ofcom considers that the proposed setting of, and modification to, the SMP Conditions referred to above comply with the requirements of sections 45 to 47, 87 and 88 of the Act as appropriate and relevant to them.

Ofcom's duties

13. In making the proposals set out in this Notification, Ofcom has considered and acted in accordance with its general duties set out in section 3 of, and the six Community requirements set out in section 4, of the Act.

Making representations

14. Representations may be made to Ofcom about the proposals set out in this Notification and the accompanying explanatory statement by no later than 20 February 2009.

15. Copies of this Notification and the accompanying explanatory statement have been sent to the Secretary of State in accordance with section 50(1)(a) of the Act, as well as the European Commission and to the regulatory authorities of every other member State in accordance with section 50(3) of the Act.

[52] http://www.ofcom.org.uk/consult/condocs/openreach/openreachcondoc.pdf

Interpretation

16. Except for references made to the identified services market in this Notification as set out in the 2004 Notification, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

17. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

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

18. Schedules 1 and 2 to this Notification shall form part of this Notification.

CRAIG LONIE

Director of Regulatory Finance

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

5 December 2008

Schedule 1

Setting of new SMP Condition FA3(A)

1. The following new SMP Condition FA3(A) shall be set by inserting it after Condition FA3 in Part 2 of Schedule 1 to the 2004 Notification—

Condition FA3(A) – Charge control

FA3(A).1 Without prejudice to the generality of Condition FA3, and subject to paragraphs FA3(A).3 and FA3(A).6, the Dominant Provider shall take all reasonable steps to secure that, at the end of each Relevant Year, the Percentage Change in:

(a) the aggregate of charges for SMPF Ancillary Services;

(b) the aggregate of charges for MPF Auxiliary Services;

(c) the aggregate of charges for Co-Mingling Services;

(d) the charge for MPF Transfer;

(e) the charge for MPF New Provide;

(f) the charge for MPF Cease;

(g) the charge for SMPF Transfer;

(h) the charge for SMPF Cease;

(i) the charge for MPF Rental, except for the First Relevant Year in relation to which the charge ceiling specified in paragraph FA3(A).2(a) applies;

(j) the charge for SMPF Rental, except for the First Relevant Year in relation to which the charge ceiling specified in paragraph FA3(A).2(b) applies,

in each of the ten categories of products and/or services specified in paragraphs FA3(A).1(a) to (j) above is not more than the Controlling Percentage (as determined in accordance with paragraph FA3(A).8).

FA3(A).2 The Dominant Provider shall not charge more than:

(a) the amount of **£85.00-£91.00**[60] for MPF Rental in the First Relevant Year; and

(b) the amount of **£15.60 - £16.20**[53] for SMPF Rental in the First Relevant Year; and

FA3(A).3 For the purpose of complying with paragraph FA3(A).1, the Dominant Provider shall take all reasonable steps to secure that the revenue it accrues as a result of all relevant individual charge changes during any

[53] See section 8 for an explanation of this range.

Relevant Year shall be no more than that which it would have accrued had all of those changes been made at [**1st April]**[54]in the Relevant Year. For the avoidance of doubt, this obligation shall be deemed to be satisfied where, in the case of a single change in charges during the Relevant Year, the following formula is satisfied:

$$RC(1-D) \leq TRC$$

where:

RC is the revenue change associated with the single charge change made in the Relevant Year, calculated by the relevant Percentage Change immediately following the charge change multiplied by the revenue accrued during the Prior Financial Year;

TRC is the target revenue change required in the Relevant Year to achieve compliance with paragraph FA3(A).1, calculated by the Percentage Change required in the Relevant Year to achieve compliance with paragraph FA3(A).1 multiplied by the revenue accrued during the Prior Financial Year; and

D is the elapsed proportion of the Relevant Year, calculated as the date on which the change in charges takes effect, expressed as a numeric entity on a scale ranging from [**1st April**] = 0 to [**31st March**] = 364, divided by 365.

FA3(A).4 The Percentage Change for the purposes of each of the categories of products and/or services (each of which is known as a 'basket') specified in paragraphs FA3(A).1(a), FA3(A).1(b) and FA3(A).1(c) respectively shall be calculated by employing the following formula:

$$C_t = \frac{\sum_{i=1}^{n}\left[R_i \frac{(p_{t,i} - p_{0,i})}{p_{0,i}}\right]}{\sum_{i=1}^{n} R_i}$$

where:

C_t is the Percentage Change in the aggregate of charges for the products and/or services in the specified category ('basket') at a particular time t during the Relevant Year;

n is the number of products and/or services in the specified category ('basket');

R_i is the sum of the revenue accrued during the Prior Financial Year in respect of the specific product and/or service i and the revenue accrued during the Prior Financial Year in respect of equivalent products and/or services provided by the Dominant Provider to itself, calculated to exclude any discounts offered by the Dominant Provider;

[54] See section [8] for an explanation of why this date may change. Other consequential date changes are also shown in square brackets in this draft condition.

$p_{0,i}$ is the published charge made by the Dominant Provider for the specific product and/or service *i* at the beginning of the Relevant Year excluding any discounts offered by the Dominant Provider; and

$p_{t,i}$ is the published charge made by the Dominant Provider for the specific product and/or service *i* at time *t* during the Relevant Year excluding any discounts offered by the Dominant Provider.

FA3(A).5 The Percentage Change for the purposes of each of the categories of products and/or services specified (each of which is referred to in this paragraph as a "single charge category") in paragraphs FA3(A).1(d), FA3(A).1(e), FA3(A).1(f), FA3(A).1(g), FA3(A).1(h), FA3(A).1(i) and FA3(A).1(j) respectively shall be calculated by employing the following formula:

$$C_t = \frac{(p_t - p_0)}{p_0}$$

where:

C_t is the Percentage Change in charges for the specific product and/or service in the single charge category in question at a particular time *t* during the Relevant Year;

p_0 is the published charge made by the Dominant Provider for the specific product and/or service at the beginning of the Relevant Year excluding any discounts offered by the Dominant Provider; and

p_t is the published charge made by the Dominant Provider for the specific product and/or service at the time *t* during the Relevant Year excluding any discounts offered by the Dominant Provider.

FA3(A).6 In the case of each of the categories of products and/or services (each of which is known as a 'basket') specified in paragraphs FA3(A).1(a), FA3(A).1(b) and FA3(A).1(c) respectively, the Dominant Provider shall also and, in any event, take all reasonable steps to secure that, at the end of each Relevant Year, the Percentage Change in discrete charges for each and every product and/or service falling within the basket in question is:

(a) no more than the *Controlling Percentage* increased by [**5 – 10**[55]] percentage points; and

(b) no less than the *Controlling Percentage* reduced by [**5 – 10**] percentage points;

where, for the purposes of (a) and (b) above, *Controlling Percentage* is the Controlling Percentage (as determined in accordance with paragraph FA3(A).8) for the basket within which the product and/or service falls to which the discrete charges relate. For the purpose of this paragraph FA3(A).6, the Percentage Change shall be calculated by employing the formula set out in paragraph FA3(A).5 and its references to a single charge category shall be treated as references to charges for the specific product and/or service falling with the basket in question.

[55] See Section [7] for an explanation of this range. Similarly for FA3(A).6 (b).

FA3(A).7 For the purpose of complying with paragraph FA3(A).6, the Dominant Provider shall take all reasonable steps to secure that the revenue it accrues as a result of all relevant individual charge changes during any Relevant Year shall be no more than that which it would have accrued had all of those changes been made at [**1st April**] in the Relevant Year. For the avoidance of doubt, this obligation shall be deemed to be satisfied where, in the case of a single change in charges during the Relevant Year, the following formula is satisfied:

$$RC(1-D)\leq TRC$$

where:

RC is the revenue change associated with the single charge change made in the Relevant Year, calculated by the relevant Percentage Change immediately following the charge change multiplied by the revenue accrued during the Prior Financial Year;

TRC is the target revenue change required in the Relevant Year to achieve compliance with paragraph FA3(A).1, calculated by the Percentage Change required in the Relevant Year to achieve compliance with paragraph FA3(A).1 multiplied by the revenue accrued during the Prior Financial Year; and

D is the elapsed proportion of the Relevant Year, calculated as the date on which the change in charges takes effect, expressed as a numeric entity on a scale ranging from [**1st April**] = 0 to [**31st March**] = 364, divided by 365.

FA3(A).8 Subject to paragraphs FA3(A).9 and FA3(A).10, the Controlling Percentage in relation to any Relevant Year means:

(a) for the category of products and/or services specified in paragraph FA3(A).1(a), [**RPI decreased by 0.5 percentage points to RPI increased by 2.5 percentage points**];

(b) for the category of products and/or services specified in paragraph FA3(A).1(b), [**RPI decreased by 0.5 percentage points to RPI increased by 2.5 percentage points**];

(c) for the category of products and/or services specified in paragraph FA3(A).1(c), [**RPI decreased by 0.5 percentage points to RPI increased by 2.5 percentage points**];

(d) for the category of products and/or services specified in paragraph FA3(A).1(d), [**RPI decreased by 0.5 percentage points to RPI increased by 2.5 percentage points**];

(e) for the category of products and/or services specified in paragraph FA3(A).1(e), [**RPI decreased by 0.5 percentage points to RPI increased by 2.5 percentage points**];

(f) for the category of products and/or services specified in paragraph FA3(A).1(f), [**RPI decreased by 0.5 percentage points to RPI increased by 2.5 percentage points**];

(g) for the category of products and/or services specified in paragraph FA3(A).1(g), [**RPI decreased by 0.5 percentage points to RPI increased by 2.5 percentage points**];

(h) for the category of products and/or services specified in paragraph FA3(A).1(h), [**RPI decreased by 0.5 percentage points to RPI increased by 2.5 percentage points**];

(i) for the category of products and/or services specified in paragraph FA3(A).1(i), [**RPI decreased by 2.5 percentage points to RPI increased by 1.5 percentage points**];

(j) for the category of products and/or services specified in paragraph FA3(A).1(j), [**RPI increased by 1 percentage point to RPI increased by 2.5 percentage points]** percentage points;

FA3(A).9 Where the Percentage Change in any Relevant Year is less than the Controlling Percentage, then for the purposes of each of the categories of products and/or services specified in paragraphs FA3(A).1(a), FA3(A).1(b), FA3(A).1(c), FA3(A).1(d), FA3(A).1(e), FA3(A).1(f), FA3(A).1(g), FA3(A).1(h), FA3(A).1(i) and FA3(A).1(j) respectively the Controlling Percentage for the following Relevant Year shall be determined in accordance with paragraph FA3(A).8, but increased by the amount of such deficiency.

FA3(A).10 Where the Percentage Change in any Relevant Year is more than the Controlling Percentage, then for the purposes of each of the categories of products and/or services specified in paragraphs FA3(A).1(a), FA3(A).1(b), FA3(A).1(c), FA3(A).1(d), FA3(A).1(e), FA3(A).1(f), FA3(A).1(g), FA3(A).1(h), FA3(A).1(i) and FA3(A).1(j) respectively the Controlling Percentage for the following Relevant Year shall be determined in accordance with paragraph FA3(A).8, but decreased by the amount of such excess.

FA3(A).11 Where the Dominant Provider makes a material change (other than to a charge) to any product or service which is subject to this Condition or to the date on which its financial year ends or there is a material change in the basis of the Retail Prices Index, paragraphs FA3(A).1 to FA3(A).10 shall have effect subject to such reasonable adjustment to take account of the change as Ofcom may direct to be appropriate in the circumstances. For the purposes of this paragraph, a material change to any product or service which is subject to this Condition includes the introduction of a new product or service wholly or substantially in substitution for that existing product or service.

FA3(A).12 The Dominant Provider shall record, maintain and supply to Ofcom in writing, no later than three months after the end of each Relevant Year, the data necessary for OFCOM to monitor compliance of the Dominant Provider with the price control by performing the calculation of the Percentage Change. The data shall include:

Pursuant to Condition FA3(A), the calculated percentage change relating to each category of products and services listed in conditions FA3(A).1 (a) through to (j).

Pursuant to Condition FA3(A).3, calculation of the revenue accrued as a result of all relevant individual charge charges during any Relevant Year compared to the target revenue change.

All relevant data the Dominant Provider used in the calculation of the percentage change C_t pursuant to Conditions FA3(A).4, including for each specific product or service *i* :

All relevant revenues accrued during the Relevant Financial Year in respect of the specific product or service.

Published charges made by the Dominant Provider at time *t* during the Relevant Year excluding any discounts offered by the Dominant Provider.

The relevant published charge at the start of the Relevant Year.

All relevant data the Dominant Provider used in the calculation the percentage change C_t pursuant to Conditions FA3(A).5, for the category of products and services specified in paragraph FA3(A).1(a), FA3(A).1(b), and FA3(A).1(c).

Published charges made by the Dominant Provider at time *t* during the Relevant Year excluding any discounts offered by the Dominant Provider.

The relevant published charge at the start of the Relevant Year.

Other data necessary for monitoring compliance with the charge control.

FA3(A).13 Paragraphs FA3(A).1 to FA3(A).12 shall not apply to such extent as Ofcom may direct.

FA3(A).14 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

FA3(A).15 In this Condition:

(a) **"Co-Mingling Services"** means all of the products and/or services listed in Part 3 of the Annex to this Condition;

(b) **"Controlling Percentage"** is to be determined in accordance with Condition FA3(A).8;

(c) **"MPF Auxiliary Services"** means all of the products and/or services listed in Part 2 of the Annex to this Condition;

(d) **"MPF Cease"** shall be construed as having the same meaning as it has for the purpose of Section 2 of the Openreach Price List, as at 10 December 2008;

(e) **"MPF New Provide"** shall be construed as having the same meaning as 'MPF Connection – New Provide – Standard' has for the purpose of Section 2 of the Openreach Price List, as at 10 December 2008;

(f) **“MPF Rental”** shall be construed as having the same meaning as it has for the purpose of Section 2 of the Openreach Price List, as at 10 December 2008;

(g) **“MPF Transfer”** shall be construed as having the same meaning as ‘MPF Connection - Singleton migrations (Transfer from WLR/SMPF or Change of CP migrations)’ has for the purpose of Section 2 of the Openreach Price List, as at 10 December 2008;

(h) **“Prior Financial Year”** means the period of 12 months ending on 31 March immediately preceding the Relevant Year;

(i) **“Relevant Year”** means either of the two periods of 12 months beginning on [**1st April**], the first period of which starts with [**1st April 2009 and ends on 31 March 2010**] (the **“First Relevant Year”**);

(j) **“Retail Prices Index”** means the index of retail prices complied by an agency or a public body on behalf of Her Majesty’s Government or a governmental department (which is the Office for National Statistics at the time of publication of this Notification) from time to time in respect of all items;

(k) **“RPI”** means the amount of the change in the Retail Prices Index in the period of twelve months ending on [**31st October**] immediately before the beginning of a Relevant Year, expressed as a percentage (rounded to two decimal places) of that Retail Prices Index as at the beginning of that first mentioned period;

(l) **“SMPF Ancillary Services”** means all of the products and/or services listed in Part 1 of the Annex to this Condition;

(m) **“SMPF Cease”** shall be construed as having the same meaning as it has for the purpose of Section 2 of the Openreach Price List, as at 10 December 2008;

(n) **“SMPF Rental”** shall be construed as having the same meaning as it has for the purpose of Section 2 of the Openreach Price List, as at 10 December 2008; and

(o) **“SMPF Transfer”** shall be construed as having the same meaning as ‘SMPF Connection – Basic Provide on existing narrowband, Simultaneous Provide of SMPF with narrowband, Singleton Migration (Transfer or change of CP migrations) from Narrowband, MPF, SMPF and ISDN/ Highway’ has for the purpose of Section 2 of the Openreach Price List, as at 10 December 2008;.

Annex to Condition FA3(A)

Products and/or services subject to charge control pursuant to paragraphs FA3(A).1(a), FA3(A).1(b) and FA3(A).1(c)

Annex to Condition FA3(A)

Products and/or services subject to charge control pursuant to paragraphs FA3(A).1(a), FA3(A).1(b) and FA3(A).1(c)

Part 1

Meaning of SMPF Ancillary Services

For the purposes of Condition FA3(A), the expression "SMPF Ancillary Services" shall be construed as including only the following twelve products and/or services:

1.	SMPF Connection – Basic Provide on existing narrowband, Simultaneous Provide of SMPF with narrowband, Singleton Migration (Transfer or change of CP migrations) from Narrowband, MPF, SMPF and ISDN/ Highway
2.	SMPF Bulk Migrations Normal – Delivered during a 24 hour period
3.	SMPF Tie Pair Modification (3 working day lead time Re-termination)
4.	SMPF Tie Pair Modification (Multiple Re-termination)
5.	SMPF Cease
6.	SMPF MDF Remove Jumper Order Singleton
7.	SMPF MDF Remove Jumper Order Bulk
8.	SMPF Order rejected at initial validation
9.	Cancellation of SMPF orders for Provide, Simultaneous provide, Migration, Modification or Amend
10.	Amend orders. Allowable change to SMPF Order
11.	SMPF standard line test (RWT)
12.	SMPF Flexi Cease Fault Investigation

Part 2

Meaning of MPF Auxiliary Services

For the purposes of Condition FA3(A), the expression "MPF Auxiliary Services" shall be construed as including only the following fifteen products and/or services:

1.	MPF Connection - Singleton migrations (Transfer from WLR/SMPF or Change of CP migrations)
2.	MPF Connection – Stopped Line Provide
3.	MPF Connection – New Provide – Standard
4.	MPF Same CP Mass Migration – Normal hours
5.	MPF Tie Pair Modification (3 working day lead time Re-termination)
6.	MPF Tie Pair Modification (Multiple Re-termination)
7.	MPF Cease

8.	MPF MDF Remove Jumper Order Singleton
9.	MPF MDF Remove Jumper Order Bulk
10.	MPF Order rejected at initial validation
11.	MPF Order rejected at detailed evaluation
12.	MPF Order returned for amendment
13.	Cancellation of MPF orders for Provide, Migration, Modification or Amend
14.	Amend orders. Allowable change to MPF Order
15.	MPF Standard line test (RWT)

Part 3

Meaning of Co-Mingling Services

For the purposes of Condition FA3(A), the expression "Co-Mingling Services" shall be construed as including only the following ninety nine products and/or services:

1.	Internal Tie Cable (1) for Co-Location and Co-Mingling - rental
2.	Internal Tie Cable (1) for Co-Location and Co-Mingling - connection
3.	Internal tie cables (2) – rental
4.	Internal tie cables (2) – connection
5.	Internal Tie Cable (2) Jointing Fixed Charge per External Tie Cable
6.	Handover Distribution Frame charge per 100 pair tie cable
7.	Handover Distribution Frame Extension to provide additional 1500 tie pair capacity for MCU1
8.	Additional Handover Distribution Frame to provide additional 4800 tie pair capacity for B-BUSS7
9.	Standalone Handover Distribution Frame (HDF) 9
10.	Standalone Handover Distribution Frame (HDF) 18
11.	MDF Licence Fee per Internal Tie Cable per annum
12.	20 CN Enhanced Specification LLU Internal Tie Cable (1) for Co-location and Co-mingling - connection
13.	20 CN Enhanced Specification LLU Internal Tie Cable (1) for Co-location and Co-mingling - rental
14.	21CN-100 pair enhanced Internal Tie Cable-HDF connected - connection
15.	21CN-100 pair enhanced Internal Tie Cable-HDF connected - rental
16.	21CN-32 pair standard Internal Tie Cable-HDF connected - connection
17.	21CN-32 pair standard Internal Tie Cable-HDF connected - rental
18.	21CN-64 pair standard Internal Tie Cable-HDF connected - connection
19.	21CN-64 pair standard Internal Tie Cable-HDF connected - rental
20.	21CN-32 pair standard Internal Tie Cable-Bare Ended Coil - connection
21.	21CN-32 pair standard Internal Tie Cable-Bare Ended Coil - rental
22.	21CN-64 pair standard Internal Tie Cable-Bare Ended Coil - connection
23.	21CN-64 pair standard Internal Tie Cable-Bare Ended Coil - rental
24.	21CN-100 pair standard Internal Tie Cable-Bare Ended Coil - connection
25.	21CN-100 pair standard Internal Tie Cable-Bare Ended Coil - rental
26.	21CN-32 pair enhanced Internal Tie Cable-HDF connected -

	connection
27.	21CN-32 pair enhanced Internal Tie Cable-HDF connected - rental
28.	21CN-64 pair enhanced Internal Tie Cable-HDF connected - connection
29.	21CN-64 pair enhanced Internal Tie Cable-HDF connected - rental
30.	21CN-100 pair enhanced Internal Tie Cable-HDF connected - connection
31.	21CN-100 pair enhanced Internal Tie Cable-HDF connected - rental
32.	21CN-32 pair enhanced Internal Tie Cable-Bare Ended Coil - connection
33.	21CN-32 pair enhanced Internal Tie Cable-Bare Ended Coil - rental
34.	21CN-64 pair enhanced Internal Tie Cable-Bare Ended Coil - connection
35.	21CN-64 pair enhanced Internal Tie Cable-Bare Ended Coil - rental
36.	21CN-100 pair enhanced Internal Tie Cable-Bare Ended Coil - connection
37.	21CN-100 pair enhanced Internal Tie Cable-Bare Ended Coil - rental
38.	BT Provided External Tie Cables (100 pairs @ 100ms) - connection
39.	BT Provided External Tie Cables (100 pairs @ 100ms) - rental
40.	BT Provided External Tie Cables (100 pairs @ 100ms) (additional charge per extra 100 metres per cable at the time of installation of the base cable) - connection
41.	BT Provided External Tie Cables (100 pairs @ 100ms) (additional charge per extra 100 metres per cable at the time of installation of the base cable) - rental
42.	BT Provided External Tie Cables (500 pairs @ 100ms) - connection
43.	BT Provided External Tie Cables (500 pairs @ 100ms) - rental
44.	BT Provided External Tie Cables (500 pairs @ 100ms) (additional charge per extra 100 metres per cable at the time of installation of the base cable) - connection
45.	BT Provided External Tie Cables (500 pairs @ 100ms) (additional charge per extra 100 metres per cable at the time of installation of the base cable) - rental
46.	BT Provided External Tie Cables (100ms) (additional charge per extra 100 pairs at the time of installation of the base cable) - connection
47.	BT Provided External Tie Cables (100ms) (additional charge per extra 100 pairs at the time of installation of the base cable) - rental
48.	Operator provided External Tie Cable Pull Through (100 pairs) - connection
49.	Operator provided External Tie Cable Pull Through (100 pairs) - rental
50.	Operator provided External Tie Cable Pull Through (500 pairs) - connection
51.	Operator provided External Tie Cable Pull Through (500 pairs) - rental
52.	Operator provided External Tie Cable Pull Through (additional charge per extra 100 pairs at the time of installation of the base cable) - connection
53.	Operator provided External Tie Cable Pull Through (additional charge per extra 100 pairs at the time of installation of the base cable) - rental
54.	Hand-over Distribution Frame option per 100 pair Frame capacity
55.	Distant location full survey
56.	Missed joint survey or testing appointment
57.	Co-location order rejection – no space available
58.	Co-location full survey

59.	Site visit charge to be allocated to all orders not in conjunction with the installation of a base product.
60.	Co-Mingling order rejection – no space or insufficient space available
61.	Forecast administration
62.	Co-Mingling set up fee (per sq metre)
63.	Comingling Shared Point of Presence Administration Fee
64.	Ancillary Service Structure Fixed price to service 1-3 Rack Space Units
65.	Ancillary Service Structure Fixed price to service 4-6 Rack Space Units
66.	Ancillary Service Structure Fixed price to service 7-9 Rack Space Units
67.	Low Capacity Unit (LCU)
68.	Medium Capacity Unit 1 (MCU with 1 customer rack space unit)
69.	Medium Capacity Unit 2 (MCU with 2 customer rack space units)
70.	B-BUSS3 (Broadband Britain Umbilical Services Structure with 3 customer rack space units)
71.	B-BUSS7 (Broadband Britain Umbilical Services Structure with 7 customer rack space units)
72.	AC final distribution
73.	Cooling per kw
74.	Initial UBASE rack including 5400 pair capacity Handover Distribution Frame or Cable Management Frame
75.	Initial or Additional UBASE standard rack (no Handover Distribution Frame or Cable Management Frame included)
76.	Provision of first Rack Space Unit (RSU) provided at time of initial order or when ordered at a subsequent date
77.	Provision of each additional RSU
78.	Upgrade of existing MCU1 product to MCU2
79.	Upgrade of existing BBUSS3 Point Of Presence to BBUSS7
80.	MCU Max Initial build
81.	MCU Max upgrade to existing MCU1 / MCU2
82.	MCU Max Upgrade from MCU1 / MCU2 Out of Hours Connection Fee
83.	MCU Max Aux upgrade to existing MCU1 / MCU2
84.	MCU Max Aux Upgrade from MCU1 / MCU2 Out of Hours Connection Fee
85.	Basic Single Rack
86.	Complete Single Rack
87.	HDF Cabinet Doors per pair provided at Initial Build
88.	Security rental per sq. metre
89.	Service Charge per square metre per annum
90.	Escorted Access BT's Normal Working Hours, planned - Hourly Charge
91.	Escorted Access BT's Normal Working Hours, unplanned - Hourly Charge
92.	BASIS (BT Assisted Site Delivery Service) fixed charge
93.	Site Access
94.	Handover
95.	Security partitioning annual rental per site charge
96.	Electricity Supply: Rental per kW per annum (charges will appear in billed units of decawatts (100W))
97.	Provision of Standby Epower: Survey for capacity upgrade
98.	Provision of Standby Epower: Rental of existing capacity per kW per annum (charges will appear in billed units of decawatts (100W))
99.	Standby Electricity: Rental per kW per annum

Part 4

Interpretation of this Annex

In this Annex, except in so far as the context otherwise requires, the terms or descriptions of products and/or services used in Parts 1 to 3 shall be construed as having the same meaning as they have for the purpose of Section 2 of the Openreach Price List, as at 10 December 2008.

Schedule 2

Modification to SMP Condition FA3

1. SMP Condition FA3 shall be modified by inserting the following new paragraph FA3.1(X) after paragraph FA3.1 of Condition FA3 in Part 2 of Schedule 1 to the 2004 Notification—

FA3.1(X) For the avoidance of any doubt, where the charge offered, payable or proposed for Network Access covered by Condition FA1 and/or Condition FA9 is for a service which is subject to a charge control under Condition FA3(A), the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that such a charge satisfies the requirements of paragraph FA3.1 above.

Part II – Proposed withdrawal of a Direction

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003

Proposal for withdrawing a Direction dated 30 November 2005 setting a charge ceiling for Metallic Path Facilities under SMP Services Conditions FA3.1 and FA9.2 imposed on BT as a result of a market power determination made by Ofcom that BT has significant market power in the market for wholesale local access services within the United Kingdom, but not including the Hull Area

Proposal in this Notification

1. Ofcom hereby makes, in accordance with section 49(4) of the Act, the proposal to withdraw the MPF Charge Ceiling Direction upon the precondition set out in paragraph 2 being satisfied.

2. The precondition referred to in paragraph 1 above is that Ofcom sets a new SMP Condition (as proposed in Part I of Annex 8 the accompanying explanatory statement) to impose a charge control in respect of the annual rental for access to Metallic Path Facilities and, if so, this withdrawal is to take effect upon the date such Condition takes effect.

3. The effect of, and the reasons for making, the proposed withdrawal is set out in the accompanying explanatory statement.

Ofcom's duties

4. In making the proposal set out in this Notification, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.

Making representations

5. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying explanatory statement by no later than 20 February 2009.

6. In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other Member State.

Interpretation

7. Except for references made to the identified services market in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

8. In this Notification—

(a) **"Act"** means the Communications Act 2003 (c.21);

(b) **"BT"** means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

(c) **"Hull Area"** means the area defined as the 'Licensed Area' in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc;

(d) **"Ofcom"** means the Office of Communications;

(e) **"MPF Charge Ceiling Direction"** means the Direction dated 30 November 2005 as set out in Annex 1 to the Statement entitled *Local loop unbundling: setting the fully unbundled rental charge and minor amendment to SMP conditions FA6 and FB6* published by Ofcom, which Direction was given to BT under SMP Services Conditions FA3.1 and FA9.2 imposed on BT as a result of a market power determination made by Ofcom that BT has significant market power in the market for wholesale local access services within the United Kingdom, but not including the Hull Area; and

(f) **"United Kingdom"** has the meaning given to it in the Interpretation Act 1978 (c.30).

9. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

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

CRAIG LONIE

Director of Regulatory Finance

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

5 December 2008

Part III – Proposed withdrawal of Direction

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003

Proposal for withdrawing a Direction dated 16 December 2004 setting charge ceilings for Specified Local Loop Unbundling Services under SMP Services Condition FA9.2 imposed on BT as a result of a market power determination made by Ofcom that BT has significant market power in the market for wholesale local access services within the United Kingdom, but not including the Hull Area

Proposal in this Notification

1. Ofcom hereby makes, in accordance with section 49(4) of the Act, the proposal to withdraw the Specified LLU Services Charge Ceilings Direction upon the precondition set out in paragraph 2 being satisfied.

2. The precondition referred to in paragraph 1 above is that Ofcom sets a new SMP Condition (as proposed in Part I of Annex 8 the accompanying explanatory statement) to impose a charge control in respect of all such products and/or services to which that Condition relates and, if so, this withdrawal is to take effect upon the date such Condition takes effect.

3. The effect of, and the reasons for making, the proposed withdrawal is set out in the accompanying explanatory statement.

Ofcom's duties

4. In making the proposal set out in this Notification, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.

Making representations

5. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying explanatory statement by no later than 20 February 2009.

6. In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other Member State.

Interpretation

7. Except for references made to the identified services market in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

8. In this Notification—

(a) **"Act"** means the Communications Act 2003 (c.21);

(b) **"BT"** means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

(c) **“Hull Area”** means the area defined as the ‘Licensed Area’ in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc;

(d) **“Ofcom”** means the Office of Communications;

(e) **“Specified LLU Services Charge Ceilings Direction”** means the Direction dated 16 December 2004 as set out in Annex 2, Schedule 1, to the Statement entitled *Review of the wholesale local access market – Identification and analysis of markets, determination of market power and setting of SMP conditions – Explanatory statement and notification* published by Ofcom, which Direction was given to BT under SMP Services Condition FA9.2 imposed on BT as a result of a market power determination made by Ofcom that BT has significant market power in the market for wholesale local access services within the United Kingdom, but not including the Hull Area; and

(f) **“United Kingdom”** has the meaning given to it in the Interpretation Act 1978 (c.30).

9. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

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

CRAIG LONIE

Director of Regulatory Finance

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

5 December 2008

Part IV – Proposed modification to a Direction

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003

Proposal for modifying a Direction dated 24 January 2006 setting charge ceilings for Wholesale Line Rental Services under SMP Services Condition AA3.1, AA10.3(a)(ii), and AA10.3(f) imposed on BT as a result of the market power determinations made by Ofcom that BT has significant market power in the markets for wholesale residential analogue exchange line services and wholesale business analogue exchange line services in the United Kingdom, excluding the Hull Area

Proposal in this Notification

1. Ofcom hereby makes, in accordance with section 49(4) of the Act, the following proposal for modifying the WLR Charge Ceiling Direction.

2. The proposed modification to the WLR Charge Ceiling Direction is set out in the Schedule to this Notification.

3. The effect of, and the reasons for making, the proposed modification is set out in the accompanying explanatory statement.

Ofcom's duties

4. In making the proposal set out in this Notification, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.

Making representations

5. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying explanatory statement by no later than 20 February 2009.

6. In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other Member State.

Interpretation

7. Except for references made to the identified services markets in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

8. In this Notification—

(a) **"Act"** means the Communications Act 2003 (c.21);

(b) **"BT"** means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

(c) **“Hull Area”** means the area defined as the ‘Licensed Area’ in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc;

(d) **“Ofcom”** means the Office of Communications;

(e) **“WLR Charge Ceiling Direction”** means the Direction dated 24 January 2006 as set out in Annex 1 to the Statement entitled *Wholesale Line Rental: Reviewing and setting charge ceilings for WLR services* published by Ofcom, which Direction was given to BT under SMP Services Condition AA3.1, AA10.3(a)(ii) and AA10.3(f) as set out in Schedule 1 to the Notification at Annex A of the *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets* review statement published on 28 November 2003; and

(f) **“United Kingdom”** has the meaning given to it in the Interpretation Act 1978 (c.30).

9. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

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

CRAIG LONIE

Director of Regulatory Finance

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

5 December 2008

SCHEDULE

[*Proposed*] Modification under section 49 of the Communications Act 2003 to a Direction dated 24 January 2006 setting charge ceilings for Wholesale Line Rental Services under SMP Services Condition AA3.1, AA10.3(a)(ii), and AA10.3(f) imposed on BT as a result of the market power determinations made by Ofcom that BT has significant market power in the markets for wholesale residential analogue exchange line services and wholesale business analogue exchange line services in the United Kingdom, excluding the Hull Area

Background

1. As a result of a market analysis carried out by the Director General of Telecommunications (the **"Director"**), he proposed on 17 March 2003 and on 26 August 2003, in accordance with sections 48(2) and 80 of the Act, that the Dominant Provider has significant market power (**"SMP"**) in the markets for, among others, wholesale residential analogue exchange line services and wholesale business analogue exchange line services in the UK, excluding the Hull Area, and the setting of certain SMP conditions.

2. The Director having considered every representation duly made, and thereafter on 28 November 2003 pursuant to sections 48(1) and 79 of the Act by way of publication of a Notification identified the relevant services markets, made market power determinations to the effect referred to in paragraph 1 above and set certain SMP conditions on the Dominant Provider to take effect on 28 November 2003, unless otherwise is stated in Schedule 1 thereto. Those SMP conditions include Condition AA3, which requires BT to secure that its charges are reasonably derived from the costs of provision on a forward looking long-run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed, and Condition AA10, which requires BT to provide specific Wholesale Line Rental Services on reasonable terms and modify its charges for the provision of Wholesale Line Rental in the manner in which the Director may direct.

3. By virtue of the Transitional Provisions, the Director was able to exercise the powers under the Act for an interim period. Ofcom assumed those powers as of 29 December 2003.

4. On 9 November 2005, Ofcom published a Notification of a proposal to give a Direction in accordance with section 49(4) of the Act to set charge ceilings for Wholesale Line Rental Services under Conditions AA3.1, AA10.3(a)(ii), and AA10.3(f) and invited representations about the proposed Direction by 12 December 2005.

5. On 24 January 2006, having considered every representation duly made to Ofcom in relation to that proposal, Ofcom gave the following Direction at paragraphs 1. and 2. as set out in Annex 1 to the Statement entitled *Wholesale Line Rental: Reviewing and setting charge ceilings for WLR services* published by Ofcom (**"WLR Charge Ceiling Direction")**:

> "1. The Dominant Provider shall not charge more than:

(a) for the annual rental of a Wholesale Analogue Line Rental (residential quality of service), £100.68 (the charge for which shall be pro rated and levied on no less than a quarterly basis);

(b) for the annual rental of a Wholesale Analogue Line Rental (business quality of service), £110.00 (the charge for which shall be pro rated and levied on no less than a quarterly basis);

(c) for the Existing Line Transfer of a single analogue Exchange Line (residential quality of service), £2.00;

(d) for the Existing Line Transfer of a single analogue Exchange Line (business quality of service), £2.00;

(e) for the New Line Installation (analogue) (residential quality of service), £88.00; and

(f) for the New Line Installation (analogue) (business quality of service), £88.00.

2. The obligation on the Dominant Provider by virtue of AA3.1 to secure, and be able to demonstrate to the satisfaction of OFCOM, that each and every charge offered, payable or proposed for Network Access covered by Condition AA1(a) and/or Condition AA10 is based on a forward looking long-run incremental costs approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed, shall not apply in respect of the proposed charge ceiling set out in paragraph 1 above only;"

6. On 5 December 2008, Ofcom published a Notification of a proposal to modify the above-mentioned Direction in accordance with section 49(4) of the Act and invited representations about the proposed modification by 20 February 2009.

7. In accordance with section 50 of the Act, a copy of that Notification was sent to the Secretary of State, the European Commission and the regulatory authorities of every of the Member State.

8. By virtue of section 49(9) of the Act, Ofcom may give effect to the proposal set out in the Notification, with or without modification, only if—

(a) it has considered every representation about the proposal that is made to Ofcom within the period specified in the notification; and

(b) it has had regard to every international obligation of the United Kingdom (if any) which has been notified to Ofcom for this purpose by the Secretary of State;

9. For the reasons set out in Section [*leave blank*] of the explanatory statement accompanying this modification to the WLR Charge Ceiling Direction, in accordance with section 49(2) of the Act, Ofcom is satisfied that this modification is—

(a) objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;

(b) not such to discriminate unduly against particular persons or against a particular description of persons;

(c) proportionate to what it is intended to achieve; and

(d) in relation to what it is intended to achieve, transparent.

10. For the reasons set out in Section [*leave blank*] of the explanatory statement accompanying this modification to the WLR Charge Ceiling Direction, Ofcom has considered and acted in accordance with its general duties set out in section 3 of, and the six Community requirements set out in section 4, of the Act in modifying that Direction.

11. Ofcom has considered every representation about the proposed modification duly made to it and the Secretary of State has not notified Ofcom of any international obligation of the United Kingdom for this purpose.

Modification

12. Ofcom hereby, pursuant to section 49 of the Act and under Conditions AA3.1, AA10.3(a)(ii), and AA10.3(f), modifies the WLR Charge Ceiling Direction as follows:

(a) for the amount of £100.68 in respect of the annual rental of a Wholesale Analogue Line Rental (residential quality of service) in paragraph 1(a), there shall be substituted the amount of [**£100.68-104.40**[56]];

(b) for the amount of £110.00 in respect of the annual rental of a Wholesale Analogue Line Rental (business quality of service) in paragraph 1(b), there shall be substituted the amount of [**£106.00-110.00**[57]];

Interpretation

13. In this Modification—

(a) **"Act"** means the Communications Act 2003 (c.21);

(b) **"Dominant Provider"** means British Telecommunications plc (BT), whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

(c) **"Ofcom"** means the Office of Communications;

(d) **"Transitional Provisions"** means sections 408 and 411 of the Act, Article 3(1) of the Communications Act 2003 (Commencement No. 1) Order 2003 and Article 3(2) of the Office of Communications 2002 (Commencement No. 3) and Communications Act 2003 (Commencement No. 2) Order 2003; and

(e) **"WLR Charge Ceiling Direction"** has the meaning given to it in paragraph 5 above.

14. Except insofar as the context otherwise requires, words or expressions in this Modification shall have the meaning assigned to them in paragraph 13 above and otherwise any work or expression shall have the same meaning as it has in or for the purposes of the WLR Charge Ceiling Direction or, if the context so permits, any word or expression shall have the same meaning as it has in the Act.

[56] See section 8 for an explanation of this range.
[57] See section 8 for an explanation of this range.

15. For the purpose of interpreting this Modification—

(a) headings and titles shall be disregarded; and

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

Effective date

16. This Direction shall take effect on [*Date*].

[*Name*]

[*Title*]

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

[*Date*]

Part V – Proposed consent for period to notify charges (LLU)

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003

Proposal for giving a Consent under SMP Condition FA5.1 in Part 2 of Schedule 1 to the Notification at Annex 1 of the Statement entitled Review of the wholesale local access market published by Ofcom on 16 December 2004, which Condition was imposed on BT as a result of the market power determination made by Ofcom that BT has significant market power in the market for wholesale local access services within the United Kingdom but not including the Hull Area

Proposal in this Notification

1. Ofcom hereby makes, in accordance with section 49(4) of the Act, the proposal to give the Consent set out in the draft form in the Schedule to this Notification under SMP Condition FA5.1 in Part 2 of Schedule 1 to the Notification at Annex 1 of the Statement entitled *Review of the wholesale local access market* published by Ofcom on 16 December 2004, upon the precondition set out in paragraph 2 being satisfied.

2. The precondition referred to in paragraph 1 above is that Ofcom decides to set (as proposed in Part 1 of Annex 8 to the accompanying explanatory statement) the proposed new SMP Condition FA3(A) entitled 'Charge control'.

3. The effect of, and the reasons for making, the proposed Consent is set out in the accompanying explanatory statement.

Ofcom's duties

4. In making the proposal set out in this Notification, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.

Making representations

5. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying explanatory statement by no later than 20 February 2009

6. In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other Member State.

Interpretation

7. Except for references made to the identified services markets in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

8. In this Notification—

(a) **"Act"** means the Communications Act 2003 (c.21);

(b) **"BT"** means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

(c) **"Hull Area"** means the area defined as the 'Licensed Area' in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc;

(d) **"Ofcom"** means the Office of Communications; and

(e) **"United Kingdom"** has the meaning given to it in the Interpretation Act 1978 (c.30).

9. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

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

CRAIG LONIE

Director of Regulatory Finance

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

5 December 2008

SCHEDULE

[*Draft*] Consent under section 49 of the Communications Act 2003 and SMP Services Condition FA5.1 imposed on British Telecommunications plc ("BT") as a result of the market power determinations made by Ofcom that BT has significant market power in the market for wholesale local access services within the United Kingdom but not including the Hull Area

Background

1. On 16 December 2004, the Office of Communications (**"Ofcom"**) published a document entitled 'Review of the wholesale local access market — Identification and analysis of markets, determination of market power and setting of SMP conditions — Explanatory statement and notification' (the **"2004 Notification"**).

2. At Annex 1 to the 2004 Notification, Ofcom published a notification identifying, in accordance with section 79 of the Communications Act 2003 (the **"Act"**), the services market of wholesale local access services within the United Kingdom, but not including the Hull Area, in which Ofcom determined that, for the purposes of making a market power determination under the Act 2003, BT has significant market power.

3. As a result of that market power determination, in accordance with section 48(1) of the Act, Ofcom set on BT pursuant to section 45 of the Act the SMP services conditions set out in Schedule 1 to the 2004 Notification, including Condition FA5 which imposes obligations on BT with regard to prior notification of charges, terms and conditions before taking effect. In particular, paragraph FA5.2 of that Condition provides:

> "FA5.2 Save where otherwise provided in Condition FA6, the Dominant Provider shall send to Ofcom and to every person with which it has entered into an Access Contract covered by Condition FA1 and/or Condition FA9 a written notice of any amendment to the charges, terms and conditions on which it provides Network Access or in relation to any charges, terms and conditions for new Network Access (an "Access Charge Change Notice") not less than 90 days before any such amendment comes into effect for existing Network Access, or not less than 28 days before any such charges, terms and conditions come into effect for new Network Access provided after the date that this Condition enters into force. This obligation for prior notification will not apply where the new or amended charges or terms and conditions are directed or determined by Ofcom or are required by a notification or enforcement notification issued by Ofcom under sections 94 or 95 of the Act."

7. On 5 December 2008, Ofcom published a Notification of a proposal to set a new SMP Condition FA3(A) entitled 'Charge control'. In addition, Ofcom published a Notification of a proposal to give a Consent under section 49 of the Communications Act 2003 and SMP Services Condition FA5.1 in relation to charges to which that proposed Condition relates (the **"Consent Proposal"**).

8. In accordance with section 50 of the Act, a copy of the Consent Proposal was sent to the Secretary of State, the European Commission and the regulatory authorities of every of the Member State.

9. By virtue of section 49(9) of the Act, Ofcom may give effect to the Consent Proposal, with or without modification, only if—

(a) it has considered every representation about the proposal that is made to Ofcom within the period specified in the notification; and

(b) it has had regard to every international obligation of the United Kingdom (if any) which has been notified to Ofcom for this purpose by the Secretary of State.

10. For the reasons set out in Section [*leave blank*] of the explanatory statement accompanying this Consent, in accordance with section 49(2) of the Act, Ofcom is satisfied that this Consent is—

(a) objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;

(b) not such to discriminate unduly against particular persons or against a particular description of persons;

(c) proportionate to what it is intended to achieve; and

(d) in relation to what it is intended to achieve, transparent.

11. For the reasons set out in Section [*leave blank*] of the explanatory statement accompanying this Consent, Ofcom has considered and acted in accordance with its general duties set out in section 3 of, and the six Community requirements set out in section 4, of the Act in giving this Consent.

12. Ofcom has considered every representation about the proposed Consent duly made to it and the Secretary of State has not notified Ofcom of any international obligation of the United Kingdom for this purpose.

Consent

13. Ofcom hereby, pursuant to section 49 of the Act and under Condition FA5.1, gives consent to BT that both periods of 90 days (amendments to the charges, terms and conditions for existing Network Access) and 28 days (charges, terms and conditions for new Network Access) are to be reduced to a period of 7 days (and the Condition shall otherwise apply accordingly) for the charges subject to the new SMP Condition FA3(A).

Interpretation

14. In this Consent—

(a) **“Act”** means the Communications Act 2003 (c.21);

(b) **“BT”** and **“Dominant Provider”**, respectively, means British Telecommunications plc (BT), whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

(c) **“Consent Proposal”** has the meaning given to it in paragraph 7 above;

(d) **“Ofcom”** means the Office of Communications; and

(e) **"SMP Condition FA3(A)"** means SMP Condition FA3(A) as set out in Schedule 1 to the Notification published by Ofcom on [*Date*] at [*Annex*] to the explanatory statement accompanying this Consent.

5. Except insofar as the context otherwise requires, words or expressions in this Consent shall have the meaning assigned to them in paragraph 14 above and otherwise any work or expression shall have the same meaning as it has in or for the purposes of the Accompanying Direction or, if the context so permits, any word or expression shall have the same meaning as it has in the Act.

16. For the purpose of interpreting this Consent—

(a) headings and titles shall be disregarded; and

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

Effective date

16. This Consent shall take effect on [*Date*].

[*Name*]

[*Title*]

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

[*Date*]

Part VI – Proposed consent for period to notify charges (WLR)

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003

Proposal for giving a Consent under SMP Condition AA6(a).1 in Part 2 of Schedule 1 to the Notification at Annex A of the Statement entitled Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets published by Oftel on 28 November 2003, which Condition was imposed on BT as a result of the market power determination made by the Director General of Telecommunications that BT has significant market power in the markets for wholesale residential analogue exchange line services and wholesale business analogue exchange line services in the United Kingdom, excluding the Hull Area

Proposal in this Notification

1. Ofcom hereby makes, in accordance with section 49(4) of the Act, the proposal to give the Consent set out in the draft form in the Schedule to this Notification under SMP Condition AA6(a).1 in Part 2 of Schedule 1 to the Notification at Annex A of the Statement entitled *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets* published by Oftel on 28 November 2003, upon the precondition set out in paragraph 2 being satisfied.

2. The precondition referred to in paragraph 1 above is that Ofcom decides to modify (as proposed in Part 4 of Annex 8 to the accompanying explanatory statement) the Direction set out in Annex 1 to the Statement entitled *Wholesale Line Rental: Reviewing and setting charge ceilings for WLR services* published by Ofcom on 24 January 2006 (the WLR Charge Ceiling Direction).

3. The effect of, and the reasons for making, the proposed Consent is set out in the accompanying explanatory statement.

Ofcom’s duties

4. In making the proposal set out in this Notification, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.

Making representations

5. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying explanatory statement by no later than 20 February 2009.

6. In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other Member State.

Interpretation

7. Except for references made to the identified services markets in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

8. In this Notification—

(a) **"Act"** means the Communications Act 2003 (c.21);

(b) **"BT"** means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

(c) **"Hull Area"** means the area defined as the 'Licensed Area' in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc;

(d) **"Ofcom"** means the Office of Communications; and

(e) **"United Kingdom"** has the meaning given to it in the Interpretation Act 1978 (c.30).

9. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

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

CRAIG LONIE

Director of Regulatory Finance

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

5 December 2008

SCHEDULE

[*Draft*] Consent under section 49 of the Communications Act 2003 and SMP Services Condition AA6(a).1 imposed on British Telecommunications plc ("BT") as a result of the market power determinations made by the Director of Telecommunications that BT has significant market power in markets for wholesale residential analogue exchange line services and wholesale business analogue exchange line services in the UK, excluding the Hull Area

Background

1. As a result of a market analysis carried out by the Director General of Telecommunications (the **"Director"**), he proposed on 17 March 2003 and on 26 August 2003, in accordance with sections 48(2) and 80 of the Act that BT has significant market power in the markets for wholesale residential analogue exchange line services and wholesale business analogue exchange line services in the UK, excluding the Hull Area and the setting of certain SMP conditions.

2. The Director having considered every representation duly made, and thereafter on 28 November 2003 pursuant to sections 48(1) and 79 of the Act by way of publication of a Notification identified the relevant services markets, made market power determinations to the effect referred to in paragraph 1 above and set certain SMP conditions on BT to take effect on 28 November 2003, unless otherwise is stated in Schedule 1 thereto. Those SMP conditions include Condition AA6(a), which requires BT (among other things) to send to Ofcom and every Third Party with which it has entered into an Access Contract covered by Condition AA1(a) a written notice of any amendment to the charges on which it provides Network Access or in relation to any charges for new Network Access (an "Access Charge Change Notice"), in the case of each of the Relevant Markets, not less than 90 days before any such amendment comes into effect. That Condition also requires that BT shall not apply any new charge identified in an Access Charge Change Notice before the effective date.

3. By virtue of the Transitional Provisions, the Director was able to exercise the powers under the Act for an interim period. Ofcom has now assumed those powers as of 29 December 2003.

4. On 9 November 2005, Ofcom published a Notification of a proposal to give a Direction in accordance with section 49(4) of the Act to set charge ceilings for Wholesale Line Rental Services under Conditions AA3.1, AA10.3(a)(ii), and AA10.3(f) and invited representations about the proposed Direction by 12 December 2005. Ofcom also proposed to give a Consent under SMP Condition AA6(a).1, so that the obligation on BT in SMP Condition AA6(a).2 to give prior notification of amendments to the charges for existing Network Access should not apply to those charges set by Ofcom in the proposed Direction.

5. On 24 January 2006, having considered every representation duly made to Ofcom in relation to that proposal, Ofcom gave the following Direction at paragraphs 1. and 2. as set out in Annex 1 to the Statement entitled *Wholesale Line Rental: Reviewing and setting charge ceilings for WLR services* published by Ofcom (**"WLR Charge Ceiling Direction")**:

> "1. The Dominant Provider shall not charge more than:
>
> (a) for the annual rental of a Wholesale Analogue Line Rental (residential quality of service), £100.68 (the charge for which shall be pro rated and levied on no less than a quarterly basis);

(b) for the annual rental of a Wholesale Analogue Line Rental (business quality of service), £110.00 (the charge for which shall be pro rated and levied on no less than a quarterly basis);

(c) for the Existing Line Transfer of a single analogue Exchange Line (residential quality of service), £2.00;

(d) for the Existing Line Transfer of a single analogue Exchange Line (business quality of service), £2.00;

(e) for the New Line Installation (analogue) (residential quality of service), £88.00; and

(f) for the New Line Installation (analogue) (business quality of service), £88.00.

2. The obligation on the Dominant Provider by virtue of AA3.1 to secure, and be able to demonstrate to the satisfaction of OFCOM, that each and every charge offered, payable or proposed for Network Access covered by Condition AA1(a) and/or Condition AA10 is based on a forward looking long-run incremental costs approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed, shall not apply in respect of the proposed charge ceiling set out in paragraph 1 above only;"

6. At Annex 3 to that Statement, Ofcom also published the Consent on the terms as proposed.

7. On 5 December 2005 2008, Ofcom published a Notification of a proposal to modify the WLR Charge Ceiling Direction in accordance with section 49(4) of the Act and invited representations about the proposed modification 20 February 2009. In addition, Ofcom published a Notification of a proposal to give a Consent under section 49 of the Communications Act 2003 and SMP Services Condition AA6(a).1 in relation to charges to which that proposal to modify the WLR Charge Ceiling Direction relate (the **"Consent Proposal"**).

8. In accordance with section 50 of the Act, a copy of the Consent Proposal was sent to the Secretary of State, the European Commission and the regulatory authorities of every of the Member State.

9. By virtue of section 49(9) of the Act, Ofcom may give effect to the Consent Proposal, with or without modification, only if—

(a) it has considered every representation about the proposal that is made to Ofcom within the period specified in the notification; and

(b) it has had regard to every international obligation of the United Kingdom (if any) which has been notified to Ofcom for this purpose by the Secretary of State.

10. For the reasons set out in Section [*leave blank*] of the explanatory statement accompanying this Consent, in accordance with section 49(2) of the Act, Ofcom is satisfied that this Consent is—

(a) objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;

(b) not such to discriminate unduly against particular persons or against a particular description of persons;

(c) proportionate to what it is intended to achieve; and

(d) in relation to what it is intended to achieve, transparent.

11. For the reasons set out in Section [*leave blank*] of the explanatory statement accompanying this Consent, Ofcom has considered and acted in accordance with its general duties set out in section 3 of, and the six Community requirements set out in section 4, of the Act in giving this Consent.

12. Ofcom has considered every representation about the proposed Consent duly made to it and the Secretary of State has not notified Ofcom of any international obligation of the United Kingdom for this purpose.

Consent

13. Ofcom hereby, pursuant to section 49 of the Act and under Condition AA6(a), gives consent to BT that the period of 90 days prior to any amendments coming into effect as referred to in paragraph AA6(a).2(a) of that Condition is to be reduced to 7 days (and the Condition shall otherwise apply accordingly) for the charges set out in the Accompanying Direction. For the avoidance of doubt, the Consent given on 24 January 2006 (to which paragraph 6 above refers) shall be withdrawn in so far as it relates to charges modified under the Accompanying Direction, upon it taking effect.

Interpretation

14. In this Consent—

(a) **"Accompanying Direction"** means the Direction published by Ofcom on [*Date*] modifying the WLR Charge Ceiling Direction, the proposed Direction of which paragraph 7 above refers;

(b) **"Act"** means the Communications Act 2003 (c.21);

(c) **"BT"** and **"Dominant Provider"**, respectively, means British Telecommunications plc (BT), whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

(d) **"Consent Proposal"** has the meaning given to it in paragraph 7 above;

(e) **"Ofcom"** means the Office of Communications;

(f) **"Relevant Markets"** mean each of the markets for wholesale residential analogue exchange line services and wholesale business analogue exchange line services in the UK, excluding the Hull Area, as referred to in paragraphs 1 and 2 above.

(g) **"Transitional Provisions"** means sections 408 and 411 of the Act, Article 3(1) of the Communications Act 2003 (Commencement No. 1) Order 2003 and Article 3(2) of the Office of Communications 2002 (Commencement No. 3) and Communications Act 2003 (Commencement No. 2) Order 2003; and

(h) **"WLR Charge Ceiling Direction"** has the meaning given to it in paragraph 5 above.

15. Except insofar as the context otherwise requires, words or expressions in this Consent shall have the meaning assigned to them in paragraph 14 above and otherwise any work or expression shall have the same meaning as it has in or for the purposes of the Accompanying Direction or, if the context so permits, any word or expression shall have the same meaning as it has in the Act.

16. For the purpose of interpreting this Consent—

(a) headings and titles shall be disregarded; and

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

Effective date

16. This Consent shall take effect on [*Date*].

[*Name*]

[*Title*]

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

[*Date*]

Annex 9

Openreach's cost projections

Introduction

A9.1 The First Consultation included Openreach's estimates of the CCA FAC cost stacks for the Core Rental Services. Openreach has now provided updated estimates.

A9.2 This Annex sets out extracts from these estimates.

A9.3 Several respondents to the First Consultation argued that the document did not provide sufficient transparency of the cost data to allow for effective scrutiny of the proposals. Conversely, Openreach does not want information that it considers to be confidential or commercially sensitive to be disclosed.

A9.4 This Annex sets out to find a balance between these two understandable concerns. In broad terms, it does this by:

- Setting out Openreach's cost estimates at an aggregate and unit cost level;
- Describing Openreach's approach to the estimate of its costs, which includes the calculation of its costs 2007/08 and projected cost estimates to 2012/13;
- Setting out the key assumptions made by Openreach to project future costs;
- Demonstrating that the base year costs are consistent with audited financial data;
- Providing Openreach's explanations for the main movements in its cost estimates between 2008/09 and 2012/13; and
- Explaining the main differences between Openreach's cost estimates set out in the First Consultation and its updated estimates.

A9.5 Ofcom's review of these calculations is described in Annex 10. As set out in Annex 10, we consider that, overall, Openreach's approach to its cost calculations appears to be logically sound but we do not agree with all of the underlying assumptions or cost adjustments.

Openreach's approach to developing cost estimates

A9.6 Openreach's cost estimates are derived from a model used by Openreach for internal planning purposes.

A9.7 The model, takes account of the numbers of activities multiplied by task times. The base year of the model is 2007/08 and it reflects the actual hours spent on each activity. The 2008/09 data is a mixture of actual time spent in the period to June 2008 (extracted from Openreach's monthly management accounting system) and forecast activity levels.

A9.8 The cost forecast model calculates labour requirements by reference to the expected number of activities multiplied by task times. The base year of the model in 2007/08 and is based on actual hours spent on each activity. The 2008/09 data is a mixture of actual time spent in the period to June 2008 (extracted from Openreach's monthly management accounting system) and forecast activity levels.

A9.9 The forecasts are a function of product volumes whilst the task times are subject to efficiency adjustments. The model has effective annual hour and cost per FTE assumptions (including training, fleet, stores etc). Volume parameters include orders, connections, number of lines, rentals, faults per lines and capital expenditure programmes.

A9.10 The outputs of the cost forecast model (including labour hours, total volumes and total costs) feed into a cost allocation model along with data from other sources (including data on the Regulatory Asset Value and transfer charges).

A9.11 The cost allocation model combines this information with financial and operational allocation data to calculate product profitability and unit costs on a CCA basis.

A9.12 Costs are first allocated to activities. Where it is possible to match costs to specific activities, the allocation basis reflects this. Activity costs are then allocated to products and services. Where the activity relates to a specific product, the activity cost is allocated directly to that product. In other cases, the costs are shared between the relevant services.

A9.13 Prior to the First Consultation, Openreach provided their projections of estimated CCA returns and service unit costs for the period to 2011/12.

A9.14 The unit cost projections provided by Openreach were calculated on a fully allocated current cost basis, and included a 10% return on capital employed. These calculations formed the basis of the analysis set out in the First Consultation.

A9.15 At Ofcom's request, Openreach has now provided cost projections for the period to 2012/13. As well as rolling forward the projections by one year, Openreach has updated some assumptions including some relating to costs and volumes.

A9.16 As set out in its response to the First Consultation, Openreach now considers that its cost of capital is around 12%. Openreach's unit cost calculations set out in this Annex have been prepared on the basis of a 12% cost of capital.

A9.17 We consider whether Openreach's methodology provides an appropriate basis for projecting costs in Annex 10.

Openreach's assumptions

A9.18 The key assumptions taken into account in Openreach's projections are as follows:

Table A9.1: Key assumptions used by Openreach

Assumption	Openreach view
a) Aggregate volumes	Copper Lines reduce by 7% between 2007/08 and 2012/13
b) Change in mix	Openreach's volume scenario anticipates the migration of around 14 million lines to MPF between 2007/08 and 2012/13 (and the loss of around 7 million SMPF lines)
c) Task times	Key variables are field and frame provision and repair task times. Openreach's projections include assumptions regarding the average time taken to complete each frame task, including the following: WLR Provide: 1.30 hours average WLR cease: 1.01 hours average LLU provide: 0.46 hours average LLU ceases: 0.33 hours average LLU migration 0.44 hours average Field and frame task times are assumed to decline over time in line with Openreach's efficiency assumptions.
d) Inflation	General inflation will run at an average rate of 3% per annum. Pay costs increase at 1% above inflation. Energy costs increase by 50% in 2009/10 before following general inflation.
e) Efficiency target	Efficiency gains of up to 1% should be achievable on costs controllable by BT
f) Reduction in fault rates	Fault rates will remain static beyond 2007/08
g) Group Costs	Openreach picks up a fair share of group costs
h) Cost allocation	Costs are allocated from Group to Openreach and from Openreach in accordance with a defined set of allocation bases.
i) Pension costs	Openreach's cost forecasts include an annual charge to meet future liabilities of members of the defined benefits scheme (at 19.5% of pensionable pay, with 6% met by employee) and Openreach's share of an additional payment by BT Group to cover a deficit identified in the triennial valuation.
j) Line cards	Line card costs should be recovered on the basis of the number of services provided.
k) SLG payments	SLG payments should be recovered based on the level that would be incurred by an efficient operator
l) Light User Scheme ("LUS")	Costs should not include the cost of the LUS. Its forecast includes an estimate of this cost.

Assumption	Openreach view
l) Regulatory Asset Value ("RAV")	Openreach's cost forecasts include an assessment of the RAV adjustment necessary to restate the value of assets acquired prior to August 1997 from a CCA value to an indexed HCA value. This adjustment declines over time as these older assets are written off.
m) Dropwire costs	Openreach's projections do not adjust the Dropwire asset base to take account of the Ofcom 2005/06 determinations. In calculating dropwire depreciation, Openreach includes all capital relating to residential dropwires installed between 2000/01 and 2004/05.
n) Line length adjustment	Openreach's projections apply the same methodology to determine line length as that used in the regulatory accounts.
o) Cost of capital	12%, pre tax nominal

A9.19 We set out our views on the appropriate assumptions to be reflected in our cost projections in Annex 10.

Openreach aggregate cost estimates

A9.20 Extracts from the financial data provided by Openreach – prepared on the basis of the above assumptions - are set out below. These projections assume that prices remain at their current level.

A9.21 Openreach has provided the following estimate of how its costs and revenues might look between now and 2012/13.

Table A9.2: Openreach estimate of CCA costs and revenues, assuming prices remain fixed in nominal terms

	2007/08 £'m	2008/09 £'m	2009/10 £'m	2010/11 £'m	2011/12 £'m	2012/13 £'m	07/08-12/12 CAGR
Revenue	**5,266**	**5,215**	**5,179**	**5,203**	**5,040**	**5,008**	**-1.0%**
Pay	985	1,003	1,037	1,109	1,127	1,124	2.7%
Non Pay	2,591	2,567	2,586	2,565	2,480	2,420	-1.4%
Operating cost	**3,577**	**3,570**	**3,623**	**3,674**	**3,608**	**3,544**	**-0.2%**
EBITDA	**1,689**	**1,644**	**1,555**	**1,529**	**1,432**	**1,464**	**-2.8%**
Depn	468	568	635	699	769	823	11.9%
EBIT	**1,221**	**1,076**	**920**	**830**	**663**	**641**	**-12.1%**
ROCE %	13%	11%	9%	8%	6%	6%	
Mean Capital Employed	**9,459**	**9,530**	**9,969**	**10,261**	**10,526**	**10,733**	**2.6%**

A9.22 On the same basis, Openreach has provided the following estimate of its costs and revenues for the Core Rental services in the period to 2012/13, as set out in the table below.

Table A9.3: Openreach estimate of CCA costs and revenues for the Core Rental Services, assuming prices remain fixed in nominal terms

	2007/08 £'m	2008/09 £'m	2009/10 £'m	2010/11 £'m	2011/12 £'m	2012/13 £'m	07/08-12/12 CAGR
Revenue	**2,687**	**2,670**	**2,660**	**2,488**	**2,249**	**2,091**	**-4.9%**
Pay	541	572	572	576	601	597	2.0%
Line cards and TAMS	274	273	270	233	158	99	-18.5%
Accomodation	273	281	300	308	317	326	3.6%
Stores, contractors & misc	156	139	136	135	134	133	-3.1%
Corporate Overheads	101	104	103	99	103	105	0.8%
IT	138	143	137	133	138	140	0.3%
Fleet	87	90	89	92	93	95	1.6%
Other	66	58	62	54	42	36	-11.2%
Operating cost	**1,636**	**1,659**	**1,669**	**1,629**	**1,587**	**1,531**	**-1.3%**
EBITDA	**1,051**	**1,012**	**991**	**858**	**662**	**560**	**-11.8%**
Depn	329	403	458	508	559	599	12.7%
EBIT	**722**	**609**	**532**	**350**	**103**	**-39**	**-155.8%**
ROCE %	10%	9%	7%	5%	1%	0%	
Mean Capital Employed	**7,056**	**7,047**	**7,343**	**7,534**	**7,700**	**7,821**	**2.1%**

A9.23 We set out our version of these cost projections in Annex 10.

Openreach's base year calculation

A9.24 Openreach's revised cost estimates start from a base year of 2007/08. These were based on Openreach's management accounts for the year, restated on a current cost accounting basis and adjusted to take account of other adjustments such as the exclusion of the costs of creating Openreach.

A9.25 Openreach has provided a reconciliation of the base year costs and revenues for the Core Rental Services in its model (see the EBIT figure of £722m in the table above) to the audited 2007/08 regulatory financial statements, as follows;

Table A9.4: Returns shown in the regulatory statements for 2007/08 but split by rentals / connections

	Total Market[58]	Rental	Connections and other
	£m	£m	£m
Wholesale Residential Line Services	**374**	363	11
Wholesale Residential Line Services	**177**	195	(18)
Wholesale Local Access (LLU)	**(9)**	(5)	(4)
	542	553	(11)
		£m	
Returns for core services in regulatory statements		**553**	
Exclusion of one-off CCA adjustments (principally Dropwires)		186	
RAV adjustments		(29)	
Pension deficit		(52)	
Light user scheme		(40)	
Northern Ireland		(15)	
Internal LLU and SMPF		33	
Line cards		(12)	
Other differences in costs and allocations		98	
Returns for core services in Openreach modelling		**722**	

	Total Market[59]	Rental	Connections and other
	£m	£m	£m
Wholesale Residential Line Services	**5,875**	5,858	17
Wholesale Residential Line Services	**1,857**	1,767	90
Wholesale Local Access (LLU)	**475**	301	174
	8,207	7,926	281
		£m	
Returns for core services in regulatory statements		**7,926**	
Exclusion of one-off CCA adjustments (principally Dropwires)		(95)	
RAV adjustments		(511)	
Line cards		(264)	
Returns for core services in Openreach modelling		**7,056**	

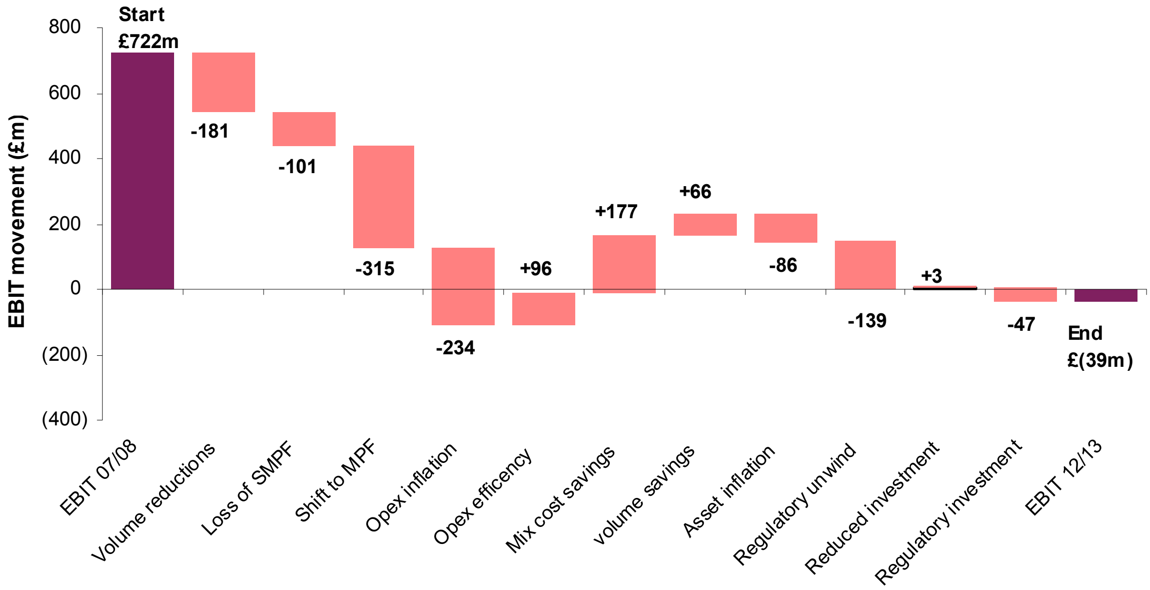
[58] P115 of BT's 2008 Regulatory Financial Statements
[59] P117 of BT's 2008 Regulatory Financial Statements.

Movement between 2007/08 and 2012/13

A9.26 As set out above, Openreach's projections indicate that its profit across the Core Rental Services would decline from around £722 million in 2007/08 to become a loss of £39 million by 2012/13 (if prices stayed at their current, nominal, levels.)

A9.27 At our request, Openreach has set out the main drivers behind the decline in profits as indicated by its projections. Openreach's analysis is set out in Figure A9.1.

Figure A9.1: Key drivers of change in revenues and costs from Core Rental Services



A9.28 In broad terms, Openreach's has explained that the reasons for the change in position between 2007/08 and 2012/13 can be summarised as follows:

- *Volume reduction*: During the period Openreach's projection assumes demand for fixed lines will fall by around 6.7% in the period (6.7% of £2,687m = £181m)
- *Revenue reduction due to changes in mix* (see Annex 11); In addition to total lines falling; there are significant changes in the product volume mix. Openreach assumes a movement of around 14 million lines from WLR to MPF. The revenue loss due to the price differentials is explained below.

  a) *Shift to MPF.* Openreach's projections assume that current prices do not change. Under current prices, there is a difference of around £22 per line between MPF and the weighted average of the WLR prices. This shift to MPF would therefore cause a reduction in revenue in excess of £300m. The associated cost saving is considered separately.

  b) *Loss of SMPF.* In addition, for each WLR + SMPF migrated to MPF, an SMPF line is lost with associated revenue loss of £15.60 per line. The reduction in revenue as result of about 7m fewer SMPF lines is £101m overall. The cost saving is considered separately, below.

- *Inflation on operating costs*. Openreach's blended inflation rate is 2.7%. The estimated impact of £234m is consistent with five years of inflation at this rate, based on operating costs of £1,636m in 2007/08. After inflation, the costs would therefore be around £1,870m (before taking account of the effect of changes in mix).

- *Opex efficiency*. As set out in Annex 14, Openreach's efficiency target of 1% of certain costs translates into an average gain of around 0.7% across all costs from 2008/09. This follows a 3.5% gain (equivalent to a 2.5% average) in 2008/09. The aggregate average efficiency gain is therefore around 5%. Applying this gain to the inflated operating costs of £1,870m gives total savings of around £96m. Operating costs would therefore be expected to be £1,774m.

- *Cost reductions due to changes in mix*. The impact on costs of a shift in demand from WLR to MPF can be illustrated by considering the cost of a line card (which is not provided with MPF). Openreach estimates that the cost of a line is around £12 per line. If demand for 14 million lines migrates from WLR to MPF costs would fall by around £177m. A £177m reduction in operating costs would give adjusted operating costs of £1,597m.

- *Cost reductions due to reduction in volumes.* Openreach's projections assume that demand will fall by 6.7%. Reduced volumes will cause some costs to fall, while other costs remain fixed. Openreach estimates that approximately 55% of its operating costs are variable with volumes. Openreach's estimated impact on costs of £66m is consistent with a 6.7% reduction in 55% of the adjusted operating costs of £1,597m.

A9.29 We have also attempted to explain the significant increase in the net depreciation as follows:

- *Asset Inflation*. Normalised depreciation in 07/08 was £646m. Asset inflation at 3.5% per annum for five years results in an increase of around £120m to depreciation. Offsetting this are holding gains. In 07/08 normalised holding gains were £261m. Inflating the holding gain by 3.5% per annum for five years results in an increase of around £35m. On this basis we estimate the increase in net depreciation to be about £86m.

- *Regulatory unwinds* – this affects net depreciation in three asset areas.

  - RAV. The RAV adjustment to net depreciation is unwinding. In 07/08 we estimate that there is seven years of RAV unwind for Copper which falls to two years by 12/13. We estimate the equivalent figures for Duct to be 29 years falling to 22 years. The 07/08 RAV adjustment for copper was £21m; we estimate this falls to (£21m x 2/7) £6m by 12/13, a £15m decrease. For Duct the adjustment was £51m in 07/08, we estimate this falls to (£51m x 24/29) by 12/13, a fall of £9m. These falls in the RAV adjustment add £24m to net depreciation.

  - Asset Lives. In 06/07 the asset life of copper was extended from 15 years to 18 years whilst the asset life of Duct was extended from 38 years to 40 years. The accounting impact was that in 06/07, there was a holding gain and an increase in the asset value. These both result in increases to the net depreciation charge going forward. The charge increases from the old steady state to the new steady state over a period equal to the change in the asset life. For Copper we estimated the increase, based on 07/08 net depreciation of £280m to be (£280m x 2/16) £35m. For Duct we estimated the increase, based on 07/08 net depreciation of £162m to be (£162m x 1/39) £4m.

- Dropwire. Dropwire has been capitalised since 00/01 with a 10 year life, previously it was expensed. The impact of this change is that net steady state depreciation is not reached until the asset base is complete, which is ten years. Based on net depreciation of £165m in 07/08, which is seven years into the build up, net steady state depreciation will be (£165m x 10/7) £235m by 12/13, an increase of around £71m.

- Steady state IT spend for Core Services is approximately £60m per annum. The starting depreciation in 07/08 was at a low £15m, due to the relative young age of the assets and other BT accounting policies (namely classifying a large proportion of cumulative IS spend as work-in-progress). The average life of the computing assets is around 4 years, and in the following years, the depreciation increases rapidly on these assets to equal the average steady state capex spend of £60m.

Comparison with aggregate cost estimates in the First Consultation

A9.30 As noted above, when Openreach provided updated cost projections to cover the period to 2012/13, it also updated its projections to take account of its revised view on a number of key assumptions.

A9.31 The projections set out in figures A7.5 to A7.8 in the First Consultation indicated that Openreach would make a profit of £65m across the Core Rental Services in 2011/12 (before allowing for any return on capital employed), if prices remained at their current levels.

A9.32 As set out in this Annex, Openreach's projections now indicate that – on the same basis- it would make a profit of £103m; an increase of £38m.

A9.33 Openreach's unit cost estimates are higher than those provided at the time of the First Consultation.

A9.34 Openreach has explained that, in broad terms, the main reasons for the difference between the two estimates for 2011/12 are as follows:

Table: main differences between Openreach EBIT projections for 2011/12

	£'m
Original EBIT 2011/12	**65**
Leavers and pensions	(71)
Change in mix	(45)
Reduced asset capitalisation	(25)
Inflation	(22)
Net volume falls	(18)
Evo-TAMs	(10)
Dropwire valuation	32
Line card allocation	65
21CN/Churn	132
Restated EBIT 2011/12	**103**

Openreach's cost estimates for each of the Core Rental Services

A9.35 On the basis of the assumptions described above, Openreach estimates of the revenues and costs for each of the Core Rental Services would be as follows:

Table A9.5: Openreach estimate of CCA costs and revenues for residential WLR, assuming prices remain fixed in nominal terms

	WLR Res Line rental						
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
Volume (m)	17.6	16.7	16.1	13.5	8.4	6.0	-19.3%
	£'m	£'m	£'m	£'m	£'m	£'m	CAGR
Revenue	**1,774**	**1,688**	**1,623**	**1,355**	**842**	**607**	**-19.30%**
Pay	354	356	341	291	196	145	-16.4%
Line cards and TAMS	206	202	199	181	121	80	-17.2%
Accomodation	170	166	169	147	98	75	-15.1%
Stores, contractors & misc	105	89	84	71	45	33	-20.5%
Corporate Overheads	66	64	61	50	34	25	-17.3%
IT	89	88	81	66	45	34	-17.6%
Fleet	60	59	56	49	32	24	-16.8%
Other	44	38	40	34	22	17	-17.6%
Operating cost	**1,095**	**1,063**	**1,031**	**889**	**592**	**434**	**-16.9%**
EBITDA	**680**	**625**	**592**	**465**	**250**	**174**	**-23.9%**
Depreciation inc holding gains	223	265	291	275	193	155	-6.9%
EBIT	**457**	**360**	**301**	**191**	**57**	**18**	**-47.4%**
ROCE %	9%	7%	6%	5%	2%	1%	
Mean Capital Employed	**5,045**	**4,823**	**4,839**	**4,215**	**2,748**	**2,082**	**-16.2%**

Table A9.6: Openreach estimate of CCA costs and revenues for business WLR, assuming prices remain fixed in nominal terms

WLR Bus Line Rental

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
Volume (m)	5.9	5.8	5.7	3.9	2.6	1.4	-25.2%
	£'m	£'m	£'m	£'m	£'m	£'m	CAGR
Revenue	**646**	**641**	**629**	**426**	**283**	**151**	**-25.25%**
Pay	107	113	110	76	55	30	-22.6%
Line cards and TAMS	68	70	71	52	37	18	-23.2%
Accomodation	53	55	56	40	28	16	-21.3%
Stores, contractors & misc	33	29	28	19	13	7	-26.2%
Corporate Overheads	20	20	20	13	9	5	-23.4%
IT	27	28	26	18	13	7	-23.6%
Fleet	19	19	18	13	9	5	-23.0%
Other	14	13	14	9	7	4	-23.6%
Operating cost	**342**	**347**	**343**	**240**	**171**	**92**	**-23.0%**
EBITDA	**304**	**294**	**286**	**185**	**112**	**58**	**-28.1%**
Depreciation inc holding gains	71	88	99	76	57	34	-13.7%
EBIT	**233**	**206**	**187**	**110**	**55**	**24**	**-36.4%**
ROCE %	15%	13%	12%	10%	7%	5%	
Mean Capital Employed	**1,585**	**1,584**	**1,621**	**1,145**	**797**	**447**	**-22.4%**

Table A9.6: Openreach estimate of CCA costs and revenues for MPF, assuming prices remain fixed in nominal terms

MPF Line rental

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
Volume (m)	1.3	2.0	2.7	6.9	12.8	15.6	65.5%
	£'m	£'m	£'m	£'m	£'m	£'m	CAGR
Revenue	**101**	**159**	**220**	**560**	**1,048**	**1,278**	**66.20%**
Pay	28	45	61	160	324	402	70.7%
Line cards and TAMS	0	0	0	0	0	0	-
Accomodation	14	22	32	84	170	220	74.1%
Stores, contractors & misc	8	11	15	38	72	90	62.4%
Corporate Overheads	5	8	11	27	56	71	68.9%
IT	7	11	14	36	74	94	68.4%
Fleet	4	7	10	26	50	64	70.7%
Other	1	1	2	5	10	13	67.6%
Operating cost	**67**	**106**	**144**	**376**	**755**	**953**	**70.1%**
EBITDA	**34**	**53**	**75**	**183**	**294**	**325**	**57.2%**
Depreciation inc holding gains	16	31	48	138	293	397	89.2%
EBIT	**18**	**22**	**27**	**45**	**1**	**-72**	**-232.8%**
ROCE %	5%	4%	3%	2%	0%	-1%	
Mean Capital Employed	**352**	**556**	**788**	**2,088**	**4,098**	**5,247**	**71.6%**

Table A9.7: Openreach estimate of CCA costs and revenues for SMPF, assuming prices remain fixed in nominal terms

	SMPF Line rental						
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
Volume (m)	10.7	11.8	12.1	9.5	4.8	3.5	-20.0%
	£'m	£'m	£'m	£'m	£'m	£'m	CAGR
Revenue	**167**	**183**	**189**	**148**	**76**	**55**	**-19.97%**
Pay	52	58	60	49	27	20	-17.3%
Line cards and TAMS	0	0	0	0	0	0	-
Accomodation	36	38	43	36	20	15	-15.4%
Stores, contractors & misc	10	9	9	7	4	3	-22.7%
Corporate Overheads	10	11	11	8	5	4	-18.2%
IT	15	16	16	12	7	5	-18.3%
Fleet	4	5	5	4	2	2	-15.8%
Other	6	7	7	6	3	3	-16.4%
Operating cost	**133**	**143**	**151**	**123**	**69**	**52**	**-17.2%**
EBITDA	**34**	**40**	**38**	**24**	**7**	**3**	**-37.9%**
Depreciation inc holding gains	19	19	21	21	15	13	-8.1%
EBIT	**15**	**21**	**17**	**4**	**-8**	**-9**	**-191.4%**
ROCE %	20%	25%	18%	4%	-14%	-21%	
Mean Capital Employed	**74**	**83**	**95**	**86**	**56**	**46**	**-9.3%**

Openreach's required rate of return

A9.36 As set out in its response to the First Consultation Openreach argues that its Weighted Average Cost of Capital is 12%.

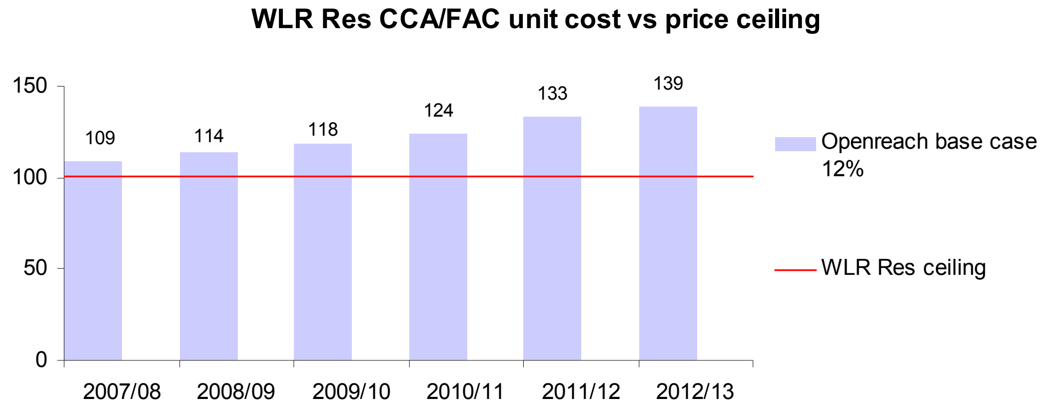
A9.37 Our view on the appropriate WACC is set out in Annex 12 which considers Openreach's cost of capital.

Openreach's unit cost estimates

A9.38 Based on the cost calculations set out above, Openreach has provided its assessment of the price necessary to make a 12% return on the Core Rental Services, as set out below.

Table A9.8: Openreach estimate of CCA unit cost for residential WLR

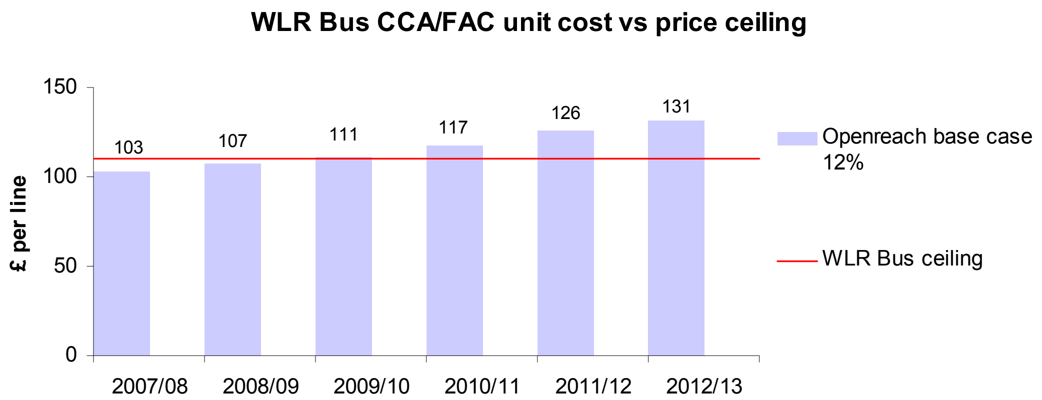
	WLR Res Line rental unit cost					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating unit cost	74.83	79.32	81.96	86.48	93.92	97.58
ROCE unit cost	34.40	34.57	36.03	37.59	39.42	41.42
Total unit cost	**109.24**	**113.89**	**117.99**	**124.07**	**133.34**	**139.00**



A9.39 Openreach's analysis would therefore indicate that the residential WLR charge ceiling is already below cost (including a 12% return).

Table A9.8: Openreach estimate of CCA unit cost for business WLR

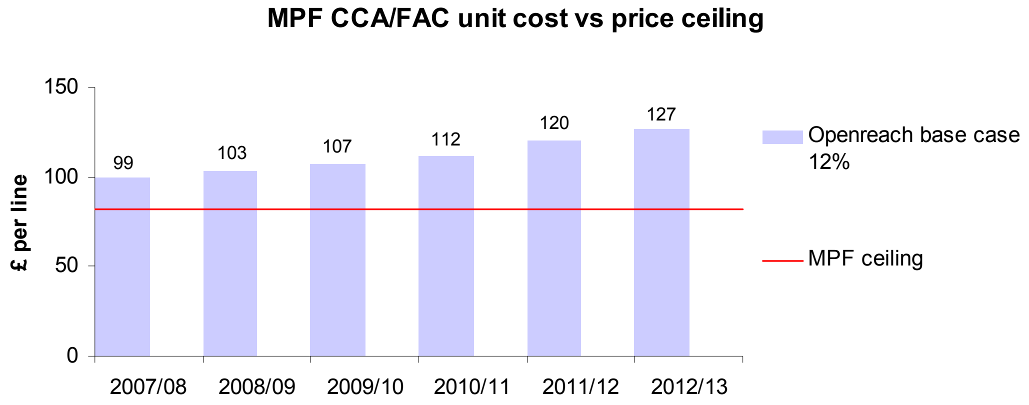
	WLR Bus Line Rental unit cost					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating unit cost	70.65	74.80	77.35	81.73	88.79	92.20
ROCE unit cost	32.49	32.66	34.03	35.50	37.23	39.12
Total unit cost	**103.14**	**107.46**	**111.38**	**117.22**	**126.02**	**131.32**



A9.40 Openreach's analysis would therefore indicate that the business WLR charge ceiling is currently above cost (including a 12% return) and will be until 2009/10.

Table A9.9: Openreach estimate of CCA unit cost for MPF

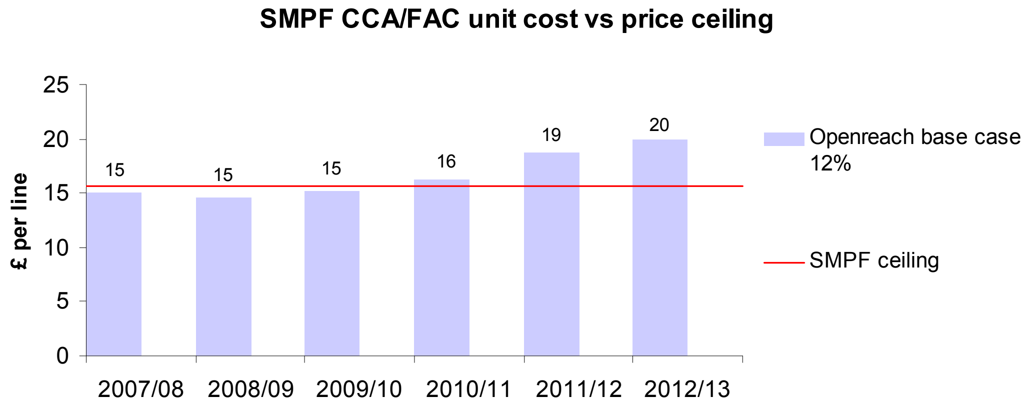
	MPF Line rental unit cost					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating unit cost	65.95	69.22	71.52	75.14	81.68	86.29
ROCE unit cost	33.54	33.76	35.17	36.58	38.32	40.24
Total unit cost	**99.48**	**102.97**	**106.68**	**111.72**	**120.00**	**126.54**



A9.41 Openreach's analysis therefore indicates that the MPF charge ceiling is already below cost (including a 12% return).

Table A9.10: Openreach estimate of CCA unit cost for SMPF

	SMPF Line rental unit cost					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating unit cost	14.21	13.68	14.22	15.15	17.26	18.42
ROCE unit cost	0.84	0.85	0.94	1.09	1.39	1.56
Total unit cost	**15.05**	**14.53**	**15.16**	**16.24**	**18.64**	**19.98**



A9.42 Openreach's analysis would therefore indicate that the business WLR charge ceiling is currently above cost (including a 12% return) and will be until 2010/11.

Openreach's explanation for movement in unit costs

A9.43 In simple terms, the main causes of movement in the cost stacks over the period are in respect of

A9.44 Regulatory Adjustments. The principal difference is the exclusion of one off CCA adjustments, the adjustment in 2007/8 was the reduction in the dropwire valuation as BT changed the indexation methodology.

A9.45 Asset inflation. This is the effect of Holding gains of 3.5% applied to the asset base which feeds through into depreciation (net of holding gains)

A9.46 Opex inflation. This is the effect of a 'blended' 2.4% being applied to the adjusted operating costs annually.

A9.47 Lower volumes. Falling volume and static fixed costs mean that unit costs rise, in addition, the loss of SMPF volumes pushes more costs onto the remaining lines.

A9.48 Regulatory Adjustments. The impact of downward regulatory adjustments such as the RAV, dropwire and extension to copper lives falls over time as the asset base to which they apply reaches steady state or is replaced.

A9.49 At our request, Openreach provided a high level explanation of the factors behind the projected increases in unit costs, as set out below. The "Adjustments" included in the charts below between the cost data per the 2007/08 cost stack and the 2007/08 adjusted cost stack are in respect of the reconciling items set out at Table 9.4 above.

Table A9.11: Openreach explanation of movement in cost of residential WLR

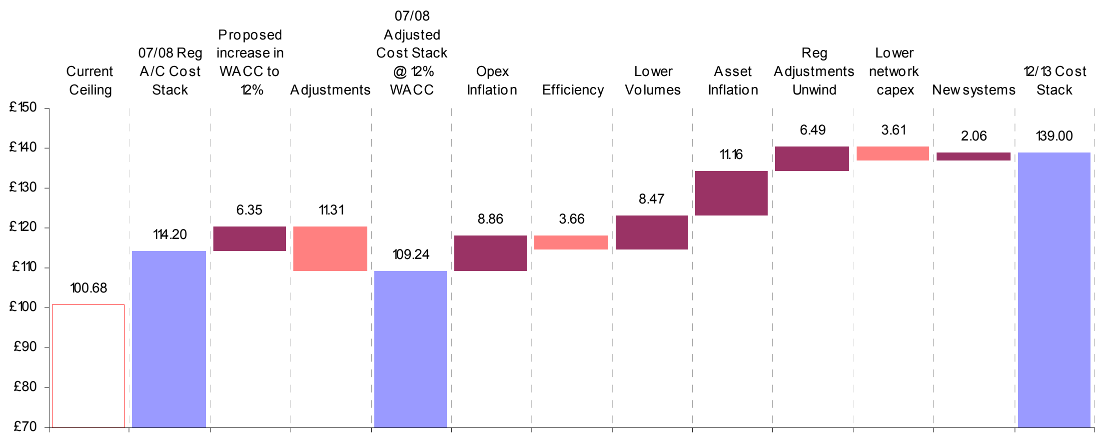


Table A9.12: Openreach explanation of movement in cost of business WLR

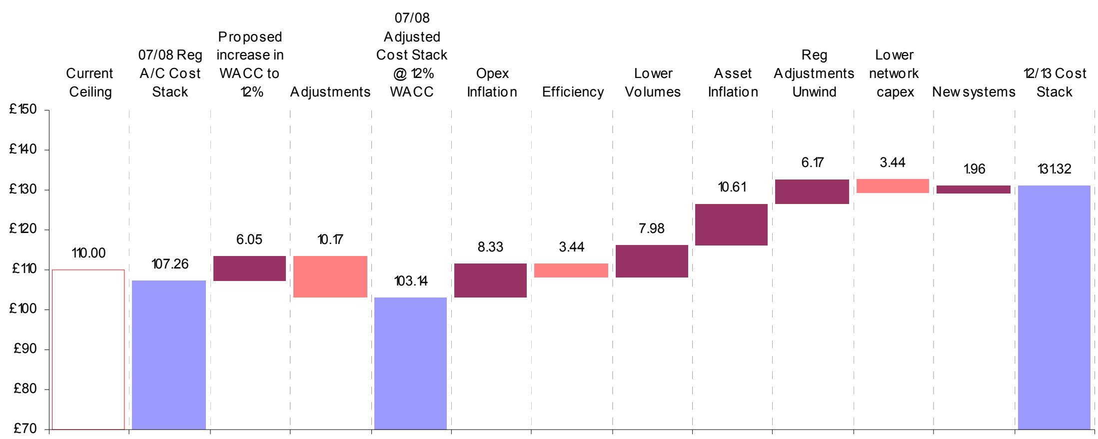


Table A9.13: Openreach explanation of movement in cost of MPF

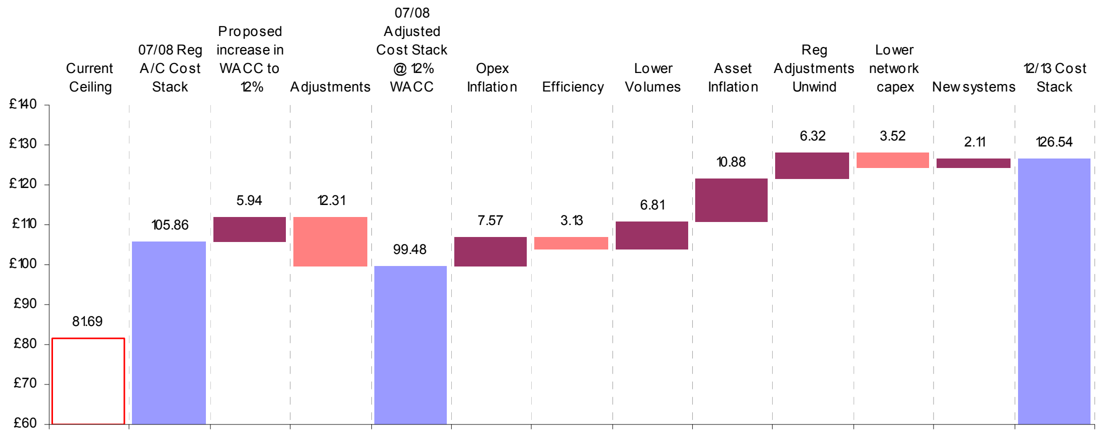
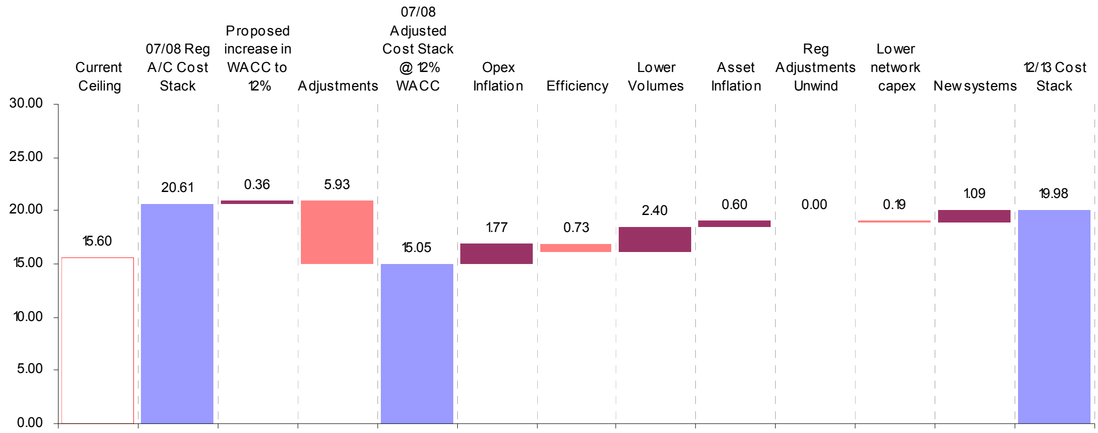


Table A9.14: Openreach explanation of movement in cost of SMPF



Other in-scope services

A9.50 Openreach has also projected the cost and revenues across the other in-scope services, if prices were to remain at their current levels.

A9.51 For ease of reference, these services are considered below in the following groups:

- WLR ancillary services, including new connections and transfers.
- MPF ancillary services, including new provides, migrations and bulk migrations.
- SMPF ancillary services, including new provides, migrations and bulk migrations.
- Co-mingling services, including new points of presence, rentals, ceases and bulk reterminations.
- Network features. Openreach announced on the 31 October reductions in prices from 1 February 2009 as an initial 6 month special offer. Ofcom is considering the impact.

- ISDN 2 services including rentals, connections and transfers/takeovers.
- ISDN30 services including rentals, connections and transfers/takeovers

A9.52 Openreach's estimates of the future returns on each of these groups of services are set out below.

	WLR ancillary services Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	**145**	**133**	**119**	**107**	**67**	**42**
Operating costs	95	87	81	70	51	33
EBITDA	50	46	37	37	16	9
Depreciation inc holding gains	5	10	12	13	16	13
EBIT	45	36	25	24	0	-4
Mean Captial Employed	**41**	**53**	**68**	**66**	**63**	**47**

	MPF ancillary services Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	45	42	49	56	83	104
Operating costs	63	61	78	86	96	106
EBITDA	-18	-19	-30	-31	-13	-1
Depreciation inc holding gains	2	4	5	6	9	13
EBIT	-21	-23	-34	-37	-23	-15
Mean Captial Employed	**52**	**47**	**51**	**55**	**62**	**73**

	SMPF ancillary services Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	206	193	139	125	97	76
Operating costs	366	300	262	225	162	124
EBITDA	-160	-107	-124	-100	-65	-48
Depreciation inc holding gains	8	11	12	14	17	17
EBIT	-167	-118	-136	-114	-82	-65
Mean Captial Employed	**48**	**48**	**66**	**70**	**65**	**60**

	Co-mingling services Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	95	94	128	143	138	176
Operating costs	46	66	131	145	142	187
EBITDA	49	27	-3	-2	-4	-11
Depreciation inc holding gains	0	0	0	0	0	0
EBIT	49	27	-3	-2	-4	-11
Mean Captial Employed	**52**	**57**	**68**	**71**	**70**	**73**

	ISDN 2 Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	**176**	**163**	**145**	**130**	**125**	**120**
Operating costs	90	84	72	67	68	65
EBITDA	86	80	74	63	58	55
Depreciation inc holding gains	21	16	13	12	13	14
EBIT	65	63	60	52	45	41
Mean Captial Employed	**236**	**210**	**197**	**183**	**189**	**195**

	ISDN 30 Total					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	**332**	**333**	**327**	**322**	**317**	**312**
Operating costs	145	148	150	154	158	159
EBITDA	187	186	176	169	159	154
Depreciation inc holding gains	14	17	17	18	19	19
EBIT	173	169	159	150	140	134
Mean Captial Employed	**304**	**299**	**296**	**291**	**284**	**274**

	Network Features					
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue	**116**	**80**	**90**	**90**	**90**	**90**
Operating costs	37	37	35	34	32	31
EBITDA	78	43	55	56	58	59
Depreciation inc holding gains	0	0	0	0	0	0
EBIT	78	43	55	56	57	59
Mean Captial Employed	**0**	**0**	**0**	**0**	**0**	**0**

A9.53 On 31 October 2008, Openreach announced reductions in prices for 'network features' from 1 February 2009. However, the projected revenues included in the above table for network features assume that prices remain at their current level.

Ofcom's review of Openreach's calculations

A9.54 Ofcom's assessment of Openreach's cost estimates is set out in Annex 10.

Annex 10

Review of the financial evidence

Introduction

A10.1 In this section, we set out our approach to the review of the financial evidence and our view on the costs of providing the regulated access services. Specifically, we set out:

- Openreach's forecast of the costs and revenues for the Core Rental Services, as described in Annex 9;
- Our forecast of the costs and revenues for the Core Rental Services, prepared under two scenarios;
- An explanation of the key differences between our forecasts and the Openreach forecast;
- An explanation of our approach to projecting Openreach's costs and revenues;
- Our views on the key assumptions to be taken into account in the cost projections; and
- The implications of these assumptions on unit costs.

Openreach's forecast

A10.2 The financial data provided by Openreach is set out in Annex 9, together with an explanation of their projections and the underlying assumptions.

A10.3 Openreach's projection of the costs and revenues for the Core Rental services in the period to 2012/13, is set out in the table below.

Table A10.1: Openreach estimate of CCA costs and revenues: Core Rental Services, assuming current prices remain fixed in nominal terms

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£'m	£'m	£'m	£'m	£'m	£'m	CAGR
Revenue	**5,266**	**5,215**	**5,179**	**5,203**	**5,040**	**5,008**	**-1.0%**
Pay	985	1,003	1,037	1,109	1,127	1,124	2.7%
Non Pay	2,591	2,567	2,586	2,565	2,480	2,420	-1.4%
Operating cost	**3,577**	**3,570**	**3,623**	**3,674**	**3,608**	**3,544**	**-0.2%**
EBITDA	**1,689**	**1,644**	**1,555**	**1,529**	**1,432**	**1,464**	**-2.8%**
Depn	468	568	635	699	769	823	11.9%
EBIT	**1,221**	**1,076**	**920**	**830**	**663**	**641**	**-12.1%**
ROCE %	13%	11%	9%	8%	6%	6%	
Mean Capital Employed	**9,459**	**9,530**	**9,969**	**10,261**	**10,526**	**10,733**	**2.6%**

A10.4 As illustrated in the table above, Openreach projections indicate that – if prices were to remain unchanged and its other assumptions were to prove correct – its profit across the Core Rental Services (before allowing for any return on capital employed) would decline from around £722 million in 2007/08 and it would make a loss of £39 million on these services in 2012/13.

A10.5 As set out in this annex, we consider that Openreach's cost projections follow a logical approach, and provide a reasonable starting point for our modelling of Openreach's costs. However, the projected costs depend on the underlying assumptions. In this respect, we do not agree with all of Openreach's assumptions and consider that Openreach's cost estimates – and the extent of the decline in profits illustrated above - are overstated as a result.

Ofcom's projections

A10.6 We consider each of the key assumptions in this Annex. For most assumptions, we consider there is a range of possible views and are inviting stakeholder responses to inform our final position. As set out below we have prepared our own forecasts of the costs of providing the Core Rental Services and considered the effect of changing these assumptions and appropriate amendments to Openreach's modelling approach.

A10.7 On this basis, we have generated what we consider to represent a plausible range of cost projections, ranging from a "high" cost case to a "low" cost case, as set out below:

Table A10.2: Ofcom "high case" estimate of costs and revenues for the Core Rental Services, assuming current prices remain fixed in nominal terms

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**2,687**	**2,670**	**2,660**	**2,488**	**2,249**	**2,091**	**-4.9%**
Pay	465	492	477	471	493	473	0.3%
Line cards and TAMS	264	263	261	225	153	95	-18.5%
Accomodation	264	271	290	297	305	313	3.5%
Stores, contractors & misc	150	133	129	126	122	120	-4.4%
Corporate Overheads	97	100	98	94	97	97	0.0%
IT	133	138	132	126	130	130	-0.4%
Fleet	84	86	83	84	83	83	-0.3%
Other	31	22	26	19	6	- 1	-144.6%
Operating cost	**1,489**	**1,506**	**1,497**	**1,441**	**1,389**	**1,311**	**-2.5%**
EBITDA	**1,198**	**1,164**	**1,163**	**1,047**	**860**	**780**	**-8.2%**
Depreciation inc holding gains	253	335	398	452	509	556	17.1%
EBIT	**945**	**829**	**765**	**595**	**351**	**224**	**-25.0%**
ROCE %	13%	12%	10%	8%	5%	3%	
Mean Capital Employed	**7,056**	**7,047**	**7,343**	**7,531**	**7,693**	**7,809**	**2.0%**

A10.8 As illustrated in the table above, in our high case, Openreach is projected to make a profit of £224 million on the Core Rental Services in 2012/13. The projected profit is therefore £263 million higher than forecast by Openreach – due to reduced costs This would represent a return of around 3% on capital employed.

Table A10.3: Ofcom “low case” estimate of costs and revenues for the Core Rental Services, assuming current prices remain fixed in nominal terms

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**2,687**	**2,670**	**2,660**	**2,553**	**2,365**	**2,249**	**-3.5%**
Pay	448	473	462	429	454	425	-1.0%
Line cards and TAMS	254	254	252	225	171	120	-13.9%
Accomodation	254	262	280	286	293	300	3.4%
Stores, contractors & misc	145	128	122	117	112	107	-5.8%
Corporate Overheads	94	97	93	87	88	86	-1.6%
IT	128	134	120	113	114	112	-2.6%
Fleet	81	82	78	77	74	73	-2.2%
Other	21	12	15	10	- 1	- 6	-177.7%
Operating cost	**1,425**	**1,442**	**1,422**	**1,344**	**1,305**	**1,218**	**-3.1%**
EBITDA	**1,262**	**1,229**	**1,238**	**1,209**	**1,060**	**1,031**	**-4.0%**
Depreciation inc holding gains	253	335	394	444	494	535	16.2%
EBIT	**1,009**	**894**	**844**	**766**	**566**	**496**	**-13.2%**
ROCE %	14%	13%	12%	10%	7%	6%	
Mean Capital Employed	**7,056**	**7,047**	**7,330**	**7,502**	**7,644**	**7,752**	**1.9%**

A10.9 In our low case, Openreach is projected to make a profit of £497 million on the Core Rental Services in 2012/13. The projected profit is therefore £536 million higher than forecast by Openreach – due to higher revenues and lower costs. This level of profit would represent a return of around 6% on capital employed. The table below sets out the main reasons for the differences between our projections and those provided by Openreach.

Adjustment	Notes	High £'m	Low £'m
Openreach profit projection	**2012/13 EBIT per Openreach**	**(39)**	**(39)**
Volumes	Decline in volumes by 2012/13: 3% to 7%	-	41
Volume Mix	Increase in demand for MPF by 2012/13: 10m to 14m lines. Fall in demand for SMPF by 2012/13: 6m to 7m lines.	-	65
Efficiency	Efficiency target: 2% to 4% (including fault rates)	36	103
Fault rates	Fault rates target: 4% to 6%	43	59
Cost allocation	Some reallocation of costs to unregulated services may be appropriate	49	98
IS costs	Exclusion of unsupported IS costs	-	23
Pension	Regulated charges should not include any contribution to the funding of the pension deficit	57	57
SLG's	SLG payments can be recovered to the extent that such costs would be incurred by an efficient operator	4	4
LUS	LUS costs should not be recovered through regulated charges	32	42
Dropwire	Dropwire costs should be adjusted to avoid over recovery of costs	42	44
Ofcom view	**2012/13 EBIT per Ofcom ranges**	**224**	**497**

A10.10 The basis for these assumptions is set out in detail below.

Basis for Ofcom's projections

A10.11 As explained in Annex 9, Openreach's cost projections are derived from models it uses for internal planning purposes.

A10.12 We have assessed the integrity of Openreach's models to determine whether they provide a robust basis to project its costs. Specifically, we have:

- Obtained, on a confidential basis, functional versions of these models;
- Spent significant time with Openreach and its consultants to ensure that we fully understand the mechanics of the model;
- Reviewed model user manuals and obtained thorough explanations of key aspects;
- Tested the interaction of volumes, task times, FTE assumptions, average salaries, fault rates and visit ratios to ensure the models produced predictable outputs that could be understood;
- Reviewed the allocation basis, to ensure that they are reasonable and are applied as described;
- Reconciled the base year forecasts back to audited financial data;
- Ensured that all movements in costs during the period could be explained by simple analysis based on an understanding of future changes in demand and cost behaviour;
- Prepared our own estimates of future costs on a CCA FAC basis, by rolling forward audited financial data from the 2008 current cost financial statements and ensured that the outputs from Openreach's model were consistent with these estimates.

A10.13 Based on this analysis, we consider that Openreach's cost projections are based on a logically sound approach. We therefore consider that Openreach's models provide a sensible basis for the modelling of future costs and have used Openreach's model to inform our estimate of unit costs.

A10.14 However, while the overall approach appears sensible, the projections are ultimately dependent on a number of key assumptions. As set out below, we do not accept that all Openreach's calculations are robust. We consider that Openreach's cost projections are overstated as a result.

A10.15 The key assumptions are reviewed in detail in the remainder of this annex. Our proposed ranges for these assumptions are highlighted in bold.

Key assumptions

Future demand

Assumption	Openreach view	Ofcom view
Aggregate volumes	Copper Lines reduce by 7% between 2007/08 and 2012/13	As set out in Annex 11, we consider that the low end of this range is defined by a decline at about half the rate proposed by Openreach. Openreach's forecast sits at the high end of the range. We have assumed that by 2012/13 volumes will decrease by between 3.5% and 7%
Change in mix	The migration of around 14 million lines to MPF between 2007/08 and 2012/13 with the loss of around 7 million SMPF lines)	As set out in Annex 11, we expect demand for MPF to increase by between 10m and 14m lines by 2012/13. Our current estimate is for a fall in demand for SMPF of between 7m and 8m lines by 2012/13.

A10.16 Future demand projections have a significant impact on aggregate and unit costs:

- The existence of fixed costs means that unit costs will increase if volumes fall, because the fixed costs must be recovered over fewer units;
- a shift in demand, from a service that makes a high per-unit contribution to fixed costs to a service that makes a lower contribution, puts further pressure on costs to be recovered from each service if the total contribution to fixed costs is to be maintained;
- the reduction in demand for services that make a positive contribution to fixed overheads puts additional upward pressure on the cost to be recovered from each service, if the total contribution to fixed costs is to be maintained.

A10.17 Openreach's cost calculations are based on the volume scenario set out in Annex 11. This represents a significantly different scenario than the scenario provided by Openreach which we set out in the First Consultation. In particular, Openreach's revised forecasts project a faster rate of decline in demand for fixed lines. As set out in more detail in Annex 11, Openreach has explained that the revised assumptions reflect an updated assessment of the likely impact of mobile substitution of fixed lines.

A10.18 The main trends in Openreach's forecast include

- a reduction in the aggregate demand for fixed lines, from 24.7m in 2008/09 to 23.0m in 2012/13;
- A shift in demand from WLR to MPF, driven by increases in internal and external demand for MPF; and
- A reduction in demand for SMPF, from 10.7m in 2008/09 to 3.5m in 2012/13.

A10.19 As explained in Annex 11, we consider that the volume scenario presented by Openreach represents a plausible outcome without necessarily being the most likely outcome.

A10.20 Specifically, as set out in Annex 11, we consider that:

- Openreach's projected reduction in the aggregate demand for fixed lines, may be overstated; the decline in demand for fixed lines is likely to continue but Openreach's projected decline appears to sit at the high end of a plausible range; and

- Openreach's projections may overstate the rate of migration from WLR to MPF and may overstate the likely reduction in demand for SMPF as a result; the rate of migration to MPF reflected in Openreach's volume scenario probably sits at the high end of a reasonable range.

A10.21 We are keen to get stakeholder views on these projections.

Impact of inflation

Assumption	Openreach view	Ofcom view
Inflation	General inflation will run at an average rate of 3% per annum.	For the time being, we consider Openreach's assumptions represent a reasonable basis for an average rate for long term forecast and the same rate is assumed in our calculation of the RPI – X control.
	Pay costs increase at 1% above inflation.	Our final decision on pay inflation will be consistent with our approach to efficiency.
	Energy costs increase by 50% in 2009/10 before following general inflation.	Wholesale energy prices have been volatile over the last three years. We will revisit the long term assumption in our final assessment of costs.

A10.22 The impact of changes to the inflation assumption on the outcome of this review is mitigated to a significant extent because the cost projections and the calculation of any RPI – X control should both assume the same rate. Therefore, to the extent that cost projection may be over - or under – stated as a result of the choice of RPI, the impact of future costs will be offset by the compensating over – or under-statement in the choice of RPI when determining the appropriate X.

A10.23 Nevertheless, we recognise that short term RPI forecasts are currently fairly volatile and we may need to revisit this assumption in due course.

A10.24 Openreach's general rate of inflation of 3% is below the current rates of RPI and CPI inflation (both currently around 5%) but is above the Bank of England target for CPI inflation. Inflation is expected to fall back towards the Bank of England's target of 2.5%; therefore in the long run 3% looks appropriate.

A10.25 As set out below, Openreach has applied a 3% inflation assumption to around 40% of its operating costs, with 30% of operating costs not being subject to any inflation in Openreach's model. These were generally cost of sales, IS spend and certain regulatory costs such as SLG payments. The 0% categories appear reasonable.

Table A10.4 – Openreach's inflation assumptions

Cost Description	RPI +1%	RPI = 3%	0%
Pay			
Current Pay – All	√		
Agency Pay – All	√		
Leavers Payments	√		
Pension Deficit Contribution			√
Labour related			
Stores and Other Opex costs		√	
Fleet		√	
Cost of Sales			
Line Cards and BNS			√
Electronic and Other			√
Accommodation			
Rent		√	
Cumulo rates		√	
Faculties management		√	
Corporate Overheads		√	
IT			
IS Support		√	
IS Development Opex			√
Other income and Operating Costs			
Repayments and Wayleaves			√
Other Operating Income			√
LUS and SLG			√
Capex			
Network Related	√		
Line test and Other			√

A10.26 Openreach has assumed that pay inflation will run at 1% above RPI. As noted in a response to the First Consultation, BT's most recent pay settlement was calculated at RPI + 0.5%; we understand that previous settlements were on a similar basis. Pay levels were specifically addressed by KPMG's benchmarking work on efficiency. For the purposes of modeling Openreach's costs we have accepted Openreach's assumption re pay inflation but calculated our efficiency assumptions on a consistent basis.

A10.27 Energy prices increased significantly in the first half of 2008 (as illustrated by BERR's energy price index). We understand that Openreach's projected increase was based on the terms of a forward contract. However, some energy prices are now falling significantly. We will revisit the long term assumption in our final assessment of costs.

A10.28 Openreach has used an assumption of 3.5% holding gains on Network Assets. Given that Openreach's non pay inflation assumption is 3% there could be a case for using this figure for asset inflation. The difference reduces the total Openreach return by £12m in 2012/13. Further, as capitalised labour costs make up a large proportion of the asset additions and Openreach have assumed a labour inflation rate of 4%, a figure of 3.5% is broadly consistent with this assumption.

Efficiency target, fault rates and task times

Assumption	Openreach view	Ofcom view
Efficiency target	Efficiency gains of up to 1% should be achievable on costs controllable by BT	We consider that efficiency gains of between 2% and 4% per annum should be achievable on costs controllable by BT. Excluding the effect of reducing fault rates.
Reduction in fault rates	Fault rates will remain static beyond 2007/08	As set out in Annex 14, we expect fault rates to continue to decline at between 4% and 6% per annum.
Task times	Task times are reduced in line with efficiency targets.	Openreach's approach appears reasonable, subject to the appropriate efficiency assumptions.

A10.29 Openreach's costs projections assume that it will be able to deliver the following efficiency gains:

Table 10.5 – Openreach's efficiency assumptions

Cost Description	1%	0.5%	0%
Pay			
Current Pay – All	√		
Agency Pay – All	√		
Leavers Payments	√		
Pension Deficit Contribution			√
Labour related			
Stores and Other Opex costs	√		
Fleet	√		
Cost of Sales			
Line Cards and BNS			√
Electronic and Other		√	
Accommodation			
Rent			√
Cumulo rates			√
Faculties management	√		
Corporate Overheads		√	
IT			
IS Support	√		
IS Development Opex			√
Other income and Operating Costs			
Repayments and Wayleaves			√
Other Operating Income			√
LUS and SLG			√
Capex			
Network Related	√		
Line test and Other			√
07/08 costs @ 0% efficiency £'m			1,160
07/08 costs @ 0.5% efficiency £'m		906	
07/08 costs @1% efficiency £'m	2,346		
Overall blended efficiency		0.6%	

A10.30 As set out in Annex 14, we consider that Openreach should be able to deliver annual efficiency gains of between 2% and 4% across the costs that BT can control.

A10.31 We estimate that increasing the potential for efficiency gains would reduce the shortfall as follows:

- If efficiency gains of 2% per annum were achieved, its operating costs would be reduced by approximately £41m; and
- If efficiency gains of 4% were achieved, its operating costs would be reduced by a further £65m.

A10.32 Openreach has assumed that the fault rates; i.e. number of faults per line, remain static post 2007/8, as set out in the table below.

Table 10.6 – Openreach's fault rate assumptions

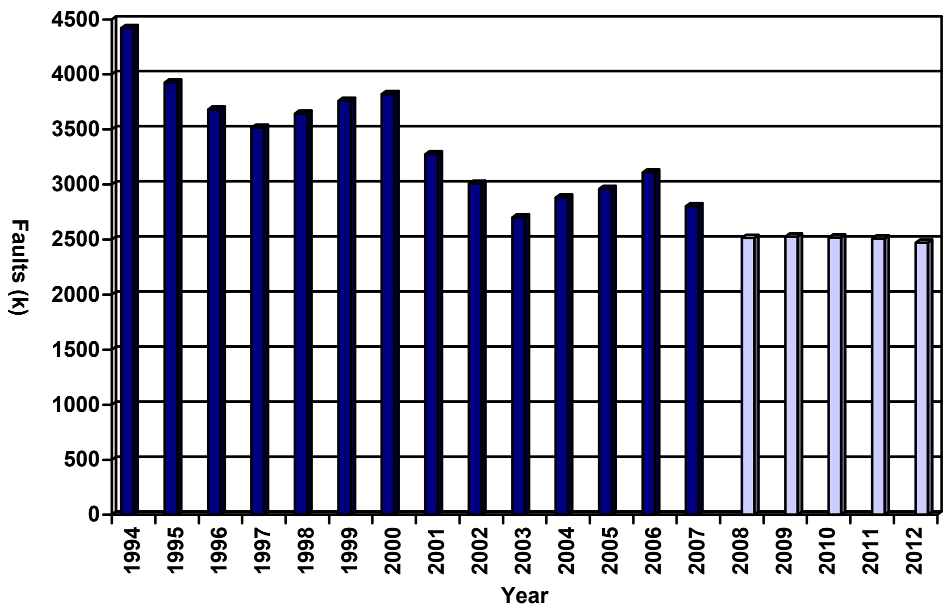
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Exchange	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
End User	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%
Network	6.10%	6.10%	6.10%	6.10%	6.10%	6.10%

A10.33 These percentages are calculated as:

- Total Number of Fault Repair Jobs divided Average Total Copper Rental System size
- Total Copper Rental system size includes WLR Analogue only, WLR+SMPF, MPF and ISDN 2 & 30 lines.

A10.34 To support its projection of constant fault rates, Openreach has provided the following chart setting out historical and projected levels of access faults.

Chart A10.1 Openreach chart of access faults



A10.35 We believe Openreach have understated the case for further improvements. As set out in CPW's response to the First Consultation, BT planned to reduce MPF fault rates from 0.3 per line in 06/07 to 0.07 per line. Carphone Warehouse's view is that 0.06 faults per line would not be unreasonable.

A10.36 Based on BT data, we understand that Network and Exchange fault rates had fallen from approximately 3.5m in 2001 to 2.3m in 2009. This 5% per annum improvement was driven by capital spend and operational spend on fault reduction programmes. If the increases in fault rates due to the take up of Broadband (in 2004) and Local Loop Unbundling (in 2006) are excluded fault rates could have fallen by as much as 10% per annum and be as low as 0.75m by 2009 (by extrapolation).

A10.37 In addition, in the case of Network fault rates, Openreach does not appear to be taking account of the considerable investment in EVO TAM line testing equipment.

A10.38 The historic evidence presented by BT shows that fault rates reductions are somewhere between 4 and 10% depending on the period under review. We recognise that fault rates are unlikely to continue to reduce at some of the higher rates seen in the past, but consider an assumption that network faults will continue to fall at a rate of between 4% and 6% per annum.

A10.39 The impact of these adjustments on core rentals, is to reduce costs by £41m in the high case and £59m in the low case by 2012/13.

Cost allocation

Assumption	Openreach view	Ofcom view
Cost allocation	Costs are allocated from Group to Openreach and from Openreach in accordance with a defined set of allocation bases.	Some of the Non-Regulated Services do not appear to pick up a fair share of costs.

A10.40 As set out below, we consider that, in general, Openreach has adopted a reasonable approach to the allocation of its costs to its services.

A10.41 However, in Openreach's cost projections, there are a number of smaller services to which little, or no, cost is allocated, even though they were generating revenues. These products are set out in the table below. For example, Enhanced Rental Care customers get priority treatment in the event of a fault. Openreach projects that it will generate revenues of around £40 million from this service in 2012/13. However, no cost is allocated to this service in Openreach's projections.

A10.42 As a result, we consider it likely that costs which may reasonably have been allocated to those services have instead been allocated to other services – including the regulated services.

A10.43 Openreach's EBIT was around 20% of revenues in 2007/08. To obtain a rough estimate of an appropriate share of Openreach's costs to be allocated to these services, we have assumed that these services should pick up a similar proportion of costs, based on the projected revenues. This assumption effectively reallocates costs from other Openreach products (including regulated and non-regulated services) to the services identified below.

Table 10.8 – Allocation of costs to other services

Estimate of reduction in costs allocated to Core Rental Services ("CRS") if other services pick up their "fair share"

Other Service	Description	Projected revenues in 2012/13, per Openreach £m	Costs in 2012/13, as projected by Openreach £m	Additional cost allocation required to leave a 20% margin £m	Reduction in cost of CRS if <u>30%</u> of additional cost is reallocated from CRS £m	Reduction in cost of CRS if <u>60%</u> of additional cost is reallocated from CRS £m
Enhanced Rental Care	CP's purchase Enhanced Care where they wish to receive a quicker response from Openreach to reported faults than offered under standard terms. There would be expected to be zero incremental costs for this product.	40	-	32	10	19
WLR Redcare	Redcare is an alarm monitoring service sold by BT. Redcare monitors the alarm over the BT phone line. If the alarm goes off or is tampered with then staff at a BT service centre will inform the police.	18	-	14	4	8
Time related charges	Time Related Charges enable additional time to be spent by Openreach engineers repairing faults, where this work is not covered under the terms of the Openreach service.	100	18	62	19	37
Own Use	This provides the capability for the customer to set up a Virtual Private Network (VPN)	35	-	28	8	17
Other	Not specified	35	-	28	8	17
Total		**228**	**18**	**164**	**49**	**98**

Transfer Charges from other parts of BT Group

Assumption	Openreach view	Ofcom view
Group Costs	Openreach picks up a fair share of group costs	We consider that Group costs have been allocated to Openreach on an appropriate basis.

A10.44 Transfer charges represent the costs allocated to Openreach by BT Group in respect of costs incurred by them on Openreach's behalf. In 2012/13, Openreach estimate that Group costs will be approximately £1.2 billion, equivalent to around 32% of Group overheads and 35% of Openreach's operating costs.

A10.45 The table below sets the data provided by Openreach in respect of transfer charges relating to Operating costs. These costs are attributed across various cost headings in the Openreach cost projection set out at Table 5.1.

Transfer Charge – operating costs	2007/08 £m	2008/09 £m	2009/10 £m	2010/11 £m	2011/12 £m	2012/13 £m
Cumulo Rates	248	256	263	271	279	288
BT Design	252	253	250	254	259	263
Corporate Overheads	181	180	183	187	191	195
Accommodation	103	105	122	125	129	133
Low User Social Telephony	77	77	77	77	77	77
Managed Service Charge	53	53	53	54	54	55
Phone Book Recovery Cost	46	44	43	35	23	16
Other Charges*	196	198	204	212	212	215
Total	**1,157**	**1,166**	**1,196**	**1,216**	**1,224**	**1,241**

* Other charges include BT fleet, Insurance Charges, Supply Chain and other minor charges

A10.46 The above costs categories are described in turn.

Cumulo Rates

A10.47 These are the business rates paid by BT Group on its network business. These relate to the use of public land for assets such as poles, duct, street cabinets and the equipment in exchange buildings. The cost is determined by government legalisation and is therefore largely out of BT's control. The cost has been allocated to Openreach in proportion to the net replacement cost of the assets. We conclude this to be an appropriate basis.

BT Design

A10.48 BT Design is BT Group's Information Systems department and is responsible for the development, maintenance and support of its computer systems. The charge includes the following costs:

- Operational Integrity (including the ongoing operation of physical systems, help desks and data systems). These costs are forecast to increase with RPI of 3% and offset by an assumed efficiency of 1%. KPMG reviewed this category of expenditure as part of their efficiency review.

- Business As Usual (BAU) This includes the development of applications used by Openreach and its customers.

- Equivalence of input platform (EMP). This is expenditure intended to provide CPs with the same customer experience as BT. The immediate spend is on the WLR3 platform.

A10.49 As around 80% of the BAU/EMP cash cost is capitalised, the cost impact is through the depreciation charge. This is rising throughout the period as Openreach builds up the asset base from scratch in 2004/5.

A10.50 In terms of forward looking spend; the 08/09 budget was built up on bottom up basis of planned projects amounting to £185m. From 09/10 a budget of £150m was rolled forward with no inflation. A key consideration for us was whether this simple roll forward of discrete, discretionary project spend was appropriate.

A10.51 On reviewing the Openreach 08/09 EMP/BAU cash budget, we identified around £75m which related to process improvements and provide software releases.

A10.52 The remaining £110m relates to non repeatable discrete one off projects. Openreach's justification is that future, as of yet unidentified software releases, will become increasingly complex, while additional projects will be identified. As a result costs are not projected to fall.

A10.53 In our opinion Openreach have not made a clear case for continued significant investment in systems and processes. However, we recognise the need to maintain an appropriate level of spend to maintain and improve service levels.

A10.54 In our high case we have therefore accepted Openreach's projections. In our low case we have deducted 40% of the non-recurring spend from 2009/10 onwards. The impact on Core rental services is to reduce costs by £26m in 2012/13.

Other cost categories

A10.55 Corporate overheads include BT Group's allocation of accommodation costs ,the cost of empty office, group HQ costs such as tax, treasury, legal etc, Group CTO and overheads from BT Design. These costs are estimated to increase with RPI (3%) offset by efficiencies of 1% per year. Group HQ, Group CTO and BT Design overheads are allocated on a full time employee basis whereas group accommodation and empty office space are allocated on the proportion of space already allocated in accommodation.

A10.56 Accommodation includes property rental costs (including empty exchange space) and outsourced facility management services. Costs have been estimated either on contracted rates or to increase by RPI (3%) with 1% efficiencies. Direct costs are allocated on the basis of usage by Line of business and occupation of empty exchange space is calculated as a percentage of exchange space utilised. KPMG have considered the treatment of vacant space as part of their efficiency review.

A10.57 Within accommodation are energy costs of around £30m in 07/08. These increase by 50% in 09/10 as BT has told us its energy buyers have been unable to obtain prices for the next (18month) forward contract at the previous level due to increases in wholesale energy prices. While this short term rationale was reasonable in September when BT supplied updated figures, recent reversals in wholesale energy prices since then indicate in the long run this might not be appropriate.

A10.58 BT Fleet costs relate to the use by Openreach field services and service management staff of BT Fleet vehicles. Costs are estimated based upon volumes of vehicles and forecast man hour requirements. Costs are allocated based upon usage.

A10.59 Light User Scheme (LUS) is a charge from BT Retail for revenue forgone on line rental as a result of the BT social telephony scheme as well as the running costs for the scheme. The costs have been estimated to be constant based upon forecast numbers of eligible customers. This cost is allocated directly to Openreach by BT group and is dealt with in more detail below.

A10.60 Managed Services Charge relates to a range of services performed by BT Wholesale or BT Operate on behalf of Openreach. These costs are allocated directly to Openreach.

A10.61 Phonebook Cost Recovery is the cost of producing and distributing UK telephone directories. Costs are estimated based upon WLR forecasts and allocated directly to Openreach.

Allocation of Group Overheads

A10.62 We have considered whether:

a) the allocation bases are logical and free from bias; and,

b) the costs allocated to Openreach appear reasonable.

A10.63 In respect of the allocation bases applied to each type of cost, it is helpful to consider the costs in 2012/13 within five categories, as follows:

- *Costs incurred specifically for Openreach and allocated directly to Openreach*. These include low user social telephony cost (£77m in 2012/13), Managed Service Charge (£55m), phone book recovery costs (£16m) and service level guarantee costs (£16m) and amount to £173m representing 5% of Openreach's operating costs;

- *Costs incurred by BT Group and allocated to Openreach based on actual usage*. These include BT fleet and mobile costs, included in other costs in table. This represents 3% of Openreach's operating costs;

- *Costs incurred by BT Group and allocated to Openreach on a basis clearly linked to the cause of the cost.* These relate to Cumulo rates which amount to £288m. This represents 8% of Openreach's operating costs; and

- *Costs incurred by BT Group and allocated to Openreach by a combination of direct allocated and indirectly by full time employee headcount.* These include BT Design costs (£263m) and supply chain.

- *Costs incurred by BT Group and allocated to Openreach on several potential bases.* These costs include accommodation (£133m allocated on the basis of floor costs) and corporate overheads (£195m allocated in proportion to previously allocated costs), insurance charges (allocated on the basis of head count) and the remaining other costs amount to £378m and represent 11% of Openreach's operating costs.

A10.64 The allocation bases applied to the first four cost categories above appear reasonable. We do not consider there to be an obviously better allocation methodology. We therefore do not propose that any changes to these allocation methodologies are necessary

A10.65 In respect of the costs in the fifth category – the costs of £378million allocated on various bases- we considered that alternative allocation bases might be justified. We therefore reviewed the allocation bases and considered the impact of changes to those bases. This review took account both of the logic for the choice of allocation basis and the impact that different bases would have on the level of cost allocated to Openreach. The table below illustrates the impact of other allocation bases for the main costs in this category on the level of costs allocated to Openreach.

A10.66 As illustrated by the table below, our analysis shows that where a sensible alternative allocation basis may exist, this has only a small effect on the total costs allocated into Openreach.

Transfer charge	**2012/13 £m**	**Alternative Allocation Basis**	**∆ £**	**∆ % total costs**
Accommodation	133	Revenue	43	1.2%
Corporate Overheads	195	Full Time Employees	(27)	(0.8%)
Insurance Charges	[] [60]	Revenue	(2)	(0.1%)
Other Charges	[][61]	None applicable		
Total	**378**		34	

A10.67 In conclusion, we believe that costs have been:

- allocated on a reasonable basis;
- the allocations are consistent with those in the regulatory accounts; and
- the allocation methods appear free from bias.

A10.68 This is supported by KPMG's findings in the 'Review of Openreach Allocation Methodologies' report which "concluded that the allocation of costs from BT Group to Openreach (are) reasonable". This document is published on our website.

A10.69 We have also considered whether the level of costs allocated to Openreach is necessarily and efficiently incurred.

A10.70 We reviewed the cost drivers and the rationale of the forecasts which were provided by Openreach for each charge and conclude these explanations and forecasts appear sensible.

[60] Redacted on the grounds of confidentiality
[61] Redacted on the grounds of confidentiality

A10.71 As set out in the table below, we also reviewed the movements in the cost forecasts and ensured we understood the reason for these trends.

Transfer charge	2012/13 £m	Trend	Description of trend
Cumulo Rates	288	Costs increase by 3% pa in line with RPI.	Cumulo rates are calculated using government legalisation. RPI appears a good approximation for the forecast costs.
BT Design	263	Costs increase less than 1% pa.	The forecast is based upon specific budgeted projects, which are assumed to remain constant, and ongoing support and integrity costs (forecast to increase with RPI). Overall, the increase is below RPI and appears reasonable. We have, however, proposed a possible adjustment to these costs as noted above.
Corporate Overheads	195	Costs increase by approximately 1% per annum.	Costs are forecast based on RPI with assumed efficiencies. The costs appear reasonable.
BT Fleet	[][62]	Costs increase by 7% to 2010/11 and remain relatively constant Thereafter.	Costs are forecast on assumed man hour requirements. The increase in costs in 2010/11 is due to a planned increase of 21CN activity.
Accommodation	133	Costs increase approximately 2-3% per annum. However, there is £17m increase in 2009/10 due to increases in energy prices	Accommodation costs are based on a combination of contracted rates and increases based upon RPI. The increase in 2009/10 is an assumed energy contract renewal. This forecast appears reasonable.
Low User Telephony	77	Costs are forecast to be constant.	Costs have been forecast based upon a constant number of eligible customers. As noted below, we have proposed adjustments for these costs.

A10.72 Overall we have concluded that transfer charges from across the BT group to Openreach represent an appropriate share of Group costs. There are, however, some cost categories where we believe Openreach's cost estimates do not necessarily provide the appropriate basis for our cost calculations, as follows.

- Service level guarantee payments
- Low user social telephony
- Some BT Design costs

A10.73 We consider whether these costs have been efficiently incurred in Annex 14. As explained in Annex 14, we consider that there may be scope to reduce some of these costs through efficiency gains. This is taken into account in our assessment of the appropriate efficiency target to be applied to Openreach's costs.

[62] Redacted on the grounds of confidentiality

Pension costs

Assumption	Openreach view	Ofcom view
Pension costs	Openreach's cost forecasts include an annual charge of £95m to meet future liabilities of members of the defined benefits scheme	We do not consider that regulated charges should include any amount in relation to the cost of funding the deficit.

A10.74 Openreach have accounted for pension costs at 19.5% of pensionable pay, with 6% met by employee within their model.

A10.75 The triennial pension fund valuation identified a funding shortfall in BT's pension scheme. BT has committed to make £280m of additional payments per annum over the next seven years. BT has calculated that Openreach should be allocated 34% of the additional payments of the £280m. This incremental amount has also been included within the updated Openreach forecasts.

A10.76 In the context of a forward looking price control we believe these costs should be excluded. Our cost assessment should therefore only include the annual charge to meet future liabilities of members of the defined benefits scheme.

A10.77 Even if one off pension liabilities are allowable, it is likely that the liability has arisen wholly or partially in relation to employees who no longer work for BT and employees who continue to work for BT but whose pension liability is in relation to past service. These costs do not relate to the forward looking provision of Openreach costs and services and we have disallowed the £94m annual pension cost. Of this total, £57m was allocated to the Core Rental Services.

Line cards

Assumption	Openreach view	Ofcom view
Line cards	Line card costs should be recovered on the basis of the number of services provided.	We propose adopting Openreach's estimate of costs per line.

A10.78 In the First Consultation we concluded that the method Openreach proposed to use for the allocation of line card costs appeared to increase line card costs reflected in the WLR charge. Consumers of WLR would therefore be required to pay more for a similar service due to a change in the means of delivering that service.

A10.79 Openreach has now provided updated analysis under the proposed methodology that line card costs should be recovered on the basis of the number of services provided. Openreach's estimated cost stacks for WLR include what we consider to be a reasonable charge for line cards that includes both legacy PSTN and voice related 21CN costs. Data related 21CN costs are not included in Openreach's projections for the Core Rental Services. The projected costs per WLR are shown in the table below

Line card unit cost	£ 07/08	£ 11/12	£ 12/13
WLR (Now proposed)	11.70	12.99	13.32
WLR (First Consultation)	11.51	16.08	-

SLG payments

Assumption	Openreach view	Ofcom view
SLG payments	SLG payments should be recovered based on the level that would be incurred by an efficient operator	Ofcom has calculated an efficient level of SLG payments based largely on Openreach's own targets for service improvement which have been shared with industry. Our assessment of the level of payments is slightly lower than Openreach's estimate.

A10.80 In the May consultation, we set out that we believed it was reasonable for Openreach to expect to recover the cost of meeting SLG payments to the extent that such costs would be incurred by an efficient operator. Responses generally supported this approach and we propose to include such allowances.

A10.81 We consider that an efficient level of SLG payments in 2012/13 is in the range or £5m to £9m a year for MPF, SMPF and WLR in total. This compares to the amount in Openreach's model of around £25m. The performance assumptions on which our range is based are better than Openreach's current performance.

A10.82 Our range is informed by a bottom-up approach of modelling all significant compensation payments. This bottom-up modelling results in a spot estimate of around £7m in 2012/13. We have assumed a failure rate and the duration of the failure and then applied the compensation as specified in the relevant contract. For example, we have included an allowance for late fault repair for MPF rental calculated as follows.

Late fault compensation per MPF line
10% annual fault rate
X 3% lines not repaired in 40 hours
X 2 days late
X assumed monthly rental charge in 2012/13
= c5p per line per annum

A10.83 Where possible, we have used performance targets that Openreach has already communicated with industry (for example, in its integrated performance plan for 2007/08 and its performance improvement plan for 2008/09). These plans predict an improvement in performance by the end of the period for which the plans last. It may not be unreasonable to assume some further improvement in the period to 2012/13, which is the year we are interested in from the point of view of our modelling. However, we are not proposing to assume further improvement. This is partly because current performance is generally below the targets and also because it is likely to become increasingly difficult to achieve further improvements as the level of performance improves. Our understanding of the performance targets that Openreach has already communicated with industry are set out below.

Openreach targets as communicated to OTA and industry	
Late fault repair	3%
Late orders/provisions (WLR, SMPF)	2%
Late provisions (MPF)	3%
MPF and SMPF DOA/ELF	2%

A10.84 The performance targets that Openreach has communicated to industry typically relate to the percentage of late fault repairs or late provisions. They do not contain targets for the:

- annual fault rate;
- duration of failures once failures have occurred; or
- other minor SLG payments.

A10.85 We therefore consider these in more detail below. We then discuss how we allocated total SLG payments to particular products and how the improvements are phased in.

A10.86 In the May consultation, we assumed a fault rate of 10 per cent per year. Thus thought this was reasonable. CPW said a target fault rate of 6 per cent should be used, as this was the target set for some other European telecommunication companies. CPW showed a table of fault rate targets in other countries, which ranged from under 6 per cent to 20 per cent per annum.

A10.87 We note that the SLG payments assumed for faults are a smaller proportion of total SLG payments that those assumed from late provisioning. The results are therefore not overly sensitive to the precise level of the fault rate from within a reasonable range. Given this, we propose to retain our initial assumption of 10 per cent per year.

A10.88 In the May consultation, Ofcom assumed that all late fault repairs and late provisions were of 2 days duration. Only one response commented specifically on this: Thus suggested that 1 day should be used for the duration of failure rather than 2 days, at least for WLR late new provisions and WLR late fault repairs. However, this appears to be at least partly because of the view that Openreach's actual payments may be below that assumed under the methodology we are using. We discuss this explicitly below.

A10.89 Openreach provided its own confidential estimates of what a reasonable duration might be. These varied by the type of failure and gradually improved over time. For the total amount of SLG payments, using Openreach's proposals for the duration of failure in 2012/13 gave broadly similar results to using 2 days throughout. We have therefore continued to adopt 2 days duration for all failures for 2012/13.

A10.90 We have included an allowance for EMP failure. As suggested in the May consultation, this was based on an assumption of performance of 99.8 per cent, or 0.2 per cent failure each month. We used this ratio and calculated based on the number of orders. The "accelerator" was not assumed to include the EMP payments, as if performance is 99.8 per cent the accelerator would not be applicable.

A10.91 Also, for WLR, we have included some allowance for other minor SLG payments, such as disconnections in error and late appointments. Rather than modelling these minor payments individually, we simply scaled up the late fault repair and late provisions SLG payments. We based the ratio on what it had actually been during 2006/07.

A10.92 Openreach has argued that it is not reasonable to expect service performance to improve to the level implied by our assumptions immediately and that a gradual improvement in service performance should be assumed over the period we are considering.

A10.93 We recognise that an immediate step change in performance may be unrealistic. In the presentation of FAC numbers, we have adopted a glidepath for payments for the intermediate years in the sense that we have phased in the assumed efficiency improvements. However, given our proposal to set charges based on a glidepath to an efficient level in 2012/13, this presentation does not affect the charges set.

A10.94 In terms of allocating the aggregate SLG payments to particular services, we have adopted Openreach's proposed methodology. These are broadly comparable to the allocations implied by our bottom up modelling for each service. Given that the charges are small in aggregate this simple approach seems most proportionate.

A10.95 Some respondents to the May consultation proposed using more demanding targets for the proportion of failures and the duration of failures because the amount that Openreach actually pays out may be materially below that implied by considering the headline KPI performance statistics. One respondent stated that its experience was that there was a wide gulf between performance according to the OTA statistics and the volume of breaches in which Openreach accepts liability to pay SLGs. This may be because compensation payments may not be due for all failures included in the headline KPIs, as the headline KPIs may capture some events for which compensation is not due because the failures relate to matters beyond Openreach's control.

A10.96 We have tried to explore this by comparing actual payments in the past with what would be implied the reported headline KPI figures. However, we do not yet have a robust enough set of data from which to draw strong conclusions. Ofcom's March 2008 Direction requiring BT to make proactive payments for the most important categories of performance failures for WLR, MPF and SMPF only applied from 25 June 2008, and there is therefore a relatively short period for which actual payments have been made. We therefore intend to undertake a more rigorous analysis of this issue for as long a period as possible before the final statement.

A10.97 We have also considered Openreach's actual payments for a twelve month period before the pro-active payment regime applied. The actual payments for that period were well in excess of the top end of the range we are proposing for 2012/13.

A10.98 Although we have not yet been able to establish that there is a strong relationship between the amounts calculated using headline KPIs and actual payments, we consider that a value in the range of £5m to £9m in 2012/13 is likely to be appropriate. We consider that this range is reasonable in the context of the higher level of current actual payments and also in the context of much higher payments in the past, albeit at a time when performance was well below the targets assumed for an efficient operator. The range proposed is also lower than the figure of around £25m assumed by Openreach. One factor that will influence our decision on where in this range is most appropriate for an efficient level of SLG payments will be the relationship between actual payments and that implied by the headline KPI performance since July 2008.

Light user scheme

Assumption	Openreach view	Ofcom view
Light User Scheme ("LUS")	Openreach should not absorb the cost of LUS. Its forecast includes an estimate of this cost.	In our High scenario we have excluded the revenue loss BT retail incurs which is then passed on to Openreach. In the low case scenario we also exclude the administration costs of the scheme

A10.99 LUS provides a reduced line rental to lower income customers of BT retail as mandated by Ofcom and the Universal Service Directive. For the reasons set out in our consultation on BT's regulatory financial reporting, of 17 April 2008, attributing a cost of the LUS to Openreach's service is not consistent with Ofcom's conclusion that the net cost to BT of the universal service obligations was relatively small, with most of the benefit accruing at the retail level.

A10.100 Openreach's estimate of LUS costs includes an assessment of the difference in retail prices between LUS rates and basic residential rental prices together with administration costs of the scheme. These amount to £77m per annum.

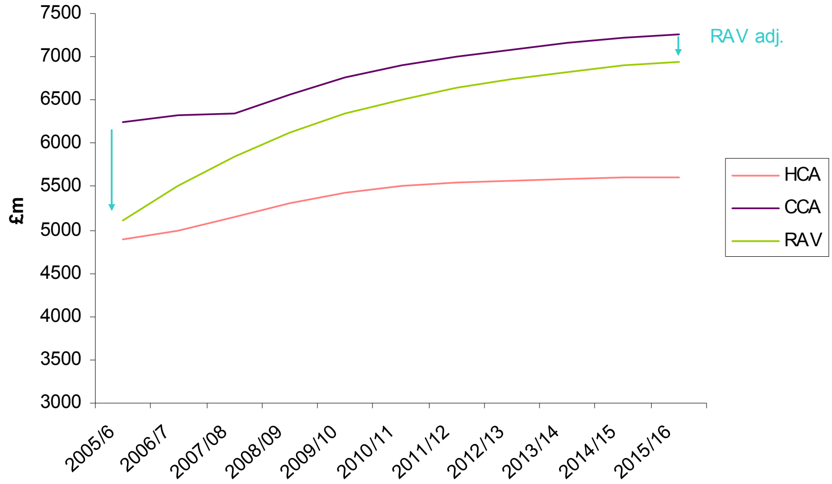
A10.101 In our high case scenario we have excluded the £60m relating to the revenue loss suffered by BT retail, leaving £17m for administering the scheme. As these transfer charges are unlikely to be incremental costs, in our low case we have also excluded these costs.

RAV Adjustment

Assumption	Openreach view	Ofcom view
RAV adjustment	BT have built a RAV model based on a methodology consistent with that set out in the "Cost of Copper Statement".	We have reviewed the assumption in the BT RAV model and have tested the key inputs and calculations and have found no material error. BT's model provides a reasonable basis for determining the RAV adjustments. No further adjustment is proposed.

A10.102 BT is allowed to make a defined return, currently 10% on its asset base. Since 2005 we have determined charges for copper access products on Openreach's Regulated Asset Value (RAV) which is different from the asset value disclosed in Openreach's Regulated Financial Statements. The difference relates to Openreach's Copper and Duct assets. In the RAV, the assets which were purchased before 1997 are valued on a Historical Cost (HCA) basis indexed by inflation. This provides a lower valuation than the Regulatory financial Statements where the same assets are valued on a Current Cost (CCA) basis. The deduction to bring the Regulatory Accounting figure to the RAV figure is the RAV adjustment. Over time as these pre-1997 indexed HCA assets are retired and replaced by post 1997 CCA assets the adjustment unwinds – the RAV approaches the CCA valuation, as shown in the graph below. The split of Copper and Duct assets on a CCA basis is currently around 50:50. The movement of the RAV towards the CCA valuation is steeper up to 2012 as Copper assets have a 15 year asset life. From 2012 onwards the gap closes slowly due to the 40 year life of the Duct assets

BT's mean valuation of copper and duct access assets.



Dropwires

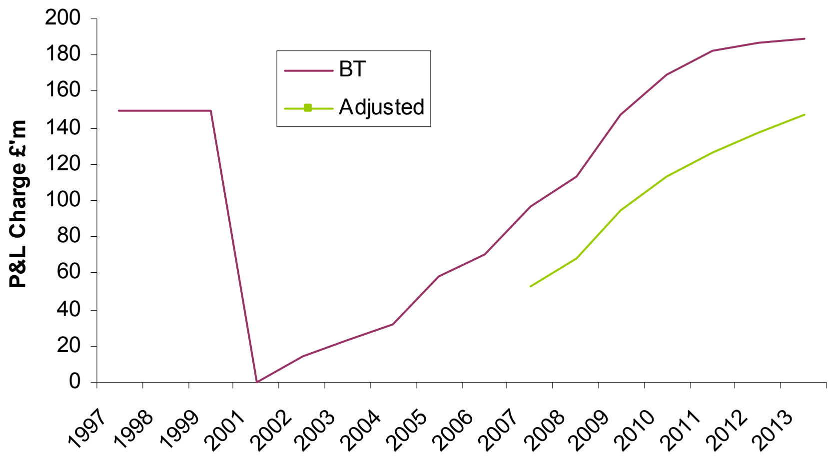
Assumption	Openreach view	Ofcom view
Dropwire costs	Openreach's projections do not adjust the Dropwire asset base to take account of the Ofcom 2005/06 determinations.	To be consistent with our previous approach, a proportion of capital costs relating to residential dropwires installed between 2000/01 and 2004/05 should be excluded.

A10.103 The Dropwire costs relate to the installation and maintenance of the copper wire that links the end users premises to the distribution point in the street. The main cost is depreciation of these assets. As can be seen in the chart above, BT changed its accounting policy for dropwire in 2001, whereby instead of writing it off as expensed, it was capitalised and written off over 10 year. Up until 2011 there is a build up of the asset base. Thereafter the increased cost represents supplementary depreciation.

A10.104 As explained in the First Consultation, we consider that a proportion of capital cost relating to residential dropwires installed between 2000/01 and 2004/05 represents an over-recovery of costs. This is because until December 2005, the Retail Price Control had set residential prices that allowed for the full recovery of dropwire operating and capital costs for BT retail residential customers. We therefore propose an adjustment in line with our previous approach. In calculating dropwire depreciation, Openreach includes all capital relating to residential dropwires installed between 2000/01 and 2004/05. To allow them to recover these costs in WLR and LLU prices would be to allow double recovery.

A10.105 Whilst disagreeing with the disallowance of Dropwire costs, Openreach provided some updated analysis as to the amount of pre 2004/5 Dropwire costs within the capital base. This showed that in 2006/7, some 77% of combined WLR Residential and MPF connections should be excluded. We have reviewed the Openreach calculations and are satisfied with the methodology. This equates to removing

£304m from the asset base in 2007/8 which unwinds to £54m in 20012/13. The chart below shows the effect of excluding pre 2005/6 residential dropwires. This reduces the capital base in 2007/8 and the P&L charges accordingly. The adjusted charge will reach the same steady state as the non adjusted charge in 2015/16



Line length Adjustment

Assumption	Openreach view	Ofcom view
Line length adjustment	Openreach's projections apply an updated methodology consistent with that used in the regulatory accounts.	Openreach's approach provides a reasonable basis for determining the line length adjustment. No further adjustment is proposed.

A10.106 When we originally set the MPF Charge we excluded 16% of D side copper costs on the basis of data provided by Openreach which showed the average length of a copper loop used to provide a 2Mbit/s broadband service was approximately 19% shorter than the average copper loop. (MPF Condoc Sept 2005 para 3.27). This supported the "technical point" that DSL did not work over long line lengths. We noted that technical advances might mean higher bandwidth services became available over longer lines'

A10.107 Openreach have made the case that average MPF line length has increased with the rollout of Broadband and now form a significant part of the overall total. In addition they point out that the cost of a copper pair is a function of thickness and age as well as length. On this basis they have calculated an 'average copper pair cost' usage factor to apportion D and E side copper costs to products in their model. The usage factor is the average capital cost of a copper pair is determined by the 2007/8 Line Length Costing Survey.

A10.108 The result is that that compared to the previous methodology, the average cost of an MPF line is 6% less than an average WLR Residential line. Openreach have also applied the methodology to all the copper based products, the impact on a WLR Business Line is that it costs 8% less than a WLR residential line. We believe that the methodology is reasonable and the results consistent with increased broadband penetration. We have accepted Openreach's methodology.

Capital Expenditure

Assumption	Openreach view	Ofcom view
Capital expenditure	Openreach's capital expenditure is primarily activity driven plus some specific investment programmes.	Subject to the appropriate efficiency assumption, Openreach's capitalised labour expenditure looks reasonable. Subject to previous comments relating to projected IT spend, we do not propose any specific adjustments to Openreach's capital expenditure projection at this stage.

A10.109 Openreach's copper related capital expenditure projections are summarised in the table below. The main driver of Capital expenditure is labour activity. The forecast Capital Expenditure for the copper of Openreach is shown below. Approximately 90% is labour related.

Capex spend (£'m)	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Labour related						
Dropwires	168	149	135	147	150	155
LLU	58	49	44	42	37	35
Other Volume Driven Copper	403	330	319	329	331	339
Total Volume Driven Copper	630	528	498	517	519	529
Network Health and Resilience	151	155	158	159	157	158
IT Systems and Development	109	145	118	118	118	118

A10.110 Informed by the explanations set out below we consider that the capital expenditure forecast has been projected on a reasonable basis. In areas where there were unexpected movement, we obtained plausible explanations.

A10.111 The main labour categories are

- Dropwires: Future expenditure is broadly in line with steady state expenditure
- Newsites: The spend relates to the cost of extending the network to new 'Greenfield' and 'Brownfield' residential and business sites. Openreach's calculation of the fall in activity in 2008/9 and 2009/10 is consistent with the anticipated reduction in housing construction in the wider economy. Whilst a recovery is expected by 2010/11 activity in 2012/13 is still below the 2007/8 level.
- Copper: D and E side capital cost is the expenditure on maintaining the copper network, as volumes of copper products fall, so does the need for investment.

A10.112 Other costs include two programme driven costs which are not volume or revenue related, these are IT Capex and Evo TAMs.

A10.113 IT Capex is the capital element of IS spend. The cost of Evo TAMS relate to the cost of new line test equipment. Openreach argue they require new line testing equipment, as like the line cards, the existing technology is obsolete and unable to provide the extra line testing functionality CPs want.

A10.114 The EVO TAM line testing equipment allows the line to be tested out from the network towards the end user as well as into the network, as with current technology. This should lead to a reduction in fault rates, particularly repeat ones, and deliver improved efficiency. We believe this investment to be reasonable and believe it helps deliver improved fault rate reduction and increased efficiency.

Impact on Core Rental Services

A10.115 As set out above, we have recalculated the cost projections to take account of a plausible range of assumptions and amendments to the Openreach's modelling approach. On this basis, we have generated what we consider to represent a plausible range of cost projections for the Core Rental Services in aggregate, ranging from a "low" cost case to a "high" cost case, as set out in the tables A11.2 and 11.3.

A10.116 Our low and high case cost estimates for each of the Core Rental Services are set out below.

WLR residential: Ofcom high case

Volume ('000)	17,596	16,742	16,116	13,455	8,366	6,032	
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**1,774**	**1,688**	**1,623**	**1,355**	**842**	**607**	**-19.3%**
Pay	302	304	282	236	159	114	-17.7%
Line cards and TAMS	199	196	193	175	117	77	-17.2%
Accomodation	164	161	163	142	94	72	-15.2%
Stores, contractors & misc	101	86	80	66	41	30	-21.6%
Corporate Overheads	64	62	59	47	32	24	-18.0%
IT	86	85	78	63	42	32	-18.2%
Fleet	58	56	52	45	28	21	-18.4%
Other	22	15	18	16	10	7	-19.7%
Operating cost	**996**	**966**	**925**	**790**	**524**	**377**	**-17.7%**
EBITDA	**779**	**722**	**697**	**565**	**318**	**231**	**-21.6%**
Depreciation inc holding gains	151	203	237	235	172	142	-1.3%
EBIT	**628**	**519**	**460**	**330**	**146**	**89**	**-32.4%**
ROCE %	12%	11%	10%	8%	5%	4%	
Mean Capital Employed	**5,045**	**4,823**	**4,839**	**4,213**	**2,746**	**2,079**	**-16.2%**

WLR Res line rental: High case unit cost

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating Unit Cost	65.17	69.82	72.12	76.17	83.20	85.94
ROCE Unit Cost	30.82	30.97	32.28	33.66	35.29	37.05
Total Unit Cost	95.99	100.79	104.40	109.84	118.49	122.99

WLR residential Ofcom low case

Volume ('000)	17596	16742	16116	14662	10623	9016	
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**1,774**	**1,688**	**1,623**	**1,476**	**1,069**	**908**	**-12.5%**
Pay	291	293	273	231	182	147	-12.8%
Line cards and TAMS	192	189	187	176	132	99	-12.3%
Accomodation	158	155	157	147	113	99	-8.9%
Stores, contractors & misc	97	83	75	66	47	39	-16.7%
Corporate Overheads	61	60	55	47	35	30	-13.4%
IT	83	82	71	60	45	38	-14.4%
Fleet	56	54	49	44	32	27	-13.9%
Other	15	9	11	11	7	6	-18.5%
Operating cost	**954**	**925**	**879**	**782**	**593**	**484**	**-12.7%**
EBITDA	**821**	**763**	**744**	**694**	**477**	**423**	**-12.4%**
Depreciation inc holding gains	151	202	235	247	204	193	5.0%
EBIT	**670**	**561**	**509**	**447**	**272**	**230**	**-19.2%**
ROCE %	13%	12%	11%	10%	8%	8%	
Mean Capital Employed	**5,045**	**4,823**	**4,831**	**4,511**	**3,378**	**2,954**	**-10.2%**

WLR Res line rental: Low case unit cost

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating Unit Cost	62.78	67.35	69.12	70.18	75.06	75.14
ROCE Unit Cost	26.52	26.65	27.73	28.46	29.41	30.30
Total Unit Cost	89.30	94.00	96.85	98.64	104.47	105.44

WLR business: Ofcom high case

Volume ('000)	5,853	5,821	5,716	3,870	2,570	1,370	
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**646**	**641**	**629**	**426**	**283**	**151**	**-25.2%**
Pay	91	95	90	61	44	23	-23.8%
Line cards and TAMS	66	68	68	50	36	17	-23.3%
Accomodation	51	52	54	38	27	15	-21.4%
Stores, contractors & misc	31	28	26	18	12	6	-27.2%
Corporate Overheads	19	20	19	12	9	5	-24.0%
IT	26	27	25	17	12	7	-24.2%
Fleet	18	18	17	12	8	4	-24.4%
Other	7	6	6	5	3	2	-25.5%
Operating cost	**310**	**314**	**307**	**213**	**151**	**80**	**-23.7%**
EBITDA	**336**	**327**	**322**	**213**	**132**	**71**	**-26.8%**
Depreciation inc holding gains	71	88	99	76	57	34	-13.9%
EBIT	**265**	**239**	**223**	**137**	**75**	**37**	**-32.6%**
ROCE %	17%	15%	14%	12%	9%	8%	
Mean Capital Employed	**1,585**	**1,584**	**1,621**	**1,144**	**797**	**446**	**-22.4%**

WLR Bus line rental: High case unit cost

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating Unit Cost	65.10	69.10	71.03	74.62	80.95	83.15
ROCE Unit Cost	29.10	29.26	30.48	31.79	33.32	34.98
Total Unit Cost	94.20	98.36	101.51	106.41	114.27	118.14

WLR business: Ofcom low case

Volume ('000)	5853	5821	5716	4189	3192	1935	
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**646**	**641**	**629**	**461**	**351**	**213**	**-19.9%**
Pay	87	91	87	59	49	28	-20.1%
Line cards and TAMS	63	65	65	50	39	21	-19.7%
Accomodation	49	50	52	39	32	20	-16.5%
Stores, contractors & misc	30	27	25	18	13	8	-23.6%
Corporate Overheads	18	19	18	12	10	6	-20.7%
IT	25	26	23	16	12	7	-21.6%
Fleet	17	17	16	12	9	5	-21.1%
Other	5	4	4	3	2	1	-24.9%
Operating cost	**295**	**299**	**290**	**208**	**166**	**97**	**-20.0%**
EBITDA	**351**	**342**	**339**	**252**	**185**	**116**	**-19.9%**
Depreciation inc holding gains	71	88	98	80	67	44	-9.2%
EBIT	**280**	**253**	**240**	**173**	**118**	**72**	**-23.8%**
ROCE %	18%	16%	15%	14%	12%	12%	
Mean Capital Employed	**1,585**	**1,584**	**1,618**	**1,217**	**959**	**599**	**-17.7%**

WLR Bus line rental: Low case unit cost

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating Unit Cost	62.56	66.55	67.99	68.77	73.08	72.80
ROCE Unit Cost	25.04	25.18	26.19	26.88	27.78	28.63
Total Unit Cost	87.60	91.73	94.17	95.65	100.87	101.42

MPF: Ofcom high case

Volume ('000)	1,260	1,976	2,689	6,850	12,834	15,647	
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**101**	**159**	**220**	**560**	**1,048**	**1,278**	**66.2%**
Pay	24	39	51	131	265	318	67.8%
Line cards and TAMS	0	0	0	0	0	0	
Accomodation	13	21	31	81	164	211	73.8%
Stores, contractors & misc	8	11	14	35	66	81	60.2%
Corporate Overheads	5	8	11	26	52	65	67.5%
IT	7	11	14	34	69	87	67.1%
Fleet	4	7	9	23	45	56	67.3%
Other	-1	-2	-2	-4	-8	-10	72.7%
Operating cost	**60**	**95**	**127**	**327**	**652**	**808**	**68.1%**
EBITDA	**41**	**64**	**93**	**233**	**396**	**470**	**63.1%**
Depreciation inc holding gains	12	25	40	121	265	368	98.7%
EBIT	**29**	**39**	**52**	**111**	**131**	**102**	**28.8%**
ROCE %	8%	7%	7%	5%	3%	2%	
Mean Capital Employed	**352**	**556**	**788**	**2,087**	**4,094**	**5,238**	**71.6%**

MPF line rental: High case unit cost

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating Unit Cost	57.14	60.49	62.32	65.42	71.52	75.16
ROCE Unit Cost	30.04	30.24	31.50	32.76	34.30	35.99
Total Unit Cost	87.18	90.73	93.82	98.18	105.81	111.15

MPF: Ofcom low case

Volume ('000)	1260	1976	2689	5591	10425	12928	
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**101**	**159**	**220**	**457**	**852**	**1,056**	**60.0%**
Pay	23	38	50	96	195	230	58.4%
Line cards and TAMS	0	0	0	0	0	0	
Accomodation	13	20	30	63	126	162	66.0%
Stores, contractors & misc	7	10	13	26	47	57	50.6%
Corporate Overheads	5	8	10	20	38	47	57.7%
IT	6	10	13	25	49	61	56.6%
Fleet	4	7	8	17	32	39	56.8%
Other	-1	-2	-3	-5	-11	-14	65.1%
Operating cost	**58**	**91**	**121**	**242**	**476**	**582**	**58.8%**
EBITDA	**43**	**68**	**98**	**215**	**375**	**474**	**61.5%**
Depreciation inc holding gains	12	25	40	97	205	283	88.5%
EBIT	**31**	**43**	**58**	**118**	**170**	**191**	**43.6%**
ROCE %	9%	8%	7%	7%	5%	5%	
Mean Capital Employed	**352**	**556**	**786**	**1,683**	**3,241**	**4,143**	**63.7%**

MPF line rental: Low case unit cost

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating Unit Cost	55.14	58.70	60.09	60.59	65.39	66.88
ROCE Unit Cost	25.85	26.02	27.05	27.85	28.76	29.64
Total Unit Cost	80.99	84.72	87.14	88.44	94.15	96.52

SMPF: Ofcom high case

Volume ('000)	10,661	11,815	12,112	9,465	4,844	3,504	
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**167**	**183**	**189**	**148**	**76**	**55**	**-20.0%**
Pay	48	53	54	43	24	17	-18.7%
Line cards and TAMS	0	0	0	0	0	0	
Accomodation	35	37	42	35	20	15	-15.5%
Stores, contractors & misc	10	9	9	7	4	3	-23.9%
Corporate Overheads	9	10	10	8	4	3	-18.9%
IT	14	16	15	12	7	5	-18.8%
Fleet	4	4	5	4	2	1	-18.0%
Other	3	3	3	2	1	1	-20.2%
Operating cost	**123**	**132**	**138**	**111**	**62**	**45**	**-18.1%**
EBITDA	**43**	**51**	**51**	**37**	**14**	**9**	**-26.5%**
Depreciation inc holding gains	19	19	21	20	15	13	-7.2%
EBIT	**24**	**32**	**30**	**16**	**-1**	**-4**	**-168.8%**
ROCE %	33%	38%	32%	19%	-1%	-8%	
Mean Capital Employed	**74**	**83**	**95**	**86**	**56**	**46**	**-9.4%**

SMPF line rental: High case unit cost

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating Unit Cost	13.34	12.75	13.12	13.86	15.75	16.67
ROCE Unit Cost	0.75	0.76	0.85	0.97	1.24	1.40
Total Unit Cost	14.09	13.51	13.97	14.84	16.99	18.06

SMPF: Ofcom low case

Volume ('000)	10661	11815	12112	10208	5950	4664	
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	07/08-12/12
	£m	£m	£m	£m	£m	£m	CAGR
Revenue	**167**	**183**	**189**	**159**	**93**	**73**	**-15.3%**
Pay	47	51	52	43	27	21	-15.2%
Line cards and TAMS	0	0	0	0	0	0	
Accomodation	34	36	41	36	23	19	-10.8%
Stores, contractors & misc	10	9	8	7	4	3	-20.5%
Corporate Overheads	9	10	10	8	5	4	-15.5%
IT	14	15	14	12	7	6	-16.1%
Fleet	4	4	4	3	2	2	-15.5%
Other	2	2	2	2	1	1	-16.9%
Operating cost	**119**	**127**	**131**	**111**	**70**	**55**	**-14.4%**
EBITDA	**47**	**56**	**58**	**48**	**23**	**18**	**-17.6%**
Depreciation inc holding gains	19	19	21	21	17	15	-3.9%
EBIT	**29**	**37**	**37**	**28**	**6**	**2**	**-38.7%**
ROCE %	38%	44%	39%	31%	9%	4%	
Mean Capital Employed	**74**	**83**	**95**	**90**	**66**	**57**	**-5.3%**

SMPF line rental: Low case unit cost

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	£	£	£	£	£	£
Operating Unit Cost	12.94	12.34	12.55	12.90	14.56	15.07
ROCE Unit Cost	0.65	0.65	0.72	0.82	1.03	1.13
Total Unit Cost	13.59	12.99	13.28	13.72	15.59	16.20

Annex 11

Volume forecasts

Introduction

A11.1 As explained in Section 5, future demand projections have a significant impact on aggregate and unit costs for the following reasons:

- The existence of fixed costs means that unit costs will increase if volumes fall, because the fixed costs must be recovered over fewer lines;
- a shift in demand, from WLR (which makes a relatively high per-unit contribution to fixed costs) to MPF (which makes a lower contribution), puts further pressure on charges if the total contribution to fixed costs is to be maintained;
- a reduction in demand for SMPF (which makes a positive contribution to fixed overheads) puts additional upward pressure on charges of all services, if the total contribution to fixed costs is to be maintained.

A11.2 Openreach's cost calculations are based on a volume scenario that includes the following trends:

- A reduction in the aggregate demand for fixed lines, from 24.7m in 2008/09 to 23.0m in 2012/13
- A shift in demand from WLR to MPF, driven by increases in internal and external demand for MPF; and
- A reduction in demand for SMPF, from 10.7m in 2008/09 to 3.5m in 2012/13.

A11.3 This is a significantly different from the scenario provided by Openreach which we set out in the First Consultation. In particular, Openreach's revised forecasts project a faster rate of decline in demand for fixed lines. Openreach has explained that the revised assumptions reflect an updated assessment of the likely impact of mobile substitution of fixed lines.

A11.4 As we explain in this annex that we consider that the volume scenario presented by Openreach represents another plausible outcome without necessarily being the most likely outcome. Specifically, as set out below, we consider that:

- Openreach's projected reduction in the aggregate demand for fixed lines, may be overstated; the decline in demand for fixed lines is likely to continue but Openreach's projected decline appears to sit at the high end of a plausible range; and
- Openreach's projections may overstate the rate of migration from WLR to MPF and may overstate the likely reduction in demand for SMPF as a result; the rate of migration to MPF reflected in Openreach's volume scenario probably sits at the high end of a reasonable range.

A11.5 However, we recognise the difficulties associated with long term forecasts of this nature. With this in mind, we are very keen to get stakeholder views on the future level of demand and the likely changes in the mix of demand for the different wholesale access services.

A11.6 This annex will first consider total line number projections, then the possible rate of migration to MPF.

Total line numbers

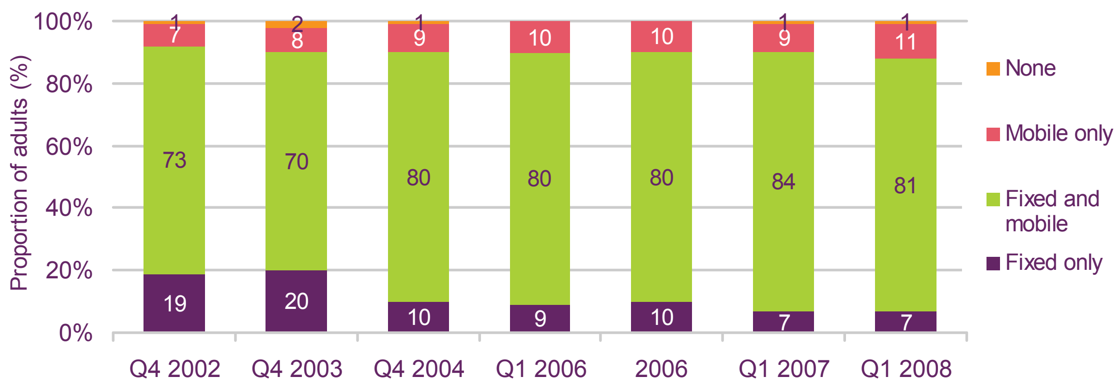
A11.7 The existence of fixed costs means that unit costs will increase if volumes fall, because the fixed costs must be recovered over fewer lines.

A11.8 As noted in the recent Ofcom report on the UK Communications market[63], the total number of fixed lines fell in the five years to 2006, followed by a small increase in 2007, due to increased business demand.

A11.9 Demand for residential lines supplied through BT's network continues to follow a downwards trend. The reduction is due to:

- An increase in mobile only households (the current number of households with a fixed line is now between 86-88%);
- Increased competition from cable; and
- Reduced demand for second lines as a result of broadband take -up.

Chart A11.1 Residential Fixed and Mobile Penetration



Source: Ofcom

A11.10 We expect demand for fixed lines will continue to fall over time. However, the rate of decline will depend on several factors including the extent of mobile substitution, economic conditions (such as the number of new homes and house moves) and the effectiveness of competition from cable in the future.

A11.11 The reasons for moving to a mobile only household are mixed - according to our surveys, fewer than half (42%) of mobile only households are the result of an entirely voluntary choice, while 33% are mobile-only due to affordability constraints; the remainder are transitory and intend to get a fixed line in the future. Further, as yet there is no clear evidence that mobile broadband is being used as a replacement for fixed line services so it is not clear that the voluntary segment will increases beyond current trends.

[63] The Communications Market 2008 http://www.ofcom.org.uk/research/cm/cmr08/

A11.12 Openreach's cost projections are based on the volume scenario set out in table A11.1.

Table A11.1 Openreach Volume Estimates (millions of lines)

Product Description	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
WLR Rental - Residential Internal	16.5	15.8	14.8	14.0	12.0	7.5	5.5
WLR Rental - Business Internal	4.9	4.6	4.6	4.3	2.9	2.0	1.0
SMPF Line rental - Internal	8.2	8.4	8.1	8.3	6.4	3.5	1.9
MPF Line rental - Internal	0.5	0.4	0.5	0.5	3.3	8.5	10.9
WLR Rental - Residential External	1.7	1.8	1.9	2.1	1.4	0.9	0.6
WLR Rental - Business External	1.0	1.2	1.3	1.5	1.0	0.6	0.4
SMPF Line rental - External	0.7	2.2	3.7	3.8	3.1	1.4	1.6
MPF Line rental - External	0.2	0.9	1.5	2.2	3.5	4.4	4.8
WLR Rental - Residential Total	18.2	17.6	16.7	16.1	13.5	8.4	6.0
WLR Rental - Business Total	5.9	5.9	5.8	5.7	3.9	2.6	1.4
SMPF Line rental - Total	9.0	10.7	11.8	12.1	9.5	4.8	3.5
MPF Line rental - Total	0.7	1.3	2.0	2.7	6.9	12.8	15.6
Aggregate lines, exc SMPF	24.8	24.7	24.5	24.5	24.2	23.8	23.0

A11.13 To inform our assessment of future volumes, we

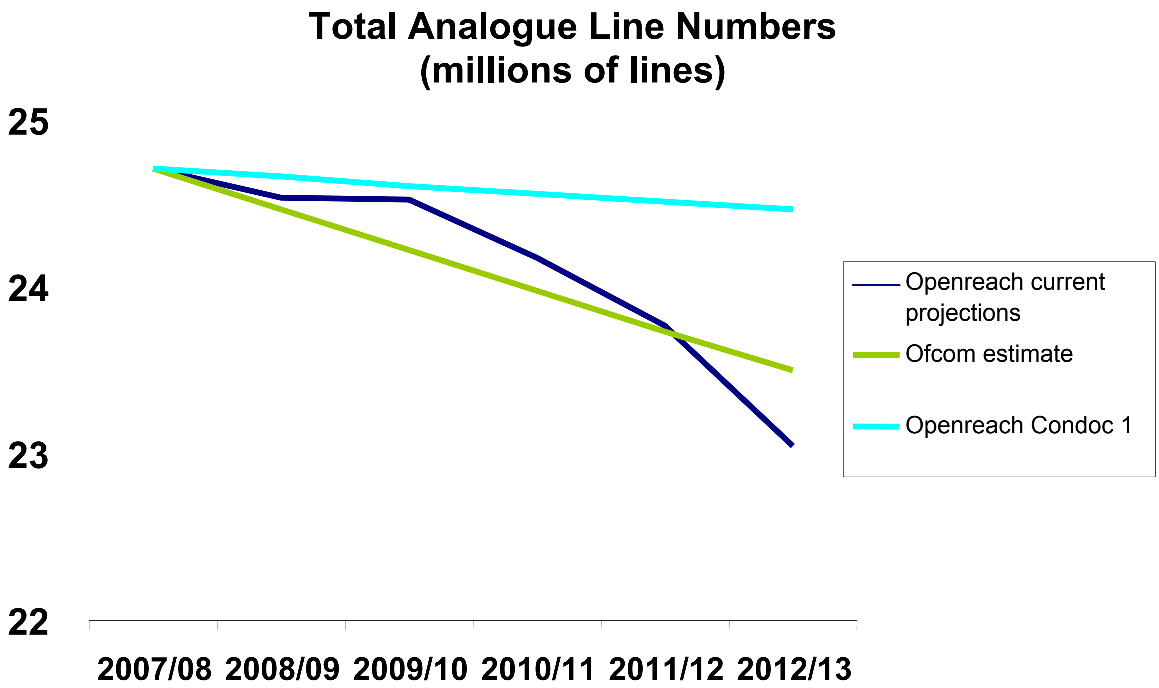
- Obtained industry views via the OTA;
- considered the views expressed by telecom analysts; and
- drew on the information collected by Ofcom from CPs and consumer surveys.

A11.14 Informed by this analysis the volume scenario presented by Openreach represents a plausible outcome without necessarily being the most likely outcome. Specifically, we consider that:

- Openreach's projected reduction in the aggregate demand for fixed lines, may be overstated; the decline in demand for fixed lines is likely to continue but Openreach's projected decline appears to sit at the high end of a plausible range; and
- Openreach's projections may overstate the rate of migration from WLR to MPF and may overstate the likely reduction in demand for SMPF as a result; the rate of migration to MPF reflected in Openreach's volume scenario probably sits at the high end of a reasonable range.

A11.15 Subject to responses received from Stakeholders, we currently consider that an annual decline of approximately 1% per annum (circa 3.5% over the period) would appear to set a the low end of the range for the likely rate of decline in demand for fixed lines in the period to 2012/13. As noted in Ofcom's recent UK Communications Report 2008, we have seen a five year decline in fixed lines but the rate of decline has slowed. Chart A11.1, this compares to BT's current estimate of a 6.7% reduction from 07/08 until 12/13 and their earlier estimate used in the May consultation of 1% over the whole period. We welcome stakeholder views but we consider that a cautious estimate of decline would be appropriate.

Chart A11.1



Source: Ofcom and Openreach

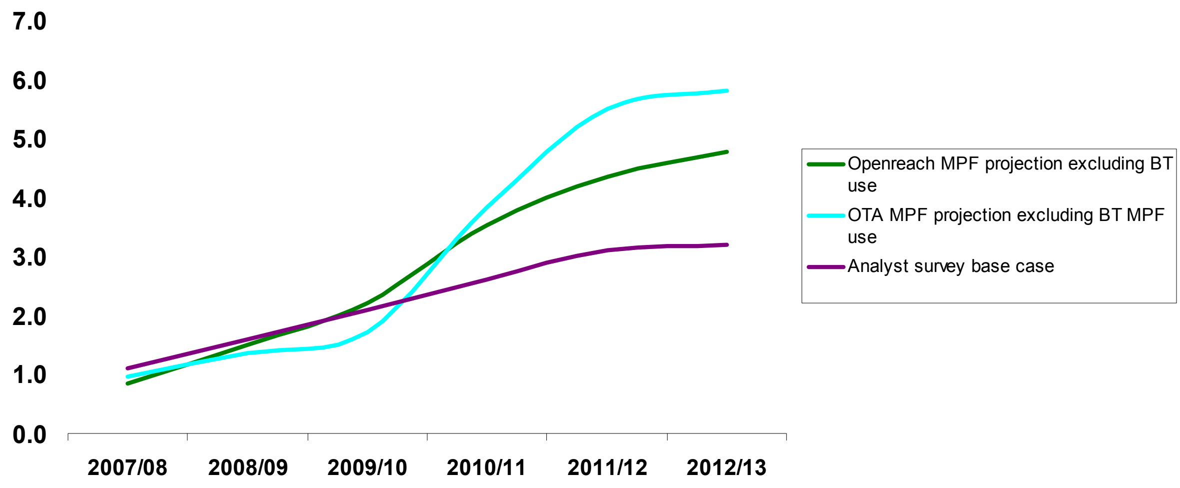
Mix of service - MPF demand

A11.16 A shift in demand, from WLR (which makes a relatively high per-unit contribution to fixed costs) to MPF (which makes a lower contribution), puts further pressure on charges if the total contribution to fixed costs is to be maintained. A reduction in demand for SMPF (which makes a positive contribution to fixed overheads) puts additional upward pressure on unit costs of all services, if the total contribution to fixed costs is to be maintained.

A11.17 Openreach's volume scenario at Table A11.1 includes a breakdown of demand by service type, split between internal (i.e. BT) and external demand. It is appropriate to consider the estimates for internal and external demand separately as the former is, to a large extent, driven by discretionary BT decisions and the roll out of the next generation network, under BT 21CN project.

A11.18 MPF demand estimates are based on the combination of individual CP demands. Openreach's estimate draws on discussions with their customers up to September 2008. Set out below, Chart 11.4, we contrast with Openreach's estimate are two other estimates based on OTA 2 estimates of demand and a survey of analysts.

Chart 11.2 External (non BT) MPF demand (millions of lines)



A11.19 As can be seen from Chart 11.2, there is some divergence of views beyond 2009/10 in terms of both the eventual level of demand and the growth profile. We need to be cautious about adopting in our model large increases in demand of the type implied by the OTA2 survey. External CPs clearly remain interested in increasing MPF demand; however, these are not committed demand volume. Moreover, there is also likely to be some degree of double counting which will tend to bias aggregate forecasts in an upward direction.

A11.20 It is also relevant that these projections are based on current pricing levels. Changes to MPF prices will have an impact on future levels of demand; specifically relative price rises for MPF compared with WLR is likely to reduce the rate of migration to MPF to some extent. For the purpose of projecting future costs, we therefore consider that we need to adopt a cautious approach to projecting migration from WLR to MPF. With this in mind, we consider that the rate of migration of external demand to MPF could be around 25% below that suggested by Openreach. This assumption, therefore, defines one end of the range used for modelling purposes with Openreach's scenario defining the other.

A11.21 Internal Openreach MPF demand is also difficult to predict with certainty. The level of demand from within BT is largely dependent on the timing and extent of the move to the new 21CN product set which uses MPF as the upstream component of services provided by BT Wholesale. These products will replace or compete with WLR, SMPF and to some extent, MPF (providing a upstream product which allows CPs greater ability to configure voice and broadband).

A11.22 The level of internal demand is, therefore, dependent both on the successful roll out of 21CN to current targets and an estimation of demand for new 21CN services. In this respect, there is inevitably some uncertainty inherent in any projection.

A11.23 It is also relevant that, 21CN BT's choice between the use of WLR and SMPF, or MPF plus one of the 21CN new products does not represent a significant difference in cost or engineering terms to BT Group.

A11.24 Accordingly, we consider that it is appropriate to discount BT internal MPF demand over the period. In the absence of a clear guideline we consider it is appropriate to use the same rate as the lower bound considered for external demand. On this basis, we consider that the rate of migration of internal demand to MPF could be around 25% below that suggested by Openreach. This assumption therefore defines one end of the range used for modelling purposes with Openreach's scenario defining the other.

A11.25 We also considered the option of exclude all internal demand on the basis that the internal choice between WLR with SMPF and MPF has only limited impact on BT Group's costs but we are concerned that this would distort the long term direction of charge determination as it is likely that MPF will become the core upstream component of most services.

A11.26 Table 11.2 sets out the revised MPF levels and, on a pro rata basis appropriate for external and internal customers, allocates additional demand to WLR and SMPF.

Chart 11.2 – Alternative volume scenario (millions of lines)

Product Description	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
WLR Rental - Residential Internal	16.5	15.8	15.0	14.2	13.2	9.7	8.4
WLR Rental - Business Internal	4.9	4.6	4.6	4.3	3.2	2.6	1.5
SMPF Line rental - Internal	8.2	8.4	8.2	8.5	7.0	4.5	2.9
MPF Line rental - Internal	0.5	0.4	0.5	0.5	2.7	6.9	9.0
WLR Rental - Residential External	1.7	1.8	1.9	2.2	1.5	0.9	0.6
WLR Rental - Business External	1.0	1.2	1.3	1.5	1.0	0.6	0.4
SMPF Line rental - External	0.7	2.2	3.7	3.9	3.2	1.5	1.8
MPF Line rental - External	0.2	0.9	1.4	1.9	2.9	3.5	3.9
WLR Rental - Residential Total	18.2	17.6	16.9	16.4	14.7	10.6	9.0
WLR Rental - Business Total	5.9	5.9	5.9	5.8	4.2	3.2	1.9
SMPF Line rental - Total	9.0	10.7	11.9	12.4	10.2	6.0	4.7
MPF Line rental - Total	0.7	1.3	1.8	2.3	5.6	10.4	12.9
Aggregate lines, exc SMPF	24.8	24.7	24.6	24.6	24.4	24.2	23.9

Annex 12

Cost of Capital

Summary

A12.1 In the First Consultation we set out our initial view on the proposed approach to estimating Openreach's cost of capital. In this annex we will refine our view with more recent estimates, taking into account respondents views and additional analysis.

A12.2 At the time of the First Consultation, we noted that it was a time of great uncertainty in global credit markets, and the timing of the review presented some challenges. Since the First Consultation in May 2008, international capital markets have continued to deteriorate, with a number of financial institutions failing or receiving substantial state funding, both in the UK and the rest of the world.

A12.3 The financial turmoil has increased uncertainty in markets, both equity and credit. This has resulted in rapid, material changes to cost of capital inputs, some of which may be short-term and some of which may be more structural.

A12.4 We need to take account of these changes in a manner that is not unduly distorted by short-term market circumstances. This is not a trivial exercise and requires a good deal of care to be taken when disaggregating the effects and causes of recent market movements, and we have adopted a cautious approach at this stage.

A12.5 As a result of this approach, our range for Openreach's estimated WACC is higher than in the First Consultation and the range is wider (from 1% to 1.5%).

A12.6 We also look at the impact of using current spot rates to determine the WACCs for BT and Openreach. As we note below, these estimates are purely illustrative, as we are not confident that current market rates provide a relevant indicator of composite capital costs over the next few years.

A12.7 In the First Consultation, we proposed an estimated range for Openreach's pre-tax nominal WACC of 9 – 10% (versus the 2005 figure of 10.0%). Our proposed range for the pre-tax nominal WACC for the rest of BT was 10 – 11% (versus the 2005 figure of 11.4%). These ranges were consistent with a BT Group range of 9.5 – 10.5%.

A12.8 In this annex we have taken into account changes to the parameters of the WACC estimates and re-calculated our range of estimates for Openreach's pre-tax nominal WACC to 9.25 – 10.75%. Our proposed range for the pre-tax nominal WACC for the rest of BT is 10.25 – 11.75%. These ranges are consistent with a BT Group range of 9.75 – 11.25%.

A12.9 Our calculations are based on the following range of estimates:

	Openreach	BT Group	Rest of BT
Equity Risk Premium	4.5 – 5%	4.5 – 5%	4.5 – 5%
Equity Beta	0.75 – 0.85	0.85 – 0.95	0.95 – 1.05
Risk-free rate	4.1 – 4.8%	4.1 – 4.8%	4.1 – 4.8%
Debt premium	2 – 3%	2 – 3%	2 – 3%
Pre-tax nominal WACC[64]	**9.25 – 10.75%**	**9.75 – 11.25%**	**10.25 – 11.75%**

A12.10 In proposing these ranges, we have, amongst other things, had regard to Section 3(4)(d) of the Communications Act 2003; i.e. to have regard to the desirability of encouraging investment and innovation in relevant markets when exercising our duties.

A12.11 Ofcom has a duty to promote efficient investment, and as such should set rates of return at a level that allows a reasonable return on investment and encourages future efficient investment.

Equity Risk Premium ("ERP")

Key parameter in CAPM

A12.12 The ERP is a key component of the estimate of a company's WACC.

A12.13 Under the CAPM the ERP represents the extra return that investors require as a reward for investing in equities rather than a risk-free asset. It is market-specific, not company-specific.

A12.14 Academics and other users of the CAPM have conducted a large number of investigations into the value of the ERP, using quantitative techniques and surveys. These have produced a range of widely differing estimates, which means that we (and other economic regulators) have to choose a value from within the plausible range implied by these studies.

A12.15 Our approach to estimating the ERP is as set out in the 2005 Final Statement[65].

Alternative estimation methods and estimates

A12.16 A number of different methods are used to measure the return that investors will require for investing in equity markets. These may be based on historical investment returns (i.e. an ex-post approach), or on forward-looking considerations (i.e. an ex-ante approach).

A12.17 As set out in the First Consultation, we consider the following estimation methods:

a) Ex-post estimation:

b) Extrapolating observed historical risk premia;

c) Extrapolating adjusted historical risk premia; and

d) Ex-ante estimation

[64] Due to the level of uncertainty in the market, particularly in the risk-free rate, we consider it prudent to round our range estimates of the WACC to the nearest 0.25%.
[65] "))% FINAL STATEMENT

e) Using the dividend growth model;

f) Surveys of academic and user expectations.

Ex-post estimation – extrapolating historical risk premia

A12.18 As explained in the First Consultation, we are relying on work carried out by the London Business School's Dimson, Marsh and Staunton ("DMS")[66], which is regarded as being one of the most authoritative sources of historical estimates. DMS measure total returns over a relatively long period, include a large sample of countries and make adjustments for survivorship bias.

A12.19 The estimates from DMS suggest it would be appropriate to give weight to historic premia between 4.0% and 5.5%. These estimates have not changed since the First Consultation[67].

A12.20 Note that these estimates are calculated using arithmetic means from historic data. Arithmetic means are our preferred measure of the historic premia, and we give more weight to arithmetic means than to geometric means from the same data.

A12.21 DMS themselves have suggested an arithmetic mean premium for the world index of approximately 4.5 – 5.0%.[68]

Ex–post estimation – extrapolating adjusted historical risk premia

A12.22 As set out in the First Consultation, using DMS data implies a range for the adjusted ERP over bonds of 3 to 4.5%.

A12.23 We note that the DMS adjustments are fairly subjective, and we would advocate putting only a modest amount of weight on these adjusted returns.

Ex-ante estimation – estimates not based on historic returns

A12.24 The ERP can be estimated without using historical data.

A12.25 The dividend growth method is based on forecasts of future dividend growth. With this method it is possible to calculate an "implied" ERP using current market values and forecasts for earnings/dividends.

A12.26 In the 2005 Final Statement we presented a range of ERP estimates based on this method of estimation with a midpoint of 3.5 to 4%.

A12.27 In response to our consultation documents that preceded the 2005 Final Statement some stakeholders argued that approaches of this type are seriously flawed since they rely on highly subjective input parameters i.e. analyst expectations and an assumption of constant growth rates.

A12.28 We agree that approaches of this type require the use of highly subjective parameters. As a result, we place relatively little weight on this type of analysis. We

[66] Dimson, Marsh and Staunton, 2008, "Global Investment Returns Yearbook 2008", ABN AMRO, London Business School.

[67] However, we would note that our Final Statement in 2009 should afford us the opportunity to update our estimates from the 2009 DMS Global Investment Returns Yearbook.

[68] DMS 2008, p52

believe that the range presented at the time of our 2005 Final Statement is still relevant.

Ex-ante estimation: academic/user surveys

A12.29 It is possible to estimate the ERP by using surveys carried out amongst academics and users of the CAPM. Participants are asked to quantify the returns that they expect from the equity market over a particular time horizon.

A12.30 The first consultation that we published in January 2005[69] in relation to assessing BT's cost of capital set out the range of views of academics as being from 3 to 7%, while the views of practitioners ranged from 2 to 4%.

A12.31 A more recent study of US finance academics, carried out by Ivo Welch, suggested that an estimate of the ERP based on academic views might be around 5%, based on a sample of about 400 finance professors' views on the 30-year geometric equity premium.[70]

A12.32 We would afford this analysis relatively little weight since participant surveys do not provide the same quality of evidence as market-based measures.

Regulatory benchmarks

A12.33 The range of ERP estimates adopted by the UK's economic regulators and competition authorities is in the range of 3% to 5%.

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[69] http://www.ofcom.org.uk/consult/condocs/cost_capital/cost_capital.pdf
[70] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1084918

Figure A12.1: Regulatory benchmarks of ERP

Source/Year	ERP	Comment
Ofcom, 2005	4.5% (range of 4.0% to 5.0%)	Our approach to risk in the assessment of the cost of capital, 18 August 2005
Ofwat, 2004	4.0% – 5.0%	For period 2005 – 10. To be reviewed in 2009.
Ofgem, 2006	4.0% - 5.0%[71]	Difference between market return of 6.5% to 7.5% and risk-free rate of 2.5%.
CC/CAA, 2008	3% - 5%	5-yr review of cost of capital for BAA Stansted Airport[72]
FSA, 2006	4.0%[73]	Difference between market return of 8.1% and risk-free rate of 4.1%.

Our objectives in determining the ERP

A12.34 In determining an appropriate value for the ERP, we have looked to previous decisions by ourselves, other economic regulators, and the Competition Commission. Given the lack of consensus for values for the ERP adopted by these bodies, there is a range of reasonable values that Ofcom could adopt.

A12.35 We have had regard to Section 3(4)(d) of the Communications Act 2003 ("The Act"); i.e. to the desirability of encouraging investment and innovation in relevant markets when exercising our duties.

A12.36 While setting rewards too low could lead to discretionary investment being discouraged, setting rewards too high could lead to consumers paying prices that are too high (or investments that are not fully justified by demand).

A12.37 Our duty to promote competition under Section 4 of The Act is also an important factor to consider. We would also note that competition at the retail level may provide a stimulus for innovation.

A range of values for the ERP

A12.38 The figure below summarises the ERP estimates that we outlined in the First Consultation. Our view on these estimates has not changed.

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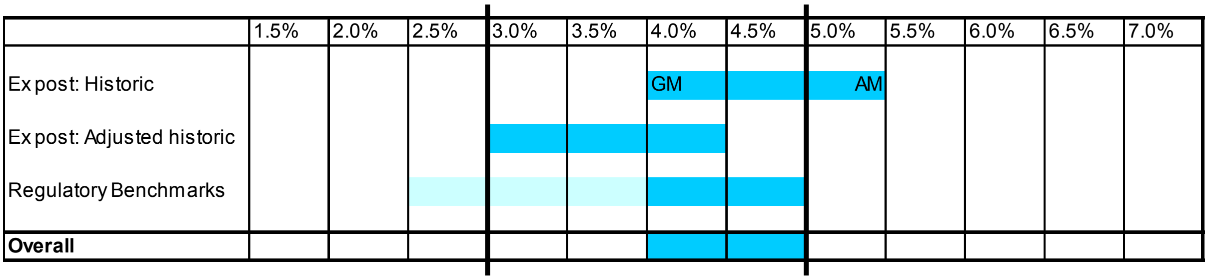
71 http://www.ofgem.gov.uk/Networks/Trans/PriceControls/TPCR4/ConsultationDecisionsResponses/Documents1/16342-20061201_TPCR%20Final%20Proposals_in_v71%206%20Final.pdf

72 http://www.caa.co.uk/docs/5/ergdocs/ccstanstedl.pdf
Note that the Competition Commission provide some commentary on the way they approached calculations of the expected market return on pL17-L18.

73 http://www.fsa.gov.uk/pubs/cp/cp06_03.pdf

Figure A12.2: Summary of ERP estimates



A12.39 We believe that a broad range of 4 to 5% reflects a balanced view of the available evidence.

A12.40 We would note that the recent consensus suggests that there has been some upward pressure on the ERP since we last reviewed BT's cost of capital, perhaps in line with increased volatility in equity markets.

A12.41 We maintain our belief that the downside of setting an ERP too low is worse than the downside of setting the ERP too high. We therefore tend to favour setting the ERP towards the upper end of the 4 to 5% range.

A12.42 Specifically, we propose a range of 4.5 – 5% for the ERP. Note that this is slightly increased from the First Consultation, where we suggested a range of 4.5 – 4.75%.

A12.43 Our widening of the range is in response to increased market volatility, and the likelihood that, following large recent market falls, investors may look for increased returns in exchange for holding equity rather than risk-free assets.

What have respondents said about our ERP estimates?

A12.44 CPW stated that it had no comments on our proposed ERP estimates. Only BT chose to respond in detail to our ERP estimates, in an annex to Openreach's response to the First Consultation.

A12.45 BT argues that using a narrow range for the ERP, of 4.5 – 4.75%, is not advisable during a period of increased volatility in financial markets.

A12.46 We agree that a wider range for the ERP would be more appropriate during a period of unprecedented market turmoil, and have therefore adopted a range of estimates for the ERP of 4.5 – 5.0%, in line with the DMS arithmetic mean premium for the world index.

A12.47 BT also quoted a number of recent academic studies in its response to the First Consultation, which point to ranges for the ERP of around 4 – 5%. This is useful analysis and, in our view, suggests that our approach, which relies on historical data and a widened range, is reasonable.

BT Group Beta

What does the equity beta represent?

A12.48 The value of a company's equity beta reflects movements in returns to shareholders (as measured by the sum of dividends and capital appreciation) from its shares relative to movements in the return from the equity market as a whole.

A12.49 We estimated the BT Group equity beta to be 1.1 in our 2005 Final Statement. This was based on a series of datapoints, with particular reference to the 2-year daily estimate of BT's beta measured against the FTSE Allshare index.

How has BT's Group beta moved since 2005?

A12.50 For the First Consultation we commissioned a study from the Brattle Group on how BT Group's equity beta had moved since the last review and on the range of values that we should now consider; this analysis has been updated with more recent values[74].

A12.51 Brattle advised that BT's equity beta had risen slightly since the First Consultation, and estimated a broad range of 0.8 to 1.0 for BT's equity beta. This analysis looked at BT share price data for the 1, 2 and 5 year periods up to 14th October 2008.

A12.52 Brattle's analysis shows that BT's 1, 2 and 5 year daily betas, when measured against the FTSE Allshare index (our preferred reference index), all lie between a narrow range of 0.85 and 0.95.

A12.53 Therefore, in our range of estimates for the WACC for BT Group, we have used a range of 0.85 – 0.95 for BT's beta.

Is it appropriate to reflect project-specific variations in risk in our financial analysis?

A12.54 As we set out in the 2005 Final Statement, it is sometimes appropriate to view some large companies such as BT as being a group that consists of a number of firms, or projects, each with its own unique risk profile, that operate together under common ownership.

A12.55 Since the conclusion of Ofcom's Strategic Review of Telecommunications in 2005, the creation of Openreach has given greater clarity over the access services part of BT Group's business.

Rewarding project risk

A12.56 As explained in the First Consultation, in the case of BT's cost of capital, it is appropriate to reflect project-specific variations in risk in our financial analysis.

What does BT's Group beta imply for the estimate of Openreach's beta?

A12.57 In the 2005 Final Statement, we estimated an appropriate notional beta for Openreach which was 0.2 lower than BT Group's. While we recognise that the process of disaggregation of equity betas is not an exact science, we remain of the view that Openreach's beta is below that of the BT Group[75].

A12.58 Therefore, where previously we estimated the beta for BT Group at 1.1 and for Openreach at 0.9 in 2005, we propose to make a similar downward adjustment to the BT Group beta for Openreach.

[74] See separate Annex entitled "Updated Estimate of BT's Equity Beta October 14th 2008"
[75] See 2005 Final Statement sections 6 and 7 for a full explanation of the magnitude of our reduction in BT Group's equity beta for BT's access services division (i.e. Openreach).

A12.59 Our view at this stage suggests an Openreach beta lower than the BT Group figure, although a reduction of 0.2 would result in beta levels disproportionately low when compared with similar network utilities[76]. Therefore, we estimate a beta for Openreach in the range 0.75 – 0.85 (compared to a BT Group beta range of 0.85 – 0.95).

A12.60 We also note that Openreach is now a larger proportion of BT Group (as measured by mean capital employed) than it was in 2005, having increased from around 40% in 2004 to around 50% in 2007. This has a knock-on effect for the beta of the rest of BT.

What have respondents said about our BT and Openreach equity beta estimates?

A12.61 Both CPW and BT commented at length on our equity beta estimates in the First Consultation.

A12.62 CPW commissioned Frontier Economics to prepare a report in response to the First Consultation, in which Frontier argued that the gearing assumption we used for Openreach was incorrect. It argued that the optimal level of gearing for Openreach is higher than the 35% used by Ofcom, and a gearing range of 50 – 60% would be more appropriate.

A12.63 At these higher levels of optimal gearing Frontier suggest that a range of equity beta from 0.7 – 1.0 is appropriate.

A12.64 We believe that there is no significantly good reason to alter our assumption of 35% optimal gearing for BT and Openreach, particularly at a time when financial markets are wary of companies with higher levels of debt (see paragraph A12.91 for further discussion of BT's gearing).

A12.65 BT, in its response, agreed that using Brattle's work is a useful starting point for the level to set for BT's equity beta, and supports the statistical methodology used by Brattle, but disagrees on aspects of interpretation.

A12.66 Brattle has responded to the specific points raised by BT in its response, which can be found in a separate annex to this document. We believe that Brattle's response fully addresses the specific issues raised by BT.

A12.67 In addition, BT argues that there is no compelling evidence to suggest that Openreach should be attributed with a beta significantly different from BT Group. It also provided a study of City analysts which suggests that, while the majority of analysts believe that Openreach is less risky than BT Group, others disagree and some perceive Openreach as more risky than BT Group.

A12.68 Ofcom's position on this issue remains as it was in the First Consultation and in the previous Review in 2005. We believe that if Openreach was a separate entity, it would be likely to exhibit qualities akin to network utilities, which tend to have lower systematic risk, and hence lower beta than the rest of the BT Group.

[76] For examples of comparator network utilities, see section 7 of the 2005 Final Statement.

BT and the debt markets

Introduction

A12.69 Our WACC calculations require two further inputs in addition to those already set out, e.g.

a) The risk-free rate; and

b) BT's debt premium.

A12.70 Since the latter half of 2007 there has been increased uncertainty and volatility in world credit markets, and we have been mindful of this when considering our estimates of debt parameter values.

A12.71 In the First Consultation we noted two recent effects, which are partially offsetting for the purposes of our calculations:

- As volatility and uncertainty in credit (and also in property) markets has increased, central bank interest rates have fallen and the risk-free rate has dropped.

- The demand for corporate debt has diminished and the required yields on corporate debt issues has increased, pushing up BT's debt premium.

A12.72 Since the First Consultation, the financial crisis has worsened and a number of credit institutions have been sold, gone into liquidation or been fully or partially nationalised.

A12.73 In this period, nominal risk-free rates first increased and then more recently have fallen back. In addition, corporate credit spreads have been volatile.

A12.74 As in the First Consultation, we have given a range of values for both the risk-free rate and BT's debt premium. We note that our analysis pairs the higher end of the debt premium range (i.e. a relatively short-term view) with the lower end of the range for the risk-free rate, while the lower end of the debt premium range (i.e. a relatively long-term view) is associated with the higher end of the risk-free rate range.

The risk-free rate

A12.75 The risk-free rate of interest is an input into both the calculations of the cost of debt and the cost of equity.

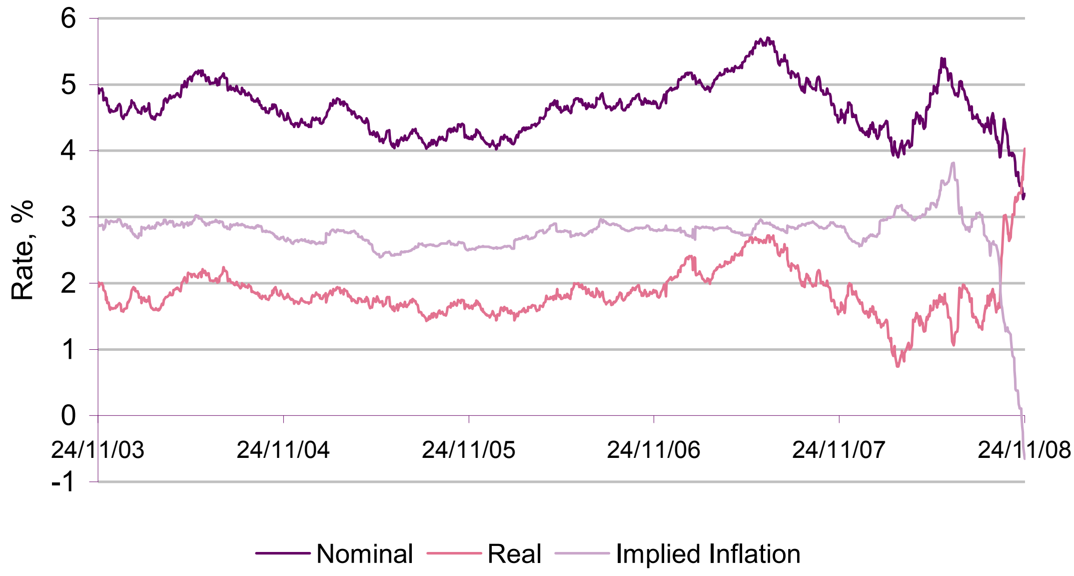
A12.76 For a UK company, a proxy for the nominal risk-free rate is the yield to maturity on gilts, or government strips[77], while the real risk-free rate can be proxied by the yield on index-linked gilts of appropriate maturity. The difference between the two provides an estimate of forecast inflation.

A12.77 We can track the nominal, real and implied forecast inflation rates over time, using Bank of England data on 5-year duration gilts, as shown by Figure A12.3 below.

[77] STRIPS = Separate trading of registered interest and principal securities - fixed-income securities sold at a significant discount to face value which offer no interest payments because they mature at par.

A12.78 From the figure we can see that the nominal yield peaked at around 5.8% in July 2007 but has recently hit new lows of around 3.3%, primarily due to very sharp falls in inflation expectations. At the same time, real gilt yields are at a high of over 4%.

Figure A12.3: 5 year gilt yields - Nominal, Real and Implied Inflation



Source: Bank of England data

A12.79 The average nominal yield for 5-year zero coupon gilts has fallen dramatically over the last year. While we would generally tend to give more weight to more recent nominal rates than those from 5 years ago, we are mindful that we do not wish to estimate the rate based on a period of abnormally low nominal rates, or abnormally low implied inflation.

Figure A12.4: Historic averages of Nominal, Real and Inflation 5 year rates (24 Nov 08)

Averaging period	Nominal	Real	Inflation
Spot (24 Nov 08)	3.3	4.0	-0.7
3 month	4.1	2.4	1.7
6 month	4.5	2.0	2.5
1 year	4.4	1.7	2.7
2 year	4.8	2.0	2.7
3 year	4.7	1.9	2.7
5 year	4.6	1.9	2.7

Source: Bank of England data

A12.80 Using values from the table above, we propose a plausible range of 3.5 to 4.8% for the nominal risk-free rate. This range includes the current spot rate for 5 year zero coupon gilts, as well as the average yields for the last 3 months, 6 months, 1 year, 2 year, 3 year and 5 year periods, and can be viewed as a prudent range on which to base our risk-free rate.

The shifting yield curve means spot rates are less reliable

A12.81 Our preferred gilt length is 5 years, as this broadly matches the approximate length of charge control review periods. However, we note that the current yield curve (as seen in Figure A12.5) has become more concave in recent months, which means that the choice of maturity length makes a big difference to the observed nominal spot rate.

A12.82 We also note that market rates are changing much faster than usual – the 5 year nominal yield on 24th November was 0.6% lower than 3 weeks earlier, while the implied inflation rate was fully 1% lower. The Bank of England's recent Inflation Report on 12th November 2008 stated that its downward revision to the inflation projection "is the largest since the MPC was established[78]."

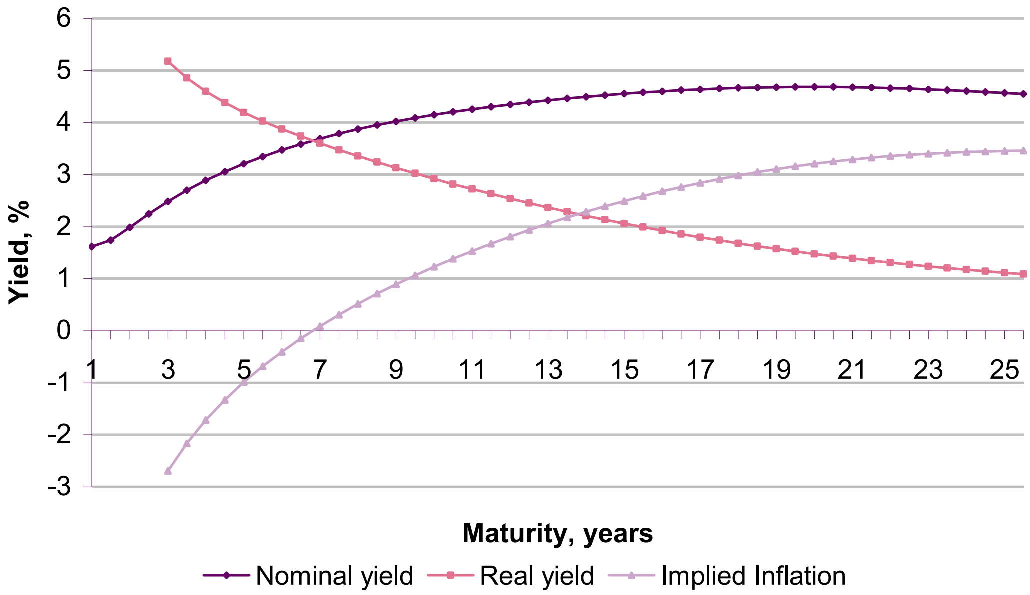
Our central range for the risk-free rate is 4.1 – 4.8%

A12.83 As a result of the unusually rapid level of expectations adjustment in the market, we believe that the current spot rate is not a robust base for our WACC assumptions, and while we include it in our plausible range, it does not form part of our central range for the risk-free rate, of 4.1 – 4.8%, which is derived from the average yields given in Figure 4 above. This range includes the average yield over every period from 3 months up to 5 years.

A12.84 Our central range of 4.1 – 4.8% also includes the yield to maturity of all the long dated gilts with a maturity of 10 years or over, as shown in Figure A12.5.

[78] http://www.bankofengland.co.uk/publications/inflationreport/ir08nov.pdf , p38
The Bank also remarked that "the five-year breakeven rate was 0.9 percentage points lower in the fifteen working days to 5 November than in the run-up to the MPC's September meeting, its largest fall over a comparable period since late 1993".

Figure A12.5: UK Gilts Yield Curve 24 November 2008



What have respondents said about our risk-free rate assumptions?

A12.85 CPW and BT both responded on this issue, although CPW simply made the point that it had no comments on our risk-free rate estimates.

A12.86 BT on the other hand made a number of points:

i) It considers that a range of values for the risk-free rate is appropriate.

ii) It considers that the low point of Ofcom's range (i.e. 4.2% in the First Consultation) is too low and should be above 4.4%. BT suggests a range of at least 4.4 to 4.8% would be appropriate.

A12.87 Ofcom's position on this is consistent, in that we are basing our range of estimates for the risk-free rate on observed 5 year zero coupon nominal gilt yields over a period of time. In the second consultation we also consider the spot rate for 5 year gilts, but this rate is not included in our central range.

BT's Debt Premium

A12.88 This is a time of huge volatility and uncertainty in credit markets, and this uncertainty is reflected in corporate bond yields, which have risen over the last year.

A12.89 BT's current credit rating is Baa1 (Moody's) and BBB+ (S&P). It has just been downgraded from "stable" to "negative" by Moody's following the issuance of an earnings warning related to BT Global Services.

A12.90 BT's most recent debt issue was on 25th June 2008, when it issued €1bn of 7-year bonds at 155 basis points above the mid-swap rate. This is below the 2 – 3% range that we proposed in our First Consultation, but we note that more recent Bank of

England data suggests that UK investment grade corporate debt spreads are around 250 basis points, or 2.5%[79].

A12.91 We note that BT's gearing at present is above 50%, mainly due to its reduced share price, while we have consistently assumed an optimal gearing level of 35%. This has been consistent with BT's observed gearing level in recent years, and it is only in the last few months that this has been different. The current high level of gearing suggests that BT's current debt premium would be higher than at its optimal level.

A12.92 BT's gearing level at the time of its most recent issue of debt was around 38%, i.e. closer to the optimal gearing level. In this respect, BT's observed debt premium of 155 bps could be considered to be more indicative of the rate at the optimal gearing level than any higher rates implied by current BT corporate debt yields.

A12.93 While we note that BT was able to access debt at less than 2% premium in June 2008, we also note that current spreads on traded BT debt imply a debt premium in excess of 3%.

A12.94 Our approach in this turbulent time is to give greater weight to longer-term rates than current, volatile spot rates.

A12.95 Given the importance of risk-free rates in the CAPM framework, and the current volatility of observed government gilt rates, we may wish to consider a more cautious approach in the future. It may be prudent to allow ourselves a degree of freedom to revisit Openreach's cost of capital in the future if the risk-free rate moves materially, either up or down, and we would be keen to understand stakeholders' views on this issue.

A12.96 We would note again that our analysis pairs the higher end of the debt premium range (i.e. a relatively short-term view) with the lower end of the range for the risk-free rate, while the lower end of the debt premium range (i.e. a relatively long-term view) is associated with the higher end of the risk-free rate range.

What have respondents said about our debt premium assumptions?

A12.97 BT agrees with Ofcom on the 2 – 3% range for the debt premium, but it has also pointed out more recently that its debt is currently trading at levels far above these rates.

A12.98 CPW argues that we should look at debt premia used by other UK regulators over the last 4 years, rather than the current market. CPW proposes a range of 1 – 1.4% for the debt premium.

A12.99 We believe that our estimate of the debt premium should take some account of recent market data, including both evidence from the Bank of England and BT's own debt issuance. We consider a range of 2 – 3% to be prudent at this time.

A12.100 We also note that traded debt yields are not necessarily a true reflection of the expected cost of debt to the firm. The expected cost of debt needs to take account of the likelihood of reduced (or zero) payments in the event of financial distress.

[79] See p256 of the Bank of England *Quarterly Bulletin* Q3 2008 - http://www.bankofengland.co.uk/publications/quarterlybulletin/qb0803.pdf

A12.101 In addition, we consider it likely that current levels of corporate debt yields reflect elements of liquidity risk caused by investors' 'flight to quality'. As demand for more risky forms of investment reduces, the demand for corporate debt rather than government debt reduces, and prices of corporate bonds rise. This in turn increases yields on these securities.

Cost of Capital Calculations

Use of spot rate assumptions

A12.102 As previously stated, at this time of intense market uncertainty, we give greater weight to longer term averages than spot rates, particularly with reference to the risk-free rate and the debt premium.

A12.103 We believe that this is the correct approach at present, but for illustrative purposes we show below what WACC would be implied by current spot rates (as at 24th November 2008).

A12.104 The table below shows what current debt market spot rates imply for Openreach's cost of capital, assuming both the equity beta and equity risk premium to be at the top end of our ranges.

Table A12.6: Spot rate assumptions for Openreach WACC

	Spot rates 24/11/2008
Nominal Risk-free	**3.3**
ERP	**5.00**
Equity beta	**0.85**
Nominal Cost of equity (post tax)	7.6
Debt premium	**4.5**
Cost of debt (pre tax)*	7.8
Corporate tax rate	28%
Nominal Cost of debt (post tax)	5.6
Gearing	**50%**
WACC (post tax nominal)	6.6%
WACC (pre tax nominal)	**9.1%**

A12.105 Taking spot rates from the market, the yield on 5 year nominal zero coupon gilts at 24 November 2008 was 3.3%, while the yield on BT's traded debt was around 8%. At present BT's gearing is around 50%.

A12.106 Using the 'spot' rate assumptions outlined above, Openreach's pre-tax nominal WACC would be around 9%.

A12.107 This exercise is interesting to show where current spot rates might lead us in terms of overall cost of capital, although we maintain our assertion that the more prudent approach is to give greater weight to longer-term averages of the input assumptions.

A12.108 In the period up to publication of our final statement, we will continue to monitor market conditions in general and spot rates in particular, and may place more emphasis on these in future.

What have respondents said about our general approach to cost of capital?

A12.109 While BT accepts our use of the CAPM methodology in general, it believes that there is an inherent asymmetry of risk associated with setting charges too low versus the risk associated with setting charges too high.

A12.110 As a result, BT argues that we should be setting the final point estimate of Openreach's cost of capital towards the upper end of our estimated range.

A12.111 As we set out above in paragraph A12.41, we have taken this into account when setting a range for the ERP, which we have set at the top of the plausible range of 4 – 5% (i.e. our central range is set at 4.5 – 5%).

A12.112 We also note that Ofcom has a duty to promote *efficient* investment, rather than investment *per se*. So we should not be encouraging inefficient investment through the setting of charges that are too high.

A12.113 Therefore, we do not accept BT's argument that we should necessarily set final point estimates of the cost of capital for Openreach at the top end of the range of values we currently propose.

A12.114 BT has also suggested that some of our analysis is inconsistent with the approach taken by the Competition Commission (CC) in its work for the CAA's charge control reviews. There are a number of complications when comparing the CC's analysis with our own, such as the use of real versus nominal rates, and tax treatment.

A12.115 However, when comparing like with like, we estimate that using a CC-style approach[80] to calculating Openreach' s cost of capital would result in a lower range than our own, but that would be mitigated by the CC's preference for the use of a point estimate at the top end of the range.

A12.116 We estimate that a CC-style range using the CC's estimates of the risk-free rate and the ERP, but our own estimates of Openreach's equity beta and debt premium would result in a point estimate in the middle of our proposed range of 9.25 – 10.75%.

A12.117 Therefore, we do not believe that our approach is inconsistent with that of the CC, although some care has to be taken when making comparisons between the two sets of estimates.

A12.118 Note that we will continue to take into account further market developments as they relate to the WACC, before we take a final decision in the forthcoming Final Statement.

Range of assumptions

A12.119 The table below sets out the WACC estimates for BT Openreach and the rest of BT based on the estimates outlined in the sections above.

[80] As per the CC's report for the CAA on the cost of capital for Stansted Airport: http://www.caa.co.uk/docs/5/ergdocs/ccstanstedl.pdf

A12.120 We propose the following ranges of values for the pre-tax nominal WACC:

- Openreach: 9.25 – 10.75% (versus 10.0% in 2005)
- The rest of BT: 10.25 – 11.75% (versus 11.4% in 2005).

Table A12.7: Range of estimates of pre-tax nominal WACC for Openreach

WACC Component	**May 08**	**Dec 08**
Risk-free rate	4.2 – 4.6%	4.1 – 4.8%
Equity Risk Premium	4.5 – 4.75%	4.5 – 5%
Equity Beta	0.7 – 0.8	0.75 – 0.85
Cost of equity (post tax)[81]	7.5 – 8.5%	7.5 - 9%
Debt premium	2 – 3%	2 – 3%
Cost of debt (pre-tax)	6.5 – 7%	7 - 7.5%
Corporate tax rate	28%	28%
Cost of debt (post tax)	4.5 – 5%	5 – 5.5%
Gearing	35%	35%
WACC (post tax)	6.5 – 7%	6.5 – 7.5%
WACC (pre-tax)	**9 – 10%**	**9.25 – 10.75%**

[81] Estimates of ranges for cost of equity and cost of debt have been rounded to the nearest 0.5% at this stage of the consultation process, while the WACC estimate has been rounded to the nearest 0.25%.

Table A12.8: Estimates of pre-tax nominal WACC for rest of BT

WACC Component	May 08	Dec 08
Risk-free rate	4.2 – 4.6%	4.1 – 4.8%
Equity Risk Premium	4.5 – 4.75%	4.5 –5%
Equity Beta	0.9 – 1.0	0.95 – 1.05
Cost of equity (post tax)	8.5 – 9.5%	8.5 - 10%
Debt premium	2 – 3%	2 – 3%
Cost of debt (pre-tax)	6.5 – 7%	7 – 7.5%
Corporate tax rate	28%	28%
Cost of debt (post tax)	4.5 – 5%	5 – 5.5%
Gearing	35%	35%
WACC (post tax)	7 – 7.5%	7.5 – 8%
WACC (pre-tax)	**10 – 11%**	**10.25 – 11.75%**

Annex 13

International benchmarking

Introduction

A13.1 The May Consultation highlighted the apparent relatively high cost of MPF rental costs when contrasted with other EC charges (as set out in the 2007 EC Implementation Report). The 2007 EC Implementation Report includes a section comparing the costs of unbundled loops across all countries which shows for one key measure, the total cost per full unbundled loop, that the UK is well above the EC average with only four countries with higher prices.

A13.2 Openreach, in its response to the consultation supported by the Yankee Group consultants, noted that the EC comparison did not accurately reflect true comparison as it over-estimated the cost of an average line in the UK and underestimated the full costs of the provision of the service in all states.

A13.3 We have undertaken a study to compare BT's unbundled local loop prices with other major European countries.

A13.4 In addition to analysing in more depth the comparative data, this study involved bilateral discussions with other main European NRA's to help us understand the UK's relative position and potential future developments. The countries consult included were the Netherlands, France, Ireland, Italy, Germany and Spain.

A13.5 The study largely accords with the information provided by Openreach in response to the May consultation, in particular, that BT LLU charges relative to other EU countries was not as high as indicated in the 2007 EC Implementation Report, but notes there was no clear upward pressure of existing charges unlike that presented by BT.

Main findings

A13.6 In summary we found that:

- The 2007 EC Implementation Report contains misleading data that, when corrected, shows the total cost for full unbundled loops in the UK to be below the EC average by approximately 2% rather than, as reported, above by over 20%.

- The EC Implementation Report includes only rental and connections charges and omits other ownership costs such as accommodation and equipment.

- There does not appear to be any strong upward pressures on regulated prices across Europe. Indeed, one NRA is currently consulting on methodological changes to the way unbundled loop costs are calculated that could lead to significant reductions.

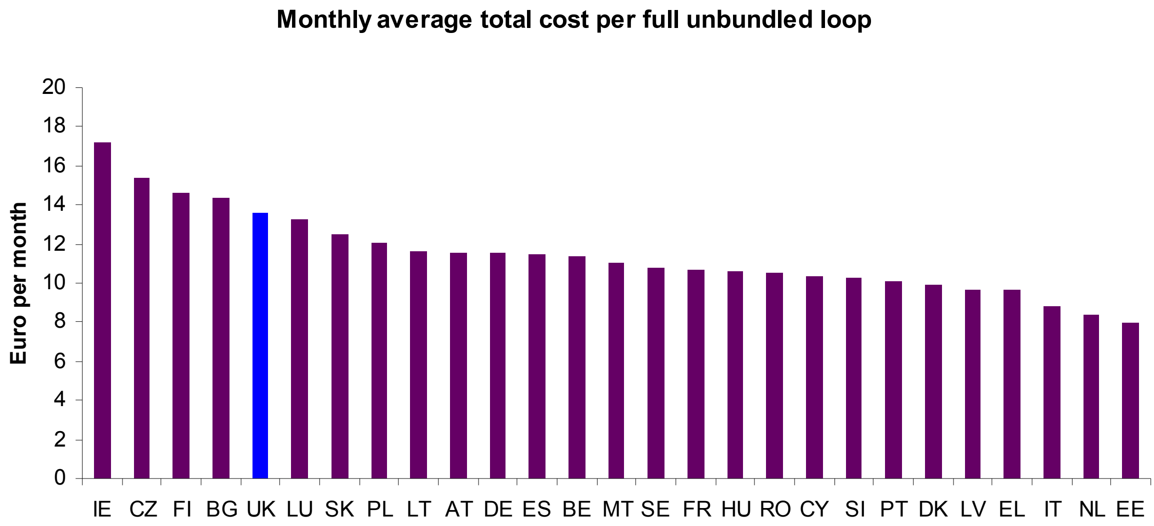
- A combination of different NRA approaches to costing methodologies, country topographies and economies of scale and scope could provide rational explanations for differences in charges across Europe.

A13.7 Our overall assessment, therefore, is that Openreach's charges for LLU do not compare unfavourably in current charges against other EC incumbents at current price levels. However, headline regulated charges (rentals and connections) across Europe are on average unlikely to increase or decrease significantly in the short term which would suggest increases in BT prices would mean an increase in UK unbundled costs compared to other EC states.

Headline charges

A13.8 The 2007 EC Implementation Report shows the UK's monthly average total cost per full unbundled to be €13.55 against an average across 27 countries of €11.28. However, the EC calculations include only the rental cost plus an amortised connection fee (over 36 months). See Chart A14.1 which sets out the Monthly total costs per fully unbundled loop in October 2007 on the basis used in the 2007 EC Implementation Report.

Chart A14.1



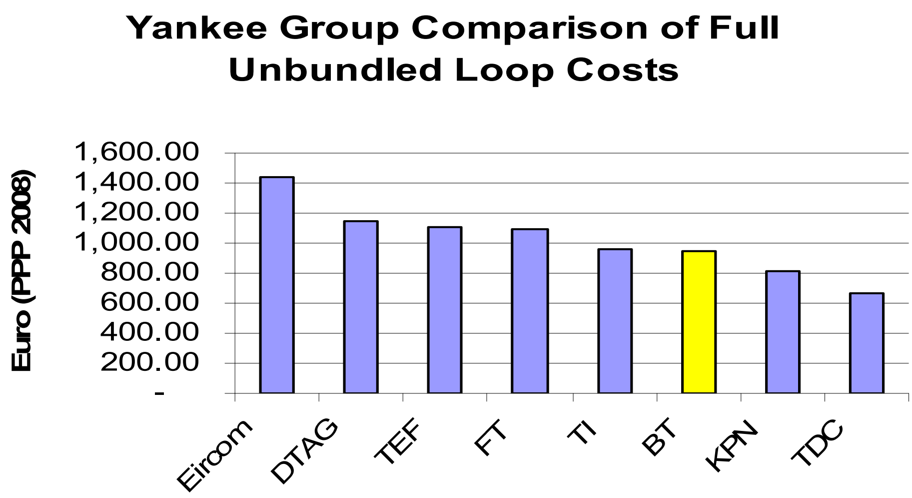
A13.9 The connection fee included in the calculation by the EC is that for a new line. However, existing line transfers account for the vast majority of connections and when factored into the calculation reduces the UK cost to €10.95 – less than the average. This data will be corrected in the 2008 EC Implementation Report.

A13.10 In addition to the rental and connection charges, operators will also charge for a number of ancillary services including accommodation and power. These costs are not factored into the EC comparison and seem to vary significantly by country. BT has provided information that suggests that these additional charges, part of the total cost of ownership, are lower in the UK than many other European countries.

A13.11 In one typical scenario, BT research through the Yankee group showed that space and power represents 6.5% of total ownership costs in the UK whilst in three other European countries the proportion was in excess of 22%.

A13.12 Taking these adjustments into account, the UK's relative position compared to other European countries in 2007 was slightly below the average on the EC measure and probably below the average on a total cost of ownership basis. In its response to the First Consultation, Openreach also noted that the EC comparison over-stated the cost of an average line in the UK, because it used the wrong connection charge (the cost of a new line rather than an existing one). It also argued that the comparison under-stated the full costs of the provision of the service. In Chart A13.2 below, Openreach's consultants, Yankee Group, set out their view of the total costs of LLU provision, that includes not only the cost of copper but also accommodation and power costs. Whilst it is based on assumptions of a large exchange and an 8 year investment life, the relative position of BT is generally stable under other assumptions.

Chart A13.2



Selected country comparison

A13.13 To help inform our proposals on the future of unbundled local loop prices we discussed with colleagues in other NRA's the costing methodologies used to derive a cost base for this service, any specific observations on their ranking in the EC Implementation Report and if there were any significant changes expected in the near future.

Costing methodologies

A13.14 There does not appear to be a single preferred cost base/methodology. The majority of NRA's use either a fully attributed cost methodology (FAC) using a historic (HCA) or current (CCA) cost base or a bottom-up long run incremental cost model. The use of a historic cost accounting base would tend to produce a lower cost particularly for access networks that are very mature.

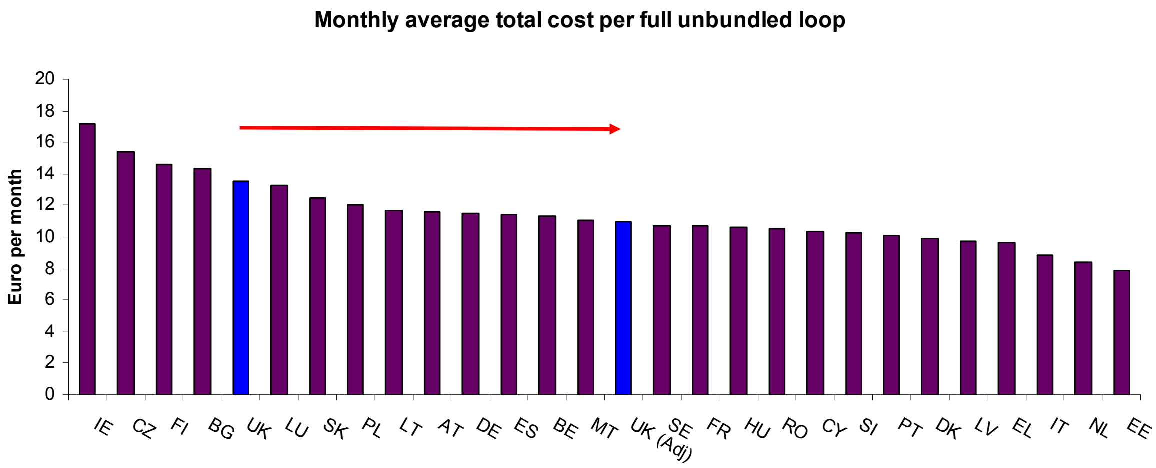
A13.15 There is no evidence to suggest that the CCA FAC approach used in the UK would result in higher charges compared to most other countries. However, it is possible that local topographies could influence the unit cost per line. One NRA for example is considering calculating the LLU price based only on the costs of those lines for which LLU may be economically and viable during the duration on any price control.

EC Ranking changes

A13.16 Our discussions with six NRA's (representing some of the main markets by size) indicate that no significant change in ranking or in the level of charges is expected in the short term. The current consultation by ComReg may however result in charge in Ireland coming more in line with the European norm.

A13.17 The UK's position is expected to improve to closer to the European average in the next EC Implementation Report once the data error for connection charges is corrected. However, its position will then be modified by the changes to charges proposed in this review. Chart A13.1 sets out the corrected relative position of UK under current charges. We also accept BT points that there would be a further modification of the relative position of BT should power and space be incorporated. While this would be subject to a number of assumptions we agree that it would place BT total costs further towards the lower charge end of the spectrum.

Chart 14.2



A13.18 The market for regulated LLU products and services seems to be stable and well understood across Europe. NRA's continue to monitor and adjust LLU products and prices with no major shift in regulated prices expected in the short term.

Annex 14

Potential for efficiency gains

Introduction

A14.1 In this annex, we set out our estimate of the efficiency gains we think Openreach will be able to deliver in the period to 2012/13.

A14.2 We have set out our approach under the following headings:

- The definition of efficiency gains;
- The scope for efficiency gains; and
- The extent to which efficiency gains can be realised.

Definition of efficiency

A14.3 Openreach has argued that efficiency targets should be considered on a "net" basis, after taking account of both efficiency savings and the investment required to deliver those savings.

A14.4 We agree with this approach. To the extent that there is a cost associated with delivering efficiency savings it is appropriate to take account of that cost in any financial modelling. These costs could include the cost of investment to deliver efficiency savings or, for example, could be related to costs of redundancy associated with the delivery of those savings.

A14.5 Further, we are looking to establish a real (rather than nominal) efficiency rate. Therefore, costs would only fall in nominal terms if the chosen efficiency rate exceeded the rate of inflation.

Scope for efficiency gains

A14.6 In its response to the First Consultation, Openreach identified a number of cost categories it described as "non-compressible", that could not be targeted for future efficiency gains. Openreach estimated that these costs represented about 30% of the operating costs associated with the delivery of the Core Rental Services.

A14.7 We agree that Openreach's ability to control some categories of costs is limited. Our analysis in this annex therefore sets out to calculate the rate of efficiency gains that should be achievable on the costs that can be controlled by Openreach (or BT Group) only. We agree that the efficiency assumption should only be applied to the "compressible" costs. The effective average rate across all of Openreach's costs will therefore be lower than this rate.

A14.8 It is therefore necessary to establish which costs are controllable.

A14.9 The calculations provided by Openreach to support its cost projections identify the costs it considers can be reduced through improvements in efficiency gains and those that can not.

A14.10 Openreach's analysis of its costs in 2008/09 indicates that – across Openreach as a whole - it considers around 70% of its cash costs (including cost of sales, the majority of operating costs – see below - and capital expenditure) to be controllable and, therefore, subject to efficiency gains.

A14.11 In respect of operating costs, Openreach estimates that around 70% of these costs are controllable. Of the remaining operating costs, around a half relate to the rates levied by the Government on Openreach's infrastructure assets (the "cumulo rates") and accommodation rental charges that are subject to long term contracts. Most of the balance relates to costs that we address separately as part of this review (including pension costs and the costs of the low user telephony scheme). On this basis, we consider Openreach's split of operating costs between compressible and non-compressible to be reasonable.

A14.12 In respect of its cost of sales, Openreach's analysis assumes that around 80% of its cost of sales – consisting largely of the cost of electronics - are partly "compressible". The remaining 20% of the cost of sales relates to the cost of line card rental from BT Wholesale. The line card costs include the depreciation and cost of capital of the underlying asset. In its response to the First Consultation, Openreach asserts that efficiency assumptions should, therefore, not apply to any of these costs. We have considered the cost of line cards separately as part of this review. On this basis, we consider Openreach's split of its cost of sales between compressible and non-compressible to be reasonable.

A14.13 Openreach has also assumed that efficiency savings can be made on around 80% of its capital expenditure. Most of the remaining 20% relates to IT spend. We consider Openreach's split of capital expenditure between compressible and non-compressible to be reasonable.

A14.14 Openreach's cost projections are based on an efficiency assumption of 1%. As noted above, this assumption is not applied to all costs, so the effective efficiency assumption will be below 1%.

A14.15 Based on its analysis of compressible costs, summarised above, Openreach has applied its 1% annual efficiency assumption as follows:

- To the 70% of operating costs it considers to be compressible;
- To the 80% of cost of sales it considers to be partly compressible, after halving the rate to around 0.5% to take account of the non-compressible element of these costs; and
- To the 80% of capital expenditure it considers to be compressible.

A14.16 Overall, we estimate Openreach's 1% assumed annual efficiency assumption translates into a 0.6% average efficiency target across all costs.

A14.17 Openreach's calculations assume that no additional efficiency savings will be achieved by reducing fault rates. Its cost calculations assume that the recent downwards trend in fault rates will not continue beyond 2007/08 and the projected fault rates stay constant throughout the period.

The scope of potential efficiency gains

A14.18 We have established that we are trying to establish a real efficiency rate to be applied to compressible costs only. We now consider what that rate should be.

A14.19 We explained in the First Consultation that we considered annual efficiency gains of between 1 and 4% should be achievable by Openreach. In support of its assumption that efficiency gains of 1% are reasonable, Openreach argued that:

- There is no evidence to suggest that Openreach is inefficient;
- Proposed efficiency assumptions must be considered against an examination of where future cost savings could be made and, in their view, the scope if now very limited; and
- Our cost modelling should assume an efficiency target closer to the lower end of our range and apply this only to compressible costs, noting that this would be comparable with the annualised efficiency savings of US Local Exchange Carriers ("LECs").

A14.20 Openreach also argued that a 4% efficiency target would necessitate significant reductions in headcount, which would make it difficult to maintain current service levels. It further argued that measures of historical efficiency savings do not provide a reasonable basis for setting future efficiency targets.

A14.21 Other respondents argued that efficiency gains are more likely to be at the higher end of our range, or above. For example:

- Carphone Warehouse referred to BT's 2007/08 annual report which stated that BT has delivered net savings of 4.3% in the year and expects to achieve 4.6% in 2008/09. It referred to Openreach's operating and performance plans as evidence of its ability to drive lower costs by reducing costs of failure. It also offered examples of what it considered to represent inefficient practices by Openreach;
- Cable & Wireless also referred to the BT Group target of 4.6% and argued that Openreach should be able to outperform BT Group overall. It referred to its own year on year operating cost savings to support its case for higher efficiency targets;
- Orange argued that, as a relatively young organisation, Openreach would be expected to take some time to recover from the upheavals of structural separation and suggested that this should generate step changes in efficiency over the coming years;
- Thus asserted that our range of 1-4% seems fairly conservative, noting that, for comparison, it reduced its own Selling, Distribution and Administrative costs by 9% last year.

A14.22 In the First Consultation we drew upon several sources of evidence to inform our assessment of the potential for efficiency gains. In light of the responses to the consultation and other recent developments, we have updated our assessment of the potential for efficiency gains, as summarised below.

Statistical analysis

A14.23 We explained in the First Consultation that we have traditionally considered efficiency gains in two parts: frontier shift (representing how the telecommunications industry as a whole has improved its efficiency) and catch-up efficiency (the additional efficiency required to reach industry best practice). In previous cost reviews, we commissioned econometric analysis to estimate the frontier shift. In simple terms, this analysis involved benchmarking BT's costs against the US Local Exchange (LECs), adjusted to account for known differences such as topography and accounting policies.

A14.24 While this approach has worked reasonably well in the past, as the LECs were provided comparable benchmarks to BT as a whole, direct benchmarking of Openreach against the LECs is problematic.

A14.25 For the reasons set out in the First Consultation, we concluded that it was necessary to look for alternative efficiency measures to encompass both the frontier shift and catch up efficiency. We are still of this view.

A14.26 In its response to the First Consultation, Openreach refers to a similar econometric study conducted for BT by Deloitte that concludes that BT's network as a whole is ranked within the top decile of US LECs. Openreach suggests that there is no evidence that Openreach is any less efficient that the rest of BT. However, we note that Deloitte qualifies its conclusions relating to catch up efficiency by noting that it has focused on the efficiency of BT's entire network business and notes that it is not practical to disaggregate the efficiency effects of the Openreach and BT Wholesale operations.

A14.27 Deloitte's report also concludes that annual productivity increases across the LECs were between 0.5% and 1.1% per annum. On this basis, Openreach argue that any frontier shift assumptions should be limited to this range. This would appear to indicate that an annual efficiency target of between 0.8% and 1.8% would need to be applied to Openreach's compressible costs (based on the analysis set out above). However, this rate is applicable to Openreach's reported results and therefore relates to costs that include depreciation (much of which relates to historical expenditure which is not subject to efficiency gains). To deliver this average efficiency gain by way of an efficiency target that applied to capital expenditure rather than depreciation, the target would have to be higher still.

A14.28 This range also assumes that Openreach is already operating at a fully efficient level. However, for the reasons set out below, we do not consider it likely that Openreach is yet operating at a fully efficient level.

Cost review

A14.29 We explained in the First Consultation that, on a confidential basis, Openreach provided us with some external research on comparative efficiency levels. Openreach explained that this research was not commissioned for the purpose of determining Openreach's efficiency relative to international operators and that there are significant limitations to the inferences that can be drawn from it.

A14.30 We accept that there are such limitations. However, in our view, this research does not support the view that Openreach is already operating at a fully efficient level. Further, as noted in the First Consultation we consider that the analysis would support projected efficiency improvements at the upper end of our range (i.e. around 4%).

A14.31 To further inform our understanding of the extent to which Openreach is operating efficiently, we engaged KPMG to conduct an efficiency review of Openreach's operating costs.

A14.32 This review was conducted in two stages. As set out in the First Consultation, KPMG performed an initial review aimed at identifying components of Openreach's operating costs where there may be potential for improvements in efficiency and improvements in cost performance.

A14.33 This initial study identified a number of areas where they consider scope may exist for efficiency savings based on available benchmark and comparator data.

A14.34 Following the First Consultation, we asked KPMG to extend the benchmarking of operating cost components to estimate the efficiency gains that could be achieved by Openreach.

A14.35 KPMG's report is available on our website. It concluded that

> In percentage terms, Openreach would need to make efficiency gains of between 3.2-3.5% per annum from 2008 until 2013 on its operating cost base for this to be comparable to that of an organisation operating in a competitive environment.

A14.36 The report explains that this is a weighted average of the efficiency gains required for each cost category weighted by their 2007/08 cost as a proportion of the operating cost base. This range applies to a total operating cost base.

A14.37 KPMG's number therefore represents its view of the average annual efficiency gain that should be achievable across all operating costs (controllable and non-controllable), based upon the extrapolation of cost areas they benchmarked. As explained above, Openreach considers that only 70% of operating costs are controllable in this way (and in arriving at its average rate KPMG's analysis recognised that some costs could not be reduced through efficiency improvements). We therefore consider KPMG's efficiency estimate to be consistent with an assumption of at least 4%.

A14.38 Openreach's cost calculations assume that fault rates will not fall beyond 2007/08. KPMG's conclusions are stated on the basis that that fault rates remain constant. A future reduction in fault rates would therefore reduce costs further. We consider fault rates within our review of historical trends, below.

Historical trend analysis

A14.39 We consider below historical trends relating to cost savings due both to efficiency improvements and reduced fault faults

A14.40 Historical trend analysis assumes that long term trends in cost savings are indicative of the level of efficiency savings in the future.

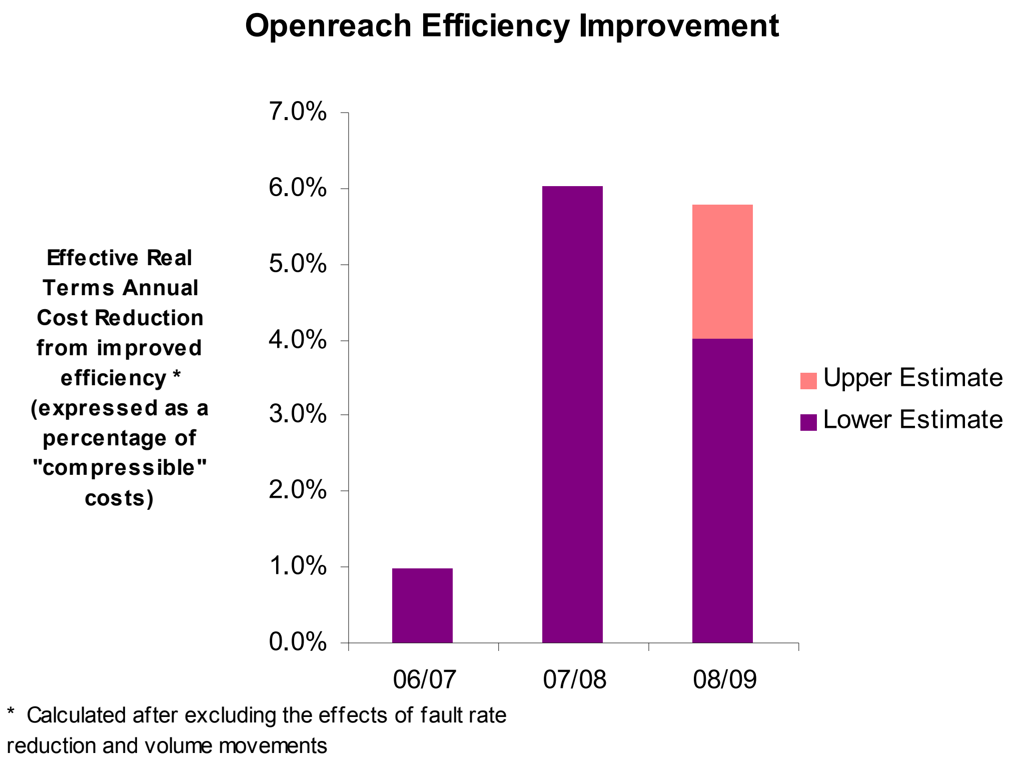
A14.41 We explained in the First Consultation that we had reviewed the costs in the regulatory accounts between 2001/02 and 2006/07. After making a number of assumptions, we estimated that the real annual efficiency improvement was just below 5% for the period. Analysis provided by Openreach suggested a historical rate of between 2% and 3% of operating costs (or around 3% to 4% of compressible operating costs).

A14.42 We have undertaken an analysis of Openreach's costs since 2006/07 to assess the actual real terms efficiency delivery.

A14.43 In doing this, we have adopted a historic measurement that is consistent with the way in which efficiency is applied in the Openreach model. We have evaluated the effective reduction in costs relative to the level of costs that would be predicted on the basis of inflation and volume measurements alone. We express the cost reductions that are delivered relative to this level as a percentage of compressible costs.

A14.44 The results of this analysis are shown in Chart A14.1.

Chart A14.1: annual efficiency savings delivered by Openreach



A14.45 As set out in the graph:

- Efficiency gains in the past two years have exceeded 4% per annum. We estimate that gains could have been up to 6% in both of the last two years.

- A lower apparent improvement was achieved in 2006/07. However, this number should be treated with caution as it is based on a comparison of pro-forma results for 2005/06 – before Openreach was established.

A14.46 On the basis of this evidence alone, the upper level of the range for future efficiency targets should be at least 4%, if we considered that historical gains could be repeated into the future.

A14.47 In its response to the First Consultation, Openreach argued that measures of historical efficiency savings do not provide a reasonable basis for setting future efficiency targets. Specifically, Openreach argued that the cost savings delivered to date and planned for 2008/09 are linked to significant capital expenditure to improve systems and diagnostic capabilities and on reducing costs such as overtime payments. Openreach asserted that these steps have moved Openreach to a more sustainable base line of costs and the scope for further cost savings is limited.

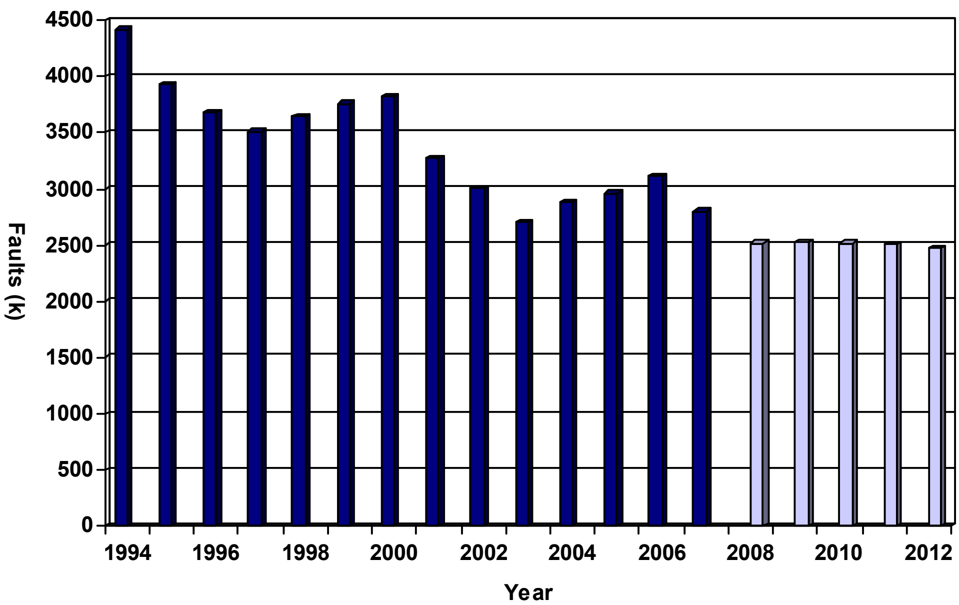
A14.48 We agree that there are limitations to the relevance of historical cost trends as a basis for future projections. We also recognise that Openreach may have already delivered many of the easier cost savings and that, in future, opportunities for further efficiency gains will become harder to identify

A14.49 However, subject to the outcome of this consultation, we consider that the high end of our range for potential efficiency savings must be close to the levels delivered in the past. On this basis, we consider that a range of between 2% and 4% is appropriate.

A14.50 This rate makes no allowance for future reductions in fault rates.

A14.51 Openreach's cost projections assume that fault rates will stay flat beyond 2008/09. As part of its support for this assumption, Openreach has provided the following chart setting out historical and projected levels of access faults.

Chart A14.2: Historical and projected access fault rates



A14.52 The historical evidence provided by Openreach shows that fault rates have fallen at a rate of between 4% and 10% depending on the period under review. We accept many of Openreach's arguments that some of the larger declines in fault rates are unlikely to be repeatable in future. However, based on these historical trends, we consider that a projected fault rate of somewhere around 4% to 6% represents a realistic target.

A14.53 Targets for reductions to the fault rates impact on a smaller proportion of costs than the general efficiency target. We estimate that a 4% reduction in fault rates would have a similar impact on costs as a 1% efficiency gain.

Conclusion

A14.54 The analysis set out above provides a case for an efficiency target in excess of the range proposed in the First Consultation.

A14.55 However, we accept some of Openreach's arguments that the costs and implications of delivering such savings must be taken into account. We also accept its argument that the level of efficiency savings delivered in recent years cannot be assumed to continue into the future as it becomes more and more difficult to identify further efficiency savings.

A14.56 Informed by the analysis set out above, we therefore consider an efficiency target around between 2% and 4% to be appropriate. This rate will be applied to compressible costs only.

A14.57 In addition, we consider that there is scope for further reductions in fault rates, of between 4% and 6% per annum.

Annex 15

Responses to the First Consultation

A15.1 Below is a list of respondents to the first consultation in May 2008. Non-confidential responses are available to view on the website at http://www.ofcom.org.uk/consult/condocs/openreach/responses.

Cable and Wireless

Carphone Warehouse

CWU and Connect

DETI Northern Ireland

Federation of Communications Services (FCS)

Openreach

Orange

Scottish and South Electricity (SSE).

Sky/Easynet

Thus

Vodafone

Will Page, Chief Economist, MCPS PRS Alliance (commenting as an individual)

Phil Thompson