



Replicability and the regulation
of BT's retail low bandwidth digital
leased lines
Draft Consent

Consultation

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Contents

Section		Page
1	Summary	3
2	Introduction	5
3	The replicability of BT's retail low bandwidth digital leased lines	11
4	Regulatory options	19
5	Proposals	41

Annex		Page
1	Responding to this consultation	44
2	Ofcom's consultation principles	46
3	Consultation response cover sheet	47
4	Consultation questions	49
5	Notification of a Draft Consent under section 49(4) of the Act	50
6	Review of the replicability issues identified in the Replicability Statement	58
7	Quantification	72
8	Glossary	75

Section 1

Summary

- 1.1 In April 2006, Ofcom published a Statement entitled *The replicability of BT's regulated business services and the regulation of business markets*¹ ('the Replicability Statement'). In the Replicability Statement, we indicated that, once replicability had been achieved in relation to BT's retail low bandwidth digital leased lines provided with a traditional interface², we would consider relaxing the pricing restrictions which apply to BT as a result of its Significant Market Power (SMP) in this market. In particular, we said that we would consider granting BT the freedom to set bespoke prices for these services and relaxing the presumption that bundles of SMP and non SMP products are anti-competitive.
- 1.2 Replicability is an important regulatory threshold. It reflects the availability of fit for purpose wholesale inputs from BT which allow its competitors to replicate effectively BT's retail prices, terms and conditions of supply. Therefore, in the presence of replicability we would expect competition to improve significantly, with benefits for customers in terms of lower prices and more choice of services and providers.
- 1.3 In the Replicability Statement, Ofcom identified nine issues that constituted a bar to replicability of retail low bandwidth digital leased lines on which we expected BT to act upon before we could consider replicability had been achieved.
- 1.4 In January 2008, Ofcom published a consultation entitled *Business Connectivity Market Review, review of retail leased lines, symmetric broadband origination and trunk markets*³ ('the BCMR Consultation') where, among other things, it concluded that, despite good progress, BT's retail low bandwidth digital leased lines were still not replicable by its competitors.
- 1.5 In December 2008, Ofcom published a statement entitled *Business Connectivity Market Review, review of retail leased lines, symmetric broadband origination and trunk markets*⁴ ('the BCMR Statement'). We concluded that BT had SMP in the retail market for low bandwidth leased lines and consequently imposed remedies on BT. These included remedies to prevent BT from behaving anti-competitively when setting prices, terms and conditions for these services. In particular, among others, BT is required in this market:
 - not to unduly discriminate; and
 - to publish, and adhere to, a standard reference offer.
- 1.6 In November 2008, BT wrote to Ofcom setting out how it considered that it had addressed the pending replicability issues identified in the Replicability Statement ('BT's submission').
- 1.7 We have now reviewed BT's submission and the additional information provided by BT to support its case. We have also collected additional financial information from BT to conduct our assessment of the options available for the relaxation of regulation.

¹ <http://stakeholders.ofcom.org.uk/consultations/busretail/statement/>

² These are leased lines of speeds up to and including 2 Mbit/s provided with an SDH/PDH interface.

³ <http://www.ofcom.org.uk/consult/condocs/bcmr/>

⁴ <http://www.ofcom.org.uk/consult/condocs/bcmr08/>

- 1.8 Ofcom considers that, overall, BT's retail low bandwidth digital leased lines can now be replicated by its competitors. This will enable them to compete more effectively with BT in the downstream market. It also means that we can now rely more confidently on the wholesale remedies in the upstream markets to deliver effective competition at the retail level.
- 1.9 With respect to the level of pricing freedom we could grant to BT, we propose that the best option is to require BT to ensure that prices for retail low bandwidth leased lines do not fall below a price floor which covers transfer charges for network components plus retail costs measured on the basis of Long Run Incremental Cost ('LRIC').
- 1.10 We also propose to give BT the freedom to offer consumers bundles of retail low bandwidth digital leased lines and non SMP products. Where low bandwidth leased lines are provided as part of a bundle, the price floor requirement should apply to the bundle as a whole.
- 1.11 However, we are aware that this option is not free of risks. In particular, there is a risk of BT behaving anti-competitively if an effective compliance monitoring system is not in place. We are proposing to require BT to adhere to a governance process broadly similar to that set out in the consent entitled: *Replicability: the regulation of BT's retail business exchange lines*⁵ ('the May 2007 Consent').
- 1.12 In this consultation, we invite stakeholders to give us their views on our proposals. We are particularly keen to hear stakeholders' views on the issues that are relevant to allowing bespoke pricing, our assessment of the available options, and the proposed governance process. Respondents have until the 4 August 2009 to respond to this consultation.

⁵ <http://www.ofcom.org.uk/consult/condocs/draftconsent/statement/>

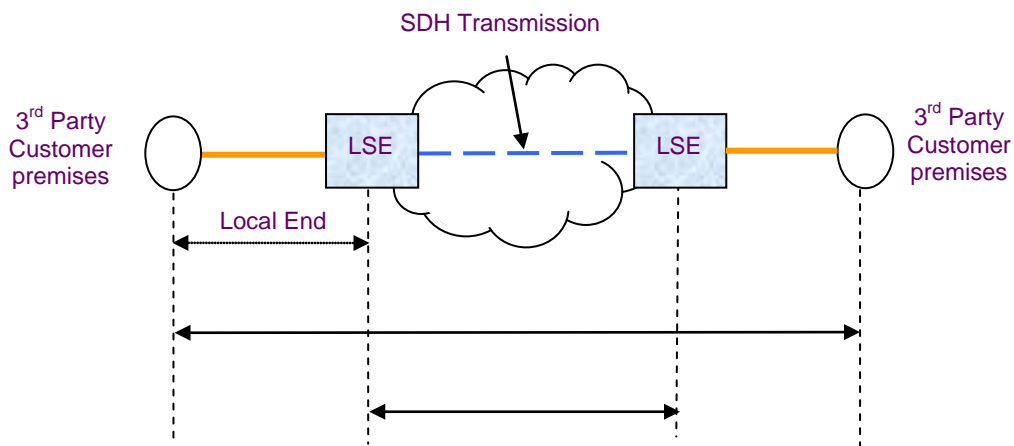
Section 2

Introduction

Introduction

- 2.1 Retail leased lines are purchased by consumers to fulfil part of their communication requirements. Consumers often purchase business exchange lines, retail leased lines and other communications services under contracts directly from Communication Providers ('CPs') or from system integrators. System integrators contract with one or more CPs for various inputs in order to provide the end-user communication services.

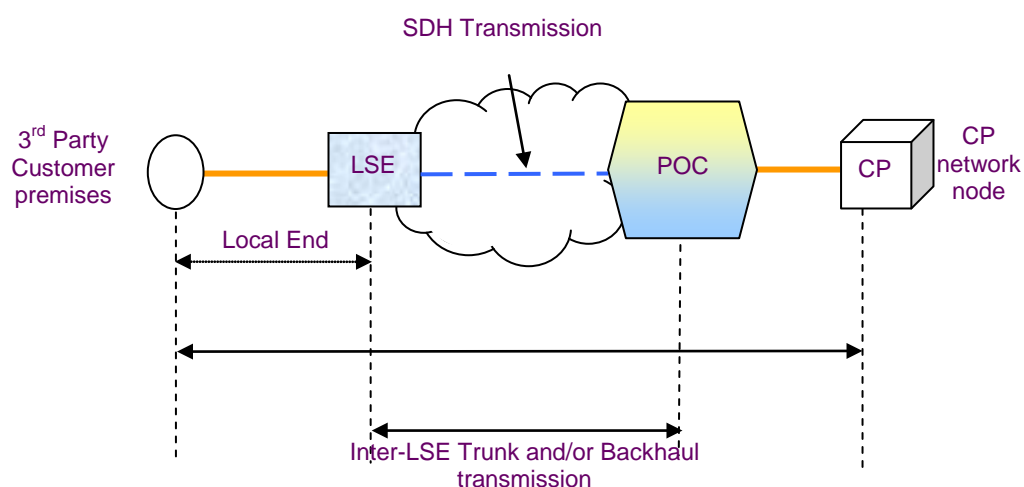
Figure 2.1 Retail leased line



SDH Synchronous Digital Hierarchy
 LSE Local serving Exchange

- 2.2 BT has an obligation to provide access to CPs on reasonable request as a result of its SMP in the wholesale upstream market.
- 2.3 Partial Private Circuits ('PPCs') are an input into retail leased lines providing a link between the end-user premises and a CP's network. CPs purchase PPCs in order that they can provide retail leased lines to consumers.
- 2.4 CPs have their own networks but require PPCs in order to provide leased line services to consumers. Replicability is the ability of a CP to replicate BT's retail low bandwidth digital leased line services.

Figure 2.1 Partial Private Circuit



POC Point of Connection
CP Communications Provider

Services covered in this review

- 2.5 Our proposals concern the retail low bandwidth digital leased lines of up to and including 2Mbit/s bandwidth capacity provided by British Telecommunications ('BT').
- 2.6 BT provides leased lines to all CPs. Those services fall within markets in which BT has been determined to have significant market power (SMP). They are regulated by Ofcom by means of sector specific regulation (known as SMP conditions) under the Communications Act 2003 (the 'Act'). This regulation is subject to a harmonised framework for the regulation of electronic communications services, networks and associated facilities and services, as contained in a package of directives adopted under the EC Treaty⁶.
- 2.7 Analogue leased lines are not within the scope of this review as there is no wholesale analogue PPC and BT is subject to separate obligations to supply analogue leased lines.

⁶ Four directives are particularly relevant in this context:

- (a) Directive 2002/21/EC of 7 March 2002 on a common regulatory framework for electronic communications networks and services (the 'Framework Directive');
- (b) Directive 2002/20/EC of 7 March 2002 on the authorisation of electronic communications networks and services (the 'Authorisation Directive');
- (c) Directive 2002/19/EC of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (the 'Access Directive'), and;
- (d) Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services (the 'Universal Service Directive').

Regulatory Framework

- 2.8 In the Telecoms Strategic Review statement ('TSR')⁷, Ofcom committed to consider how it could introduce more deregulation in retail business markets. Business users, along with BT, claimed that relaxing pricing restrictions applying to BT for those business services subject to SMP conditions would allow bespoke pricing and more aggressive competition on prices. Relaxation of certain pricing obligation could also potentially reduce price-following behaviour by BT's competitors, which could contribute to some extent to muted price competition.
- 2.9 In the Replicability Statement, we considered whether BT's retail low bandwidth leased lines and retail business exchange lines could be technically and commercially replicated by its competitors.
- 2.10 We concluded that there were nine issues that constituted a barrier to replicability. These issues are outlined in Section 3 below. These nine issues can be categorised as:
- technical issues arising from a discrepancy between external and internal supply; and
 - regulatory accounting issues arising from a discrepancy between the way internal and external supply were treated.
- 2.11 We also set out our intention to grant BT some level of deregulation in retail low bandwidth digital leased lines and retail business exchange line markets once replicability was achieved. The proposed deregulation would take the form of allowing the freedom to bespoke price and to offer retail business exchange lines and leased lines services in bundles with other products.
- 2.12 In March 2007, we consulted on the deregulation of BT's business exchange lines⁸ following a finding that business exchange lines were replicable. BT's retail business exchange lines were deregulated in 2007 with Ofcom allowing BT to bespoke price exchange lines.
- 2.13 In the BCMR Statement, we concluded that BT had SMP in the retail market for analogue and digital leased lines provided over a traditional interface at speeds up to and including 8 Mbit/s. This was in our view also derived from, among other aspects, the lack of replicability, which still prevented more effective competition for these products. As a result of the SMP finding, Ofcom imposed remedies on BT in Schedule 6 of Annex 8 SMP Conditions and Directions of the BCMR Statement, including remedies designed to address the risk that BT, on the strength of its SMP, could behave anti-competitively when setting prices, terms and conditions for these services. In particular, among others, the following remedies were imposed:
- No undue discrimination (Condition I2); and
 - An obligation to publish a reference offer setting out the terms and conditions on which BT would be willing to enter into an agreement for the provision of a retail leased line (Condition I4).

⁷ http://www.ofcom.org.uk/consult/condocs/statement_tsr/statement.pdf

⁸Replicability: the regulation of BT's retail business exchange line services
<http://www.ofcom.org.uk/consult/condocs/draftconsent/statement>

- 2.14 On the 28 November 2008, BT wrote to Ofcom stating that it now considers it has removed, or was in the process of removing, all obstacles to leased line replicability identified by Ofcom in the Replicability Statement.

Purpose of this Review

- 2.15 The purpose of this review was to assess whether BT's low bandwidth digital leased lines are, in line with its claims, replicable and to evaluate the options for deregulation should replicability be established.
- 2.16 In Section 3, we assess whether BT's low bandwidth leased lines are replicable and in Section 4 we set out the various options and our favoured option for deregulation consequent to a finding of replicability.

Policy approach and objectives

Ofcom duties

Section 3 – Ofcom's general duties

- 2.17 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.
- 2.18 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.
- 2.19 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.
- 2.20 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.
- 2.21 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

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

2.23 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.

2.24 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.

Policy objectives

2.25 In line with our Better Policy Making Guidelines⁹, in identifying the options set out in Section 4, we have considered a wide range of options, including a deregulation option and a 'do nothing' option.

2.26 In identifying the policy objectives for this review, we have had regard to our duties under the Act set out above, as well as the policy commitments set out in the TSR Statement, and, subsequently, in the Replicability Statement.

2.27 In the TSR Statement published on 23 June 2005 Ofcom reported that it would look again at the scope for deregulation of services supplied to business customers where replicability provides the ability to replicate BT's own retail offerings.

2.28 Subsequently, in the Replicability Statement, Ofcom set out that once BT had addressed the unresolved replicability issues concerning PPCs identified in that statement, we would consider giving consent to BT to offer bespoke prices with respect of retail low bandwidth digital leased lines, including as part of bundles with other non SMP products.

⁹ For further information about our approach to impact assessments, see the guidelines, Better Policy-Making: Ofcom's approach to impact assessments at: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf

- 2.29 The objective of the policy set firstly in the TSR Statement and then refined and clarified in the Replicability Statement was to promote the interests of consumers of retail low bandwidth digital leased lines by fostering price competition between BT and its competitors. This policy objective remains relevant for this review and is the one against which we have measured the pros and cons of the different regulatory options, as further discussed in Section 4.

Impact assessment

- 2.30 The analysis presented in the rest of the Sections and Annexes of this consultation represents and impact assessment, as defined in section 7 of the Act.
- 2.31 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Act, which sets out that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities.
- 2.32 We have not carried out separate equality impact assessments in relation to race or gender equality or equality schemes under the Northern Ireland and Disability Equality Schemes. This is because we are not aware that the proposals being considered here, which are technical in nature and will affect all industry stakeholders equally, would have a differential impact in relation to people of different gender or ethnicity, on consumers in Northern Ireland or on disabled consumers compared to consumers in general. Similarly, we have not made a distinction between consumers in different parts of the UK or between consumers on low incomes. Again, we believe that the proposals under consideration will not have a particular effect on one group of consumers over another.
- 2.33 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. Specifically, pursuant to section 7 of the Act, 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.

Next Steps

- 2.34 Respondents are asked for comments on this consultation. Details of how to respond are given in Annex 1. The closing date for responses is August 4 2009.

Section 3

The replicability of BT's retail low bandwidth digital leased lines

Introduction

- 3.1 In this section, we present our conclusions with respect to the issue of whether BT's retail low bandwidth digital leased lines are replicable by its competitors.
- 3.2 We first present a summary of the replicability issues set out in the Replicability Statement. We then set out an overview of the developments on each issue since April 2006 and our view on each issue. Annex 6 to this consultation provides greater detail of the issues, the developments since the publication of the Replicability Statement, and Ofcom's views of those issues.
- 3.3 We conclude this section by setting out our conclusions with respect to the replicability of BT's low bandwidth digital leased lines.

Summary of replicability issues

- 3.4 In the Replicability Statement, we set out the issues we considered to constitute a barrier to replicability and the action we expected BT to take in to resolve them. These were:
1. Addressing cost disparities between retail leased lines and PPCs as a result of the PPC pricing model;
 2. Implementation of revised forecasting penalties;
 3. Implementation of an option to re-designate/grandfather muxes on cost-oriented terms;
 4. Successful conclusion of the Master Services Agreement ('MSA') or PPC contract review process;
 5. Prove adequate billing accuracy and bill verifiability;
 6. Implement relevant price changes for In Span Handover ('ISH') extension circuits;
 7. Introduce Key Performance Indicators ('KPIs') to allow the performance of the BT Retail Customer Management Centre ('CMC') to be compared to the wholesale CMCs;
 8. Availability of Priority Prompt and Total Care Service Level Agreements ('SLAs') on PPCs designated for use in safety of life or defence of the realm applications; and
 9. Potential double payment for equipment cancelled after the Firm Order Confirmation ('FOC') point and subsequently deployed in fulfilment of another order.

- 3.5 Ofcom has reviewed these issues and their current status in light of the submission made by BT set against the initial findings from the 2006 Replicability review and the later BCMR Statement.

Overview of findings for each issue

- 3.6 We provide below a brief overview of each issue, together with an explanation of the issue, the action(s) taken by BT (and/or) Ofcom, and Ofcom's view on each issue. A more detailed analysis is provided in Annex 6.

1. Address cost disparities between retail leased lines and PPCs as a result of the PPC pricing model

The policy issue identified in the Replicability Statement

- 3.7 In the Replicability Statement, Ofcom identified a number of accounting and modelling changes that could collectively be described as addressing cost disparities between retail low bandwidth digital leased lines and PPCs as a result of the PPC pricing model. Following further analysis, we set our concerns in more detail in a paper which was published in January 2008 as Annex 13 to the BCMR Consultation.

Subsequent developments

- 3.8 During the course of further analysis and investigative work a major error was discovered in the revenue data for TI markets. We found that the methodologies and practice for calculating revenues used by BT to prepare its regulatory accounting information (a key source of data for demonstrating no undue discrimination and providing transparency to stakeholders) had been significantly overstating revenues. BT subsequently corrected this error and restated the 2006/07 revenues in the 2007/08 Regulatory Financial Statements ('RFS').
- 3.9 Given these material corrections we commissioned an independent consultant (Analysys Mason) to review the new methodologies used by BT and assess the accuracy of the restated data. Analysys Mason's main finding is that the current calculation methods used by BT appear reasonable.
- 3.10 In response to all of the issues raised by us, there were a series of meetings and information exchanges with BT resulting in a range of further actions and improvements. Where these improvements required changes to the regulatory reporting framework then we have directed BT to make changes to the reporting of PPC's in its regulatory Financial Statements ('Changes to BT's 2007/08 Regulatory Financial Statements' published on 26 June 2008¹⁰ and 'Changes to BT and KCOM's regulatory financial reporting 2008/09' published on 15 June 2009¹¹).
- 3.11 Our inquiries and requests for further information covered the following topics:
- i) External revenue reconciliations;
 - ii) Reporting of excess construction charges (ECC's);

¹⁰ <http://www.ofcom.org.uk/consult/condocs/btregs08/statement/>

¹¹ <http://www.ofcom.org.uk/consult/condocs/btkcom09/statement/>

- iii) Reporting of resilience services;
- iv) Third party equipment (and infrastructure) sales;
- v) Transparency of regulatory accounting methods;
- vi) Reporting of Central London Zone and non-Central London Zone charges;
- vii) Local end adjustment; and
- viii) Payment terms.

Conclusion

- 3.12 There were a range of diverse reporting issues set out in our Replicability Statement. We believe most of the substantive issues have been fully resolved although there remains some ongoing activity with BT to finalise a few outstanding issues. However, having found a material error requiring a restatement of BT's 2006/07 RFS, we recognise the importance of remaining vigilant in monitoring BT's performance in preparing and publishing reliable regulatory financial information. The regulatory financial reporting framework is in any case subject to ongoing review and improvement.
- 3.13 BT has made a number of improvements to its regulatory reporting since the Replicability Statement and has substantially addressed the issues raised. Given the progress made on these issues and the relatively low significance of any outstanding work to the aims of replicability, our view is that the regulatory financial reporting issues are no longer a barrier to a finding of replicability.

2. Implementation of revised forecasting penalties

The policy issue identified in the Replicability Statement

- 3.14 Our view was that penalties should be cost based to allow BT to recover its efficiently incurred costs should forecasted orders not materialize. The model for determining penalties was described in Annex D of the PPC Phase Two Direction. Ofcom requested BT to recalculate penalties based on the most recent cost data.

Subsequent developments

- 3.15 BT rebuilt the model used to calculate the penalties using up to date cost data and it was shared with Ofcom. The new charges came into effect on 1 April 2008¹².
- 3.16 Ofcom also asked BT to provide appropriate documentation to show that BT Retail pays forecasting penalties in the same way as external customers. In its response, BT indicated that internal customers do not follow the same process as external customers, in that there are no explicit internal transfer charges for forecasting penalties. However, BT confirmed that the costs which the forecasting penalties are designed to recover are included in the regulatory accounts, and are allocated between BT's downstream businesses and external customers on the basis of

¹² BT's PPC handbook

http://www.btwholesale.com/pages/static/Pricing_and_Contracts/Reference_Offers/Partial_Private_Circuits_PPC_Reference_Offer.html

volumes. BT has estimated, if an explicit internal transfer charges were to be levied for forecasting penalties, it would be in the region of £65k per annum¹³.

Conclusion

- 3.17 Ofcom is satisfied that the forecasting penalties have been amended in an appropriate manner. In addition, we do not consider that the absence of comparable internal transfer charges should be regarded as an obstacle to replicability, given the inclusion of the related costs in the regulatory accounts and their small scale, relative to BT's annual spend of £200m on PPCs. We therefore consider that this issue should no longer be considered as a barrier to replicability.

3. Implementation of an option to re-designate/grandfather muxes on cost-oriented terms

The policy issue identified in the Replicability Statement

- 3.18 Ofcom was of the view that in order for BT's retail private circuits to be fully replicable, CPs should be able to migrate customers from retail circuits to PPCs without incurring unnecessary and inefficient costs. Ofcom therefore concluded that BT's retail low bandwidth digital leased lines should not be considered to be replicable in respect of migration until such time as operators have the ability to migrate retail circuits to PPCs and re-designate muxes at a reasonable charge.
- 3.19 Ofcom was also of the view that CPs should be able to Grandfather retail muxes to be able to order PPCs from spare capacity on the muxes.
- 3.20 Until BT has made available grandfathering/re-designation of muxes on cost-oriented terms this would continue to be a bar to replicability.

Subsequent developments

- 3.21 Re-designation was launched on 6 September 2006. BT has however decided not to re-introduce grandfathering after consulting with industry and establishing that there was no demand for grandfathering.

Conclusion

- 3.22 Ofcom is satisfied that this issue is resolved as re-designation has been launched by the evidence indicates that there is no demand for grandfathering.

4. Successful conclusion of the MSA or PPC contract review process

The policy issue identified in the Replicability Statement

- 3.23 The Replicability Statement noted that concerns had been expressed by operators in relation to the complexity of the PPC contracts, and the reasonableness of some of

¹³ BT has stated in a submission to Ofcom that "These costs, however, are allocated to BT's downstream businesses in the regulatory accounts. The costs are initially allocated to the various 'plant group' cost categories. These costs are then apportioned to a number of 'network component' cost centres. These components include the various network activities relating to both CP's and BT's downstream customers. These costs are apportioned to services based on volumes. These services are separately defined for CP's services and BT's downstream services. The use of the volume cost driver means that the costs are allocated to CP's and BT's downstream services on an equitable basis and means that whilst there is no explicit transfer charge, BT's downstream business do get an equitable allocation of these costs."

its terms. Having reviewed these concerns, it was Ofcom's view that these factors represented an obstacle to replicability.

Subsequent developments

3.24 There has since been an extensive industry consultation process, including the sharing of multiple drafts by BT with industry, which has resulted in a revised PPC contract¹⁴ that was introduced at the end of March 2008. After discussion with Office of the Telecoms Adjudicator (OTA2) it appears that the revised contract is now fit for purpose.

Conclusion

3.25 Ofcom is satisfied that BT and Industry engaged actively in the negotiation of a revised PPC contract and that, as a result, this issue has been resolved.

5. Prove adequate billing accuracy and bill verifiability

The policy issue identified in the Replicability Statement

3.26 CPs expressed concerns in relation to the quality and accuracy of bills raised by BT for PPC products. Ofcom urged BT to work with its customers to improve not only the accuracy but also the verifiability of its bills as without the provision of accurate bills, CPs were unable to accurately bill their own retail customers, leaving them at a commercial disadvantage to BT. Ofcom found that until both accuracy and verifiability had been satisfactorily improved, this would continue to be a bar to replicability.

Subsequent developments

3.27 A new billing process¹⁵ was put in place on 1 October 2008, after industry-wide consultations between BT and CPs, covering issues related to both accuracy and verifiability.

Conclusion

3.28 Ofcom is satisfied that the billing system has now been implemented and the issues identified have now been resolved.

6. Implement relevant price changes for ISH extension circuits

The policy issue identified in the Replicability Statement

3.29 The issue here was that BT's charges for ISH extension services and path protected services were not consistent with its charges for PPCs (which were covered by a charge control), even though they used the same network components. We considered that this could lead to undue discrimination against the users of ISH services, and represented an obstacle to replicability.

¹⁴ BT's PPC contract

http://www.btwholesale.com/pages/static/Pricing_and_Contracts/Reference_Offers/Partial_Private_Circuits_PPC_Reference_Offer/PPC_Contracts.html

¹⁵ BT's PPC billing handbook

http://www.btwholesale.com/pages/static/Pricing_and_Contracts/Reference_Offers/Partial_Private_Circuits_PPC_Reference_Offer/PPC_Billing_Handbook.html

Subsequent developments

- 3.30 BT developed a revised set of charges for ISH services, which designed to provide consistency with PPC charges. The revised pricing was notified to industry on 25 October 2007 and came into effect on 22 January 2008.

Conclusion

- 3.31 Ofcom is satisfied that appropriate pricing has now been implemented and this issue is resolved.

7. Introduce KPIs to allow the performance of the BT Retail CMC to be compared to the wholesale CMCs

The policy issue identified in the Replicability Statement

- 3.32 The issue in this case was that the existing KPIs were insufficient to be able to determine the level of performance within the BT Retail CMC as opposed to the CMCs used by CPs. As a result, it was not possible to establish whether the level of service provided to external CPs was comparable with that provided to BT's own downstream business. Ofcom considered that it might be appropriate to impose additional KPIs on BT was in the area of CMC performance.

Subsequent developments

- 3.33 Ofcom referred the matter to OTA2 to consider as part of the wider review of PPC KPIs¹⁶. OTA2 raised the matter with industry. The OTA2 assessment was that there were no convenient or common touch points to measure when comparing the two different processes. Since then, OTA2 has confirmed that there are no common processes or touch points that can be measured and that they are unable to identify any additional KPI that would add value over and above those that already exist.

Conclusion

- 3.34 Ofcom is satisfied that there are no additional KPIs that can be introduced to compare CMC performance. As a result we have concluded that this issue does no longer constitute a barrier to a finding of replicability.

8. Availability of Priority Prompt and Total Care SLAs on PPCs designated for use in safety of life or defence of the realm applications

The policy issue identified in the Replicability Statement

- 3.35 CPs had raised concerns that BT offered enhanced SLAs to some of its retail customers which they were unable to replicate, given the existing SLAs available on PPCs. Based on the information available at the time, this was identified as an obstacle to replicability.

¹⁶ BT's quality of service for PPCs can be found here

http://www.btwholesale.com/pages/static/Pricing_and_Contracts/Reference_Offers/Partial_Private_Circuits_PPC_Reference_Offer/PPC_Quality_of_Service_Performance.html

Subsequent developments

- 3.36 Subsequent investigation revealed that there was a misleading entry in the BT's retail price list¹⁷ that implied Priority Prompt/Total care was available. Priority Prompt/Total Care was not available on retail leased lines as the standard Priority Care is the highest repair service available. The entry in the retail price list was removed in 2007.

Conclusion

- 3.37 Given that the issue was as a result of misleading information that has now been clarified Ofcom concludes that this issue has been resolved.

9. Potential double payment for equipment cancelled after the Firm Order Confirmation ('FOC') point and subsequently deployed in fulfilment of another order

The policy issue identified in the Replicability Statement

- 3.38 Ofcom understood that BT might receive full payment for equipment not subsequently used for the original order if that order was cancelled after the FOC point, and hence there was the possibility of BT receiving payment twice for the same equipment if it was subsequently used to fulfil another order. It is Ofcom's view that it would be inappropriate for BT to be paid more than once for the same equipment when that equipment is not used in fulfilment of the original order and that BT should work with industry to determine an appropriate mechanism for avoiding such a situation. Until an agreed mechanism was in place Ofcom would regard this as a bar to replicability.

Subsequent developments

- 3.39 The PPC cancellation charges were amended to address this issue and reflect only cancellation costs, and not the costs of equipment that could be re-used elsewhere. The new prices have been effective since 31 March 2008.
- 3.40 In addition, Ofcom asked BT to provide evidence to show whether BT Retail pays 3rd party equipment cancellation charges, in order to assess whether internal and external customers are treated in an even-handed manner. BT confirmed that its downstream services do not follow the same processes in so far that there is no explicit internal transfer charge made to BT's downstream businesses in either BT's management accounts or the BT regulatory accounts. However, BT also confirmed that the costs which the cancellation charges are designed to recover are included in the regulatory accounts, and are allocated between internal and external services on an equitable, volume-related basis. In addition, BT estimated that if a transfer charge were to be levied on BT's downstream leased line business for 3rd party equipment cancellation that charge would be in the region of £150k per annum. This would represent a very small fraction of BT's total spend on PPCs, which is around £200m per annum.

Conclusion

- 3.41 Ofcom is satisfied that the 3rd party equipment charges have been amended in an appropriate manner. In addition, we do not consider that the absence of an explicit internal transfer charge for 3rd party equipment cancellation should be regarded as a

¹⁷ BT's retail price list <http://www.serviceview.bt.com/list/public/zdocs/index.htm>

barrier to replicability, given the inclusion of the related costs in the regulatory financial statements and the likely small scale of such a charge, were one to be introduced. On this basis, we consider that this issue should no longer be regarded as a barrier to replicability.

Conclusions on replicability

- 3.42 BT has made a wide range of changes to the PPC product, terms and conditions and changes to regulatory reporting since April 2006. We think BT has made substantive changes and improvements to address our original concerns over replicability. The changes that have been made should benefit CPs that compete with BT in the provision of retail low bandwidth digital leased lines.
- 3.43 Issues 2 and 9 (forecasting penalties and cancellation charges) have been partly resolved where the process has been changed to ensure that the charges levied on CPs are appropriate. Although BT's downstream business does not follow an equivalent process, and does not pay an explicit transfer charge, BT has stated in a submission to Ofcom that:
- “the related costs are allocated to BT's downstream businesses in the regulatory accounts. These services are separately defined for CP's services and BT's downstream services. The use of the volume cost driver means that the costs are allocated to CP's and BT's downstream services on an equitable basis and means that whilst there is no explicit transfer charge, BT's downstream business do get an equitable allocation of these costs.”*
- 3.44 Ofcom concludes that issues 3 to 8 have been resolved. With respect to each of the issues it is clear that BT has engaged with industry and revised the process behind the issue such that industry has accepted such changes.
- 3.45 As a result of the actions taken by BT, we believe that its retail low bandwidth digital leased lines should now be regarded as replicable. We recognise that BT has not addressed all aspects of the issues we previously identified as barriers to replicability but do not consider the outstanding points to be sufficiently material to prevent us proposing that replicability has been achieved. Accordingly we review in Section 4 the appropriate level of retail deregulation.

Section 4

Regulatory options

Introduction

- 4.1 In Section 3 we concluded that BT's retail digital low bandwidth leased lines can now be replicated by its competitors. In light of that view, in this Section we consider the issue of whether we should grant BT the ability to offer bespoke prices for its digital low bandwidth retail leased lines.
- 4.2 In the Replicability Statement, we set out that once replicability had been achieved, we should consider granting BT the freedom to offer bespoke prices and to offer retail digital low bandwidth leased lines in bundles with other non SMP products.
- 4.3 This would give BT the freedom to mix retail digital low bandwidth leased lines with non SMP products in bundles to customers. Such freedom would be of particular importance in a market worth around £560M a year¹⁸. In conjunction with the proposal set out in the *Retail Narrowband Market Review Consultation*¹⁹ ('the RNMR Consultation') according to which business exchange lines markets are to be deregulated, it would mean that in the near future BT could be free to offer bespoke prices for all its retail products.
- 4.4 In the BCMR Consultation²⁰ published in January 2008, we set out how we considered that, absent replicability, wholesale regulation alone would not, in our view, suffice to safeguard consumers from anti competitive prices. Competitors were, we considered, at a disadvantage when pricing retail digital low bandwidth leased lines that consumed PPCs. BT's market share in the upstream wholesale market of 89%²¹ indicated a lack of significant competition in the upstream market which leaves competition in the retail market highly reliant on the quality and price of BT's PPCs.
- 4.5 In this Section, following BT's submission and our assessment in Section 3 that replicability has been achieved, we consider what the appropriate level of regulation should be for BT's prices for retail low bandwidth digital leased lines in the presence of fit for purpose PPCs.
- 4.6 Compliance with replicability on behalf of BT gives us renewed comfort that, going forward, BT's competitors are going to be able to use PPCs more effectively to compete with BT in the downstream market. This also means that with the new leased lines charge controls coming into force later this year, we can now be more confident that the price regulation imposed on BT's wholesale pricing of PPCs will provide an effective constraint on BT's pricing behaviour downstream.
- 4.7 In this Section, we first identify the policy options available to us by way of discussing the key policy issues relating to the pricing of BT's retail digital low bandwidth leased lines.

¹⁸ See BCMR Consultation, Annex 5, Table 39.

¹⁹ http://www.ofcom.org.uk/consult/condocs/retail_markets/

²⁰ <http://www.ofcom.org.uk/consult/condocs/bcmr/>

²¹ According to the BCMR Statement, paragraph 7.21, BT had a market share of 89% in the market for low bandwidth traditional interface symmetric broadband origination (TISBO).

- 4.8 We then evaluate the different policy options on the basis of an analytical framework that tries to capture the range of diverse intended and un-intended effects that each policy option is likely to have on the market, the CPs and consumers.
- 4.9 We then conclude our review by discussing our preferred option, and setting out how we believe the proposals comply with the legal tests set out in the Act. Section 5 will then set out our proposals including a draft consent and governance process.
- 4.10 The analysis in this Section, therefore, form a key part of the impact assessment referred to in Section 2.

Designing the regulatory options

- 4.11 Following up from the discussion of the policy objective for this review set out in Section 2, there are a number of issues which we consider are relevant to the policy objective we have set out to achieve. These are:
- Issue 1: Impact of replicability on competition;
 - Issue 2: Whether to allow BT to bundle SMP retail digital low bandwidth leased lines with non-SMP telecoms products;
 - Issue 3: Whether to allow BT to offer bespoke pricing to customers;
 - Issue 4: Do BT's contracts need to pass a test to ensure that prices are above wholesale transfer costs plus an appropriate level of costs at the retail level?; and
 - Issue 5: Should any freedom to offer bespoke prices and mixed bundles be limited to a subset of BT's customers?
- 4.12 These issues are similar to those identified and discussed in the Replicability Statement, and broadly relate to the potential competition concerns that bespoke pricing can give rise to in the presence of SMP.
- 4.13 In the following paragraphs, we take a fresh look at these issues to be able to take into consideration the developments in the market since the Replicability Statement was published.

Issue 1: Impact of replicability on competition

- 4.14 Where a supplier with SMP, such as BT, is not obliged to offer uniform prices to all broadly comparable customers, it may selectively offer price cuts where it faces a degree of competition, while keeping prices high elsewhere. In these circumstances competitors may find it very difficult to compete and market entry may be foreclosed as these competitors cannot offer selective price cuts in this way²².
- 4.15 Acceptance of this outcome is unlikely to be consistent with Ofcom's statutory duty to promote competition. In the electronic communications sector there are often very high common costs relative to incremental costs and, where competition is unevenly spread across a market, there are opportunities for a dominant player to recover those common costs disproportionately in areas of least competition. Ex ante

²² See Oftel's October 2003 consultation on pricing of services for retail business customers, paragraph 2.10.

conditions may be imposed to address this concern by prohibiting the dominant provider from offering targeted prices.

- 4.16 If, however, competitors are able to replicate BT's retail services in a market, by relying on the use of BT's wholesale services, then the scope for BT to recover a high proportion of common costs in areas of low or non-existent competition, while reducing prices to incremental cost in areas of stronger competition, would be much reduced.
- 4.17 This is because such replicability enables competitive pressure to be spread more evenly, making it more likely both that competitors will be able to undermine any attempt by BT to raise prices in some areas, and also that they will be able to match lower prices in others. In these circumstances it may no longer be necessary to prohibit BT from offering bespoke retail prices, as the competition enabled by replicability may be sufficient to prevent excessive variations in prices which could foreclose market entry. Price discrimination, such as bespoke discounts, under competitive conditions is likely to be benign. Customers may then benefit from BT's ability to offer bespoke prices and services in response to specific needs.
- 4.18 In addition, the finding of replicability also increases the degree to which Ofcom can rely on wholesale regulation (in this case PPCs regulation) to prevent anti competitive behaviour in the downstream market.
- 4.19 For these reasons, Ofcom is considering whether retail regulation which prevents targeted pricing remains appropriate in respect of services which we have now found in Section 3 to be replicable.

Issue 2: Whether to allow BT to bundle SMP retail digital low bandwidth leased lines with non-SMP telecoms products

- 4.20 On 15 October 2003 Oftel proposed in a consultation entitled *BT's pricing of services for business customers*²³ ('the 2003 Consultation') that BT should be permitted to offer discounted prices for bundles of services and discount schemes based on expenditure aggregated across a range of services, including where some of the services are from markets where BT has SMP provided that:
- competitors are able to replicate, commercially and technically, the services included within a bundle of services, or the services which may be aggregated for the purpose of calculating entitlement to a discount; and
 - BT's prices pass appropriate implicit price – cost and net revenue tests.
- 4.21 Oftel also proposed that:
- the prices of these bundles of services, and full details of the discount schemes, should be published and made available to all broadly comparable customers; and
 - eligibility criteria should be sufficiently flexible that, in practice, the discounted bundle is available to more than just a narrowly targeted customer or group of customers.

²³ http://www.ofcom.org.uk/consult/condocs/pricing_business_customers/

- 4.22 In the statement entitled *BT's Pricing of Services for Business Customers* published on 27 May 2004²⁴ (the 'May 2004 Business Pricing Statement'), Ofcom concluded that when BT's retail business exchange line services, inland calls and retail digital low bandwidth leased lines were deemed to be replicable, Ofcom should no longer presume that service bundles which mix those services with services from other markets where BT does not have SMP are unduly discriminatory (and, therefore, be presumed in breach of the prohibition of undue discrimination).
- 4.23 In a competitive market, it would be usual for firms to offer bundles of products at a discounted price compared to the sum of the individual prices of the products within the bundle. Firms may bundle products for various reasons. In some cases, bundling may be an efficient form of price discrimination, allowing costs to be recovered whilst enabling the price of additional services to be closer to the incremental cost of producing them. This enables total output and hence welfare to be higher than it otherwise would have been. Fixed common costs can then be recovered from a larger volume of output. We would expect this to be the case for BT given the economies of scope which it enjoys. This would benefit customers who value these bundles, if part or all of the cost savings are passed on to them. Customers may also value bundles for several reasons (e.g., savings on search and transaction costs, convenience of dealing with a unique supplier etc.).
- 4.24 In the end user research conducted for the BCMR Consultation, we found that 50% of all business interviewed bought retail leased lines as part of a wider bundle with other services.²⁵ This evidence is consistent with representations made to Ofcom by some stakeholders regarding the importance of bundling when purchasing retail leased lines products.
- 4.25 If customers value bundles that include products in markets where BT has SMP ('SMP products') and products in markets where BT does not have SMP ('non SMP products') and if BT's competitors offer such bundles, there is a possibility that customers may be worse off as a result of BT not being allowed to offer bundles. This is because BT's competitiveness would be reduced compared to competitors that can offer such bundles as customers may find the BT competitors' offers more attractive, even if these other operators are not as efficient as BT. This would negatively impact competition and customers who are denied the lower prices that would likely prevail if BT was able to match the bundles offered by its competitors.
- 4.26 However, as Ofcom noted in the 2003 Consultation, where potential competitors are unable, commercially or technically, to replicate all of the services which BT offers to bundle for the purpose of calculating discounts, customers would probably be reluctant to consider splitting their purchase between competing providers. By offering bundled discounts, BT could then ensure that the cost of purchasing services from several suppliers is greater than the cost of purchasing the full bundle offered by BT. If BT is the only viable supplier of one or more elements of the bundle, the level at which BT sets its stand-alone prices for these elements, relative to the implicit prices when supplied within the bundle, may heavily weight the customer's calculation in favour of a bundled purchase, thus foreclosing the market to competitors.

²⁴ http://www.ofcom.org.uk/consult/condocs/pricing_business_customers/ofcom_statement/

²⁵ In the BCMR Consultation (paragraph 7.93), Ofcom's end-user survey indicated that 33% of surveyed customers only acquire business connectivity services as part of a wider bundle and a further 17% sometimes acquire services as part of a wider bundle.

- 4.27 The key competitive concern is therefore about BT leveraging its market power in the supply of the SMP product into the market for the non SMP products. By bundling SMP and non SMP products, BT could, in the absence of replicability and appropriate safeguards which allow CPs to match its bundle, stimulate the take-up of its non SMP products, gaining market shares in the latter markets simply as the result of bundling²⁶.
- 4.28 Replicability mitigates the concerns mentioned above. If CPs are able to replicate BT's leased lines, they should be able to replicate any bundle offered by BT which contains leased lines and non-SMP and other replicable products. Allowing BT to offer bundled discounts would benefit customers who value bundles and allow them to obtain the bundled products at a lower price.
- 4.29 In the September 2005 Business Pricing consultation Ofcom expressed the view that where the services from markets where BT has SMP are deemed replicable such bundles should not be required to pass an implicit price-cost test at the individual product level as, in the presence of replicability, competitors should be able to compete to supply the complete service bundle. In the Replicability Statement, Ofcom, after considering the responses on this issue to the September 2005 Business Pricing consultation concluded that given that replicability ensures that competition across the full range of services is possible, it would not be proportionate to require service bundles to pass an implicit price – cost test²⁷.
- 4.30 However, replicability in itself may not remove completely anticompetitive concerns and may need to be supplemented by a few conditions BT would need to observe in setting the price of its bundles. We discuss under issue 3 and 4 the options in relation to such pricing conditions.

Issue 3: Whether to allow BT to offer bespoke pricing to customers

- 4.31 In the May 2007 Consent, after having found that business exchange lines were replicable, we consented to granting BT the freedom to offer bespoke prices and suspending the obligation to publish and adhere to a standard price list for these services. This was subject to the condition that bespoke prices did not fall below a price floor which covers transfer charges for network components plus retail costs on a fully allocated basis.
- 4.32 In addition, we stated that BT would be expected to assess each bespoke price for compliance with the Competition Act 1998 and any ex ante safeguard tests, and to demonstrate that it has adequate management systems to ensure such compliance. Finally, we set out how these principles could be equally applied to prices offered to larger and smaller businesses but that, as a precautionary measure, it should initially be limited to prices offered to customers spending more than £1m per year with BT, until BT's management systems have been adequately tested.
- 4.33 Following the publication of the BCMR Statement in December 2008, the regulation of BT's retail digital low bandwidth leased lines includes an obligation to publish a reference offer plus a general prohibition of undue discrimination (including, as noted above, the presumption that mixed bundles are anti-competitive).

²⁶ In its RNMR Consultation, Ofcom proposed that BT does not have SMP in the market for business calls. In the absence of replicability BT could, for example attempt to leverage its market power in the leased line markets into the market for calls in the business segment if it was allowed to offer bundles.

²⁷ See paragraph 8.20 of the Replicability Statement.

- 4.34 As discussed earlier in our review of Issue 1, where an undertaking has SMP in a given market, allowing it to offer bespoke prices may have a negative impact on competition and customers. If the undertaking is not obliged to offer uniform prices, it may choose to recover its common costs through higher prices in areas/segments where it faces little or no competition (to the disadvantage of customers in these areas/segments) while selectively setting lower prices where it faces greater competition. This may also be to the disadvantage of competitors that do not have the ability to allocate common costs in this way.
- 4.35 The effect of selective pricing on BT's competitors is not an issue in itself. It is an issue only to the extent that this may ultimately harm consumers if it would weaken competition in the market or, in the extreme, drive BT's competitors out of the market or prevent new entry. Customers targeted by lower prices may benefit in the short term but may incur, in the long term, a loss that is potentially greater than any short term gain as competition weakens and prices increase.
- 4.36 The potential negative impact of allowing an undertaking to offer bespoke prices in markets where it holds SMP mainly stems from the presence of entry barriers. In particular, BT's ability to raise prices in some areas to compensate for lower prices where it faces competition would not be a real concern if competitors were able to quickly enter the areas/segments where BT would raise prices. If BT's competitors do not have access to a fit-for-purpose wholesale input, such entry may not be possible, and an obligation on BT to publish, and adhere to, standard prices, is likely to be justified.
- 4.37 If BT's retail services are replicable, an obligation on BT to publish a reference offer may not only be unnecessary but may harm competition. There is a risk that competitors may follow BT's prices (typically pricing a few percent below BT) rather than competing strongly amongst themselves. In other words, the publication of prices by an undertaking with SMP (BT in this instance) may "coordinate" competitors on BT prices even where such competitors are able to offer lower prices. While competition would benefit customers, it would drive down profits. Hence there may be an incentive for price following behaviour.
- 4.38 During the previous reviews on business pricing, BT has claimed that the obligation to publish and adhere to standard prices may enable a degree of price following by competitors, resulting in a muting of competition. Ofcom is not able to test this hypothesis directly, as we have no visibility of CPs prices. In the following paragraphs, we look at market shares and BT's prices in order to assess if these are consistent with a muting of competition.
- 4.39 At an aggregate level, the BCMR Statement²⁸ reports that BT has an 80% market share in this market, 10 times the market share of the next biggest player (Cable & Wireless), the remaining 12% being held by various players with small shares (i.e. smaller than 3%). This is illustrated in the following table.

²⁸ We have not been able to calculate market shares with more recent data as this would have required data from all CPs which we do not have. We however have good reasons to consider that BT's market shares have remained relatively unchanged. Firstly, the large volumes of lines for these services still in use means that it takes time for CPs to erode BT's market share as they need to lure away a high number of customers from BT to build up their market share. Secondly, we have looked at the movement in low bandwidth digital PPCs sales since the BCMR Statement (2007/08). Sales to CPs have gone up, while sales to BT have gone down. However, the net effect on the total volumes of PPCs is only around 0.4% of the total retail market.

Table 4.1 Market shares for low bandwidth traditional interface retail leased lines in the UK (excluding the Hull area) (2006)

	Share (%)
BT	80
C&W	8
Others (no other CP had >3%)	12

Source: BCMR, January 2008

- 4.40 These market shares however include analogue lines where BT holds a 99% market share and which are out of the scope of this review. Also, as the BCMR Statement acknowledges, these market shares do not differentiate between the different types of leased lines, in particular, the fact that BT has a relatively high market share of lower bandwidth services within the product market as illustrated by the following table.

Table 4.2 BT's market shares for individual services within the product market (2006)

	BT market share (%)
Digital SDH <2Mbit/s	50
Digital SDH 2 to 8Mbit/s	89

Source: BCMR, January 2008

- 4.41 BT has high market shares in digital leased lines services, although it appears that competitors have managed to gain 50% of the Digital SDH <2Mbit/s market. High market shares *per se* are not very informative of a price following behaviour (if any) when there are a few competitors in the market. The evolution of prices or market shares may be more informative.
- 4.42 In the absence of a time series for prices, looking at how profitability varies over time may be informative. In particular, evidence is provided by the analysis of BT's profitability in this market as measured by BT's Return on Sales (ROS) which measures how much profit is being produced per pound sterling (£) of sales²⁹. The downside of ROS is that it does not have a theoretical benchmark against which returns can be compared (the "required" return on sales will vary directly with the degree of capital investments of the firm and its cost of capital). Although ROS suffers from the lack of a benchmark, it is nonetheless sometimes possible to form views on the level of a particular ROS. In particular, where the degree of capital investment is low, a low but positive ROS would indicate that a company is likely to be making an adequate return.
- 4.43 In the following paragraphs, we first look at the profitability analysis carried out in the BCMR Consultation, and compare it with the ROS we have calculated using information provided by BT to us and based on their 2007/08 regulatory accounts.

²⁹ The most commonly used by economic regulators and competition authorities is the return on capital employed (ROCE), which has the advantage of having a benchmark against which it can readily be compared (the activity's weighted average cost of capital (WACC)). However, as noted in the 2008 Business Connectivity Market Review, ROCE is a less meaningful indicator of profitability in markets in which there is little or no capital investment, as is the case in retail leased line markets. In these markets, payments for wholesale services account for a high proportion of the total underlying retail cost base. Most of BT's fixed capital is included in its wholesale business. At the retail level therefore, capital employed is typically small relative to turnover and may even be negative. This has led Ofcom to use ROS.

4.44 We were unable to isolate the profitability of retail digital low bandwidth leased lines of speeds up to and including 2 Mbit/s. This is because BT's regulatory financial accounts do not show the profitability of low bandwidth digital leased lines by bandwidth but only by service/product family. We therefore present the profitability of BT's Kilostream and Megastream portfolios. Kilostream leased lines comprise circuits below 2 Mbit/s and the Megastream product line offers leased lines of 2 Mbit/s and above.

4.45 Profitability calculations from the BCMR Consultation for 2005/06 and 2006/07 showed that:

“despite some of the limitations with the data (which essentially mean that the profitability analysis set out above does not correspond precisely to the market under consideration), BT's ROS [...] generally appear to be very substantially above the levels that competition authorities have usually found should apply in effectively competitive markets where capital intensity is low.”³⁰

4.46 Based on data recently supplied by BT, Ofcom has estimated BT's ROS for 2007/08 which are presented here below alongside the ROS calculated for the BCMR Consultation.

Table 4.3 BT's profitability for Kilostream and Megastream as measured by ROS (%)

	2005/06	2006/07	2007/08
Kilostream	14	15	46
Megastream	(4)	12	12

Source: Ofcom (based on BT data)

4.47 Despite the limitations of ROS and of our own calculations, it is nevertheless useful to look at these returns. ROS is relatively higher for Kilostream than for Megastream³¹.

4.48 The ROS for Megastream is similarly positive and fairly constant for 2006/07 and 2007/08. This is likely to underestimate the real ROS for 2 Mbit/s lines, as the returns for higher bandwidth leased lines (mainly 34/45 Mbit/s and 155 Mbit/s) are also included. However, we would expect BT's returns for these products to be lower because of the higher degree of competition BT faces for these products³².

4.49 Despite the absence of a theoretical benchmark, we believe that BT's ROS for Kilostream have been relatively high, and persistently so, since at least 2005/06 especially given the fact that competitors have a 50% share for this service. Whilst in the absence of detailed evidence of actual pricing behaviour it is not possible to be conclusive, the persistence of high rates of return is consistent with at least some degree of price following behaviour.

³⁰ Paragraph 7.68, BCMR Consultation, January 2008.

³¹ The Megastream returns, however, are likely to be understated because the Megastream portfolio also includes services that qualify as wholesale products and sold to large customers such as sales to MNOs. Arguably, large buyers such as MNOs have some countervailing buyer power when purchasing low bandwidth leased lines from BT because they have at least in some cases the alternative to purchase such service from BT's competitors or even self-supply it. Therefore, we would expect BT to earn lower returns on sales to these customers. See also paragraph 7.56 and following of the BCMR Consultation.

³² See BCMR Statement, Section 7.

- 4.50 In any case, the evidence available supports the preliminary conclusion that at least to some extent BT's prices continue to be above the levels to be expected in fully competitive markets. If this is due to price publication requirements which facilitate price following behaviour, a disapplication of BT's obligation to publish and adhere to standard prices could be beneficial for competition and ultimately for customers who appear to be paying potentially too high prices. Bespoke pricing by BT would then allow customers to benefit from lower prices. The non-publication by BT of its prices would imply that any coordination on BT's prices is likely to break down as CPs know that BT has the tool of bespoke pricing at its disposal and is likely to use it. We would therefore expect CPs to rationally lower their prices if they know that BT is likely to exert its option to offer bespoke pricing, or face the risk of losing customers to BT.
- 4.51 As Ofcom stated in September 2005 in the Regulation of Business Retail Markets Consultation (the '2005 Consultation')³³, replicability does have the ability to mitigate the competition concerns arising from bespoke pricing and non adherence to published prices, by enabling competition to be more uniform. At the same time, replicability implies that CPs are likely to enter any segments/areas of the market where BT would attempt to set high prices to compensate for the lower bespoke prices offered elsewhere. This is especially more likely given the fact that, at the retail level, there are relatively low barriers to entry in terms of fixed investment, as the main entry barriers are at the wholesale level.
- 4.52 Some concerns remain, and we look at them in the light of replicability in the following paragraphs.
- 4.53 Allowing BT to offer bespoke pricing could generate potential concerns where BT's competitors are unable to match BT's prices. This would likely be the case where economies of scale are important and BT has a very high market share. In this case, an increase in its market share through bespoke pricing could leave its competitors unable to respond and potentially force them out of the market. Replicability addresses this potential concern at the wholesale level by allowing CPs to leverage BT's economies of scale. It enables BT's competitors to react to increased competition from BT, though BT could still have advantages at the retail level.
- 4.54 We have considered whether the 50% market share held by competitors in the Digital SDH < 2 Mbit/s segment, together with the apparently high ROS for this service, suggests there is a risk of harm to competition from allowing BT to offer bespoke pricing and not publish prices. On balance, we believe that the benefits are likely to outweigh the risks. Even in the absence of replicability, competitors have been able to gain a 50% market share. In addition, there would be a risk that the combination of replicability, which signals that competitors are able to match BT's prices, and price publication, would hamper competition and prevent the full benefits of replicability being passed to customers. BT's competitors appear to be already well established with a 50% share of this market segment. This suggests that, with replicability, competition is unlikely to be harmed if BT competes more vigorously, and customers could benefit from lower prices.
- 4.55 The 89% volume share of Digital SDH 2 to 8 Mbit/s held by BT may be a bit more of a concern. We have therefore considered how much weight should be placed on this 89% share.

³³ Regulation of Business Retail Markets, Consultation, 7 September 2005, par. 4.20:
<http://www.ofcom.org.uk/consult/condocs/busretail/busretail>

- 4.56 Firstly, if BT's high volume share is due to entry barriers which until now prevented replicability, we would expect competition to intensify now that BT's retail leased lines are replicable.
- 4.57 In addition, as reported in the BCMR Statement³⁴, market trends suggested that BT's share for the (higher value) digital 2 to 8 Mbit/s may fall in the future. It should also be borne in mind that the method used to calculate the retail sales of BT's competitors was somewhat approximate³⁵. Moreover, given that replicability implies that barriers to entry are substantially lowered, market shares may not provide the best indication of the level of competition. Finally, we note that it is likely to be relatively easy for operators who are already supplying lower bandwidth leased lines – in which BT's rivals have gained a 50% share – to begin to supply higher bandwidth leased lines as well.
- 4.58 Another useful element for considering this issue is provided by the evidence of what has happened in the market for business exchange lines following the May 2007 Consent to offer bespoke prices. In order to do so, we have considered the preliminary findings for the narrowband retail market set out in the RNMR Consultation.
- 4.59 This shows that competition in the market for business analogue exchange lines has developed to such an extent that Ofcom is proposing that BT does no longer have SMP in that market. The main reason put forward for such development is the availability of a fit-for-purpose wholesale input (WLR). This is at least consistent with the view that BT's ability to offer bespoke discounts has not harmed competition.
- 4.60 In the light of this, we do not view BT's 89% share of digital SDH 2 to 8 Mbit/s leased lines as a necessary obstacle to giving BT some greater pricing freedom in this segment, in the light of replicability. However, it may mean that a more cautious approach than in the case of lower bandwidth leased lines is appropriate, and we consider this below in the discussion of options for deregulation.

Issue 4: Do BT's contracts need to pass a test to ensure that prices are above wholesale transfer costs plus an appropriate level of costs at the retail level?

- 4.61 Given the risk of BT weakening competition which would be inherent to providing an undertaking with SMP greater pricing flexibility, it is reasonable to consider whether to put in place appropriate safeguards in addition to competition law. The Replicability Statement proposed that in the future any consent to BT offering unpublished bespoke prices for services from markets where BT has SMP should be conditional upon BT observing a price floor in respect of those services, set by reference to the transfer charge for the network components plus BT's retail FAC costs.
- 4.62 A first test for anticompetitive pricing is whether the price of a service under consideration is below the additional costs incurred in supplying that service. The standard competition law test outside telecoms is based on Average Variable Costs (AVCs). If a company is not able to cover its AVC for a given service, the price is presumed to be anti competitive.
- 4.63 As we noted in the 2005 Consultation, additional costs are, in the telecoms sector, normally measured by incremental costs (LRIC)³⁶. Under this approach, any price for

³⁴ See paragraph 7.50.

³⁵ See BCMR consultative document, January 2008, Annex 7.

³⁶ See for example The Competition Act 1998: the application in the telecoms sector.

a given service that would fail to fully recover (on a contract by contract basis) the transfer charges which BT Retail is liable to pay BT's relevant wholesale division for the network components of the service would be viewed as unduly discriminatory and anticompetitive. In addition, it would be expected to cover at least the incremental retail cost of provision.

- 4.64 LRIC is the floor below which a charge is presumed to be anti-competitive. However, it is not in general sufficient for a price to be above LRIC to demonstrate that it is not anti-competitive. In the case of a multi-product firm with significant common costs such as BT, it is also necessary for the prices of each combination of products to be sufficient to recover the costs which are incremental to that combination but not to any individual product within it, that is, common costs³⁷.
- 4.65 Ofcom nevertheless stated in the 2005 Consultation that it believed a price floor based on retail FAC costs would be more appropriate than a price floor based on LRIC. This was because of the large economies of scale and other advantages enjoyed by BT arising from its legacy presence (including customer inertia). These advantages imply that competitive conditions would likely remain uneven at least for some time even under replicability. With a price floor based on retail LRIC, BT's competitors (or potential competitors) may be unable to compete vigorously with BT not because they are less efficient but because of BT's advantages deriving from its legacy presence. Using a FAC basis (at least for a limited time) would allow competitors to adjust to BT's new pricing flexibility.
- 4.66 Since Ofcom allowed BT to use unpublished bespoke pricing in the market for business exchange lines in May 2007, no competitor has complained about BT's pricing in this market. As the consent given to BT was on the basis that prices should remain above a retail FAC-based floor, the absence of complaints could be interpreted as evidence that the market could have supported further deregulation. In the recent RNMR Consultation, Ofcom has proposed that BT no longer has SMP in that market. As a result, Ofcom is proposing to extend BT's freedom to offer bespoke prices to all customers. Should the proposals be confirmed, these prices will in the future be subject only to compliance tests under competition law using incremental costs as the basis.
- 4.67 Ofcom could also allow BT to use unpublished bespoke pricing without imposing any price floor. BT pricing would then be subject only to the provisions of competition law. This would clearly have the benefit of minimising the risk of Ofcom setting the price floor at too high (or too low) a level, raising prices for consumers and possibly providing scope for inefficient entry.
- 4.68 We are however of the view that, given the current level of competition in retail low bandwidth digital leased lines, the potential cost of not setting a price floor (other than that provided by competition law) is higher than any potential benefits.
- 4.69 Under competition law, the relevant output increment and time period used to calculate the incremental costs which a price should be expected to cover will vary from case to case. For example, in the investigation of the "complaint against BT's pricing of digital cordless phones"³⁸, we stated:

³⁷ See the OFT Guidance [OFT417].

³⁸ *Complaint against BT's pricing of digital cordless phones*, 1st August 2006
http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_828/cordless_06.pdf

“A number of different increments of volume can be considered – for example one particular unit (i.e. a single phone) or a particular model of phone, or the product line in general (i.e. all DECT phones). The variable cost recovery test compares revenues arising from the sale of that particular increment of volume to the costs of supplying that volume. The relevant volume measure will depend on a number of factors including the relevant period, the extent of the alleged pricing abuse and the timescale of relevant business decisions.”

- 4.70 Where the relevant output increment is small, incremental cost can be very low. For example, the incremental cost of an individual leased line contract could include very few of BT's retail costs, few of which would be directly caused by the supply of a single customer. A floor based on the incremental cost of an individual contract would therefore give BT significantly greater freedom to offer large bespoke discounts than it would have with an FAC floor. The experience of bespoke pricing with a FAC floor would be a limited guide to the consequences of moving straight to a floor derived from ex post competition law. Therefore we believe a more appropriate choice is between a price floor derived via FAC or a price floor based on an estimate of long run average incremental retail costs derived from the BT retail LRIC model. Because this is a measure of long run incremental costs for a relatively large output increment (BT's incremental cost model treats retailing as a single increment), the resulting LRIC floor would be between the FAC and the individual contract incremental cost.

Issue 5 – Should any freedom to offer bespoke prices and mixed bundles be limited to a subset of BT's customers?

- 4.71 We have considered whether competitive conditions vary systematically with firm size, and in particular whether there is more competition to supply larger customers. In practice, competitive conditions do not appear to be different between users with a different level of spending or company size³⁹. In other words, Ofcom considers that competitive conditions between different segments of the market by company size/telecom spend are sufficiently homogeneous that the finding of different markets (e.g. for supply to large and small firms defined on the basis of turnover) is not supported by evidence. This view is consistent with the findings of the BCMR Statement, which did not find a break in the product market under consideration⁴⁰. From a purely competitive perspective, there would therefore be no reason to limit *a priori* BT's pricing freedom to a subset of its customers.
- 4.72 When Ofcom disappplied the remedies related to the pricing of retail business exchange lines for the larger companies in May 2007, we explained that the consent would initially be limited to offers made to customers with an annual spend with BT in excess of £1 million per year on a projected basis (assessed on the basis of anticipated spend in the next 12 months consequent on BT being awarded the contract for which it would be bidding). These customers are subject to close account management by senior BT staff and, therefore, it could be expected that BT would be better equipped to ensure that the company did not contravene competition law rules and behave anti-competitively. It was however noted that, subject to the monitoring of behaviour over time, the exemption could be extended to smaller companies.
- 4.73 Ofcom noted in the RNMR Consultation that were we not undertaking that review we would be considering a further review of replicability which might include an

³⁹ See the 2005 Consultation paper, paragraphs 3.17-3.19. The BCMR Statement has also not distinguished between different types of customers in the market for retail digital leased lines. Finally, the RNMR Consultation

⁴⁰ See BCMR Statement, Section 3, Retail product market definition.

extension of the non-application to smaller companies and the inclusion of calls remedies (as the CPS product now appears to fulfil the fitness for purpose criteria).

- 4.74 Ofcom considered in that consultation that there have been substantial changes in the markets for business exchange lines which have, in turn, have directly benefited consumers and business customers. It also considered the lack of complaints as indicative of the fact that the market for business services has not been unduly disrupted by the exemptions to the remedies. The review considered that competition (stimulated by replicability) rather than regulation appears to have constrained BT's ability to set prices.
- 4.75 Given the experience of the business exchange line markets, we believe we should consider critically whether there is any reason that would currently justify denying some types of consumers the opportunity to benefit from lower prices. Therefore we have considered two options: not imposing any threshold (BT can bundle/bespoke deals to all customers); or imposing a >£1m p.a. threshold as applied in the May 2007 Consent given to BT to bespoke prices for business exchange lines.

Question 1: Do you agree with our assessment of the relevant competitive issues? Are there any other issues Ofcom should consider?

Regulatory options

- 4.76 On the basis of the issues discussed above, Ofcom has identified the following options as the most relevant for considering whether to grant BT greater pricing freedom for its retail digital low bandwidth leased lines:
- Option 1 'maintain the status quo': BT would continue to be subject to all the current SMP conditions as set out in the BCMR Statement (including publication of a reference offer and non discrimination, including the presumption that mixed bundles are anti competitive);
 - Option 2 'the same level of pricing freedom as granted with respect to business exchange lines': BT will no longer have to comply with a price publication requirement, provided that: i) bespoke prices do not fall below a price floor which covers transfer charges for network components plus retail FAC; and ii) the offer of bespoke prices is limited to customers spending more than £1M per year with BT; in addition, Ofcom will no longer presume that bundles of retail digital leased lines with other SMP and non-SMP products are unduly discriminatory;
 - Option 3 'more pricing freedom with FAC price floor': BT is allowed to offer bespoke prices to all customers as long as prices do not fall below a floor which covers transfer charges for network components plus retail FAC and this freedom applies to all customers (i.e. not only those who spend more than £1M a year with BT); in addition, Ofcom will no longer presume that bundles of retail digital leased lines with other SMP and non-SMP products are unduly discriminatory; and
 - Option 4 'more pricing freedom with LRIC price floor': BT is allowed to offer bespoke prices to all customers as long as prices do not fall below a floor which covers transfer charges for network components plus retail LRIC, and this freedom applies to all customers (i.e. not only those who spend more than £1M a year with BT); in addition, Ofcom will no longer presume that bundles of retail digital leased lines with other SMP and non-SMP products are unduly discriminatory.

- 4.77 We noted above that there was some suggestion that there may be more competition in digital SDH leased lines at below 2Mbit/s than in the higher bandwidth segment. This may mean that a more cautious approach to this latter segment is justified. It may therefore be that the same option will not be appropriate for both segments, at least for a period of time until the effects of replicability are clearer. We invite views on this in response to this consultation.

Analytical framework for assessing the options

- 4.78 The right method for setting the level of regulation for BT's retail prices for digital low bandwidth leased lines is the one that can be expected to further most the interests of consumers. There are a range of criteria that will help in assessing whether a particular approach is better overall than another. To help frame the debate on the options listed above, we have identified the following criteria for our preliminary assessment:
- Economic efficiency – Does the option promote economic efficiency? This includes both a static assessment (i.e. whether consumers are likely to benefit in the short term from lower prices) and the impact that the various regimes may have on incentives to invest (and dynamic competition more generally);
 - Distributional effects on consumers – Which consumers will be better off, and which worse off, as a result of adopting the option? While the overall impact on consumers is examined under the concept of economic efficiency, the different approaches might have some distributional effects, for example, between high and low spending users;
 - Competitive impacts – Does the option promote or harm competition among operators and, if so, how?; and
 - Commercial and Regulatory consequences – It is also relevant to consider the practical implications of adopting each option. This examines the other relevant impacts on the industry, such as, for example, the risk of regulatory failure and the burden of regulation.

Options assessment

Option 1 'maintain the status quo'

Description

- 4.79 Under this option, BT would continue to be subject to all the current SMP conditions as set out in the BCMR Statement interpreted in the same way as before replicability. This means that BT would not be able to offer bespoke prices for customers or offer bundles of retail digital low bandwidth leased lines with other non SMP products. These SMP conditions include:
- SMP Condition I4 'Requirement to publish a reference offer': BT has to publish, among other terms and conditions, the prices of its services and must adhere to the published price list; and
 - SMP Condition I2: 'requirement not to unduly discriminate', including the presumption that bundles of SMP and non reference offer products ('mixed bundles') are anti competitive.

Assessment

- 4.80 In the presence of replicability, CPs will be in a position to compete more effectively and more aggressively with BT, for the reasons discussed at paragraph 4.14 and following earlier in this Section. As a result, we expect competition to increase in the future. If the regulation of BT is not changed to reflect this, BT's market shares should decrease as a result. The effect on retail prices is however uncertain. BT's prices would still have to be published and could provide a focal point for CPs to set their own prices, allowing competition to remain muted. The gains from replicability would not then be passed to consumers. This behaviour is more likely where the number of bidders is likely to be low. We also consider that under this option BT would be disadvantaged in a way that might not be proportionate, given the presence of upstream fit for purpose asymmetric remedies. If CPs are able to replicate BT's retail leased line services, and regulation does not reflect this, then BT might not be able to win contracts even when it is more efficient than its rivals. Allowing BT to have similar pricing freedom to those which its competitors already have would increase pressure on those operators to increase their own efficiency. The status quo could therefore deliver a less efficient competition outcome than other options.
- 4.81 In addition, preventing BT from reacting to competition in the market might introduce some distortions. If BT was not able to respond to competition for retail low bandwidth digital leased lines, it could for example try to attract customers towards potential substitutes (although not sufficiently close substitutes to be in the same market) provided in markets where BT is not constrained by retail SMP conditions (such as, for example, ADSL/SDSL and Ethernet leased lines). This could distort choice.
- 4.82 In conclusion, under Section 6 of the Act, Ofcom has a duty to ensure it does not impose or maintain unnecessary regulatory burdens. Given the expected impact of replicability (discussed in paragraph 4.14 and following in this Section) we consider that that it would not be proportionate to do nothing and maintain the status quo in the presence of replicability. This is because a continuing prohibition on the offering of bespoke prices could mute price competition to supply these services and prevent customers from negotiating bespoke prices, terms and conditions to suit their particular circumstances. In reaching this view, we have taken into account all of our duties and policy objectives in this consultation, in particular that regulation should be proportionate to the competitive problems identified.
- 4.83 In principle these arguments are relevant to all retail low bandwidth digital leased lines. However, market share data suggests that there is currently less competition in the supply of leased lines at 2Mbit/s and above. There may therefore be a stronger case for option 1 to apply to the higher bandwidth segment than to the lower bandwidth segment, at least for a period of time. This is not our preferred option however, as it would deny the benefits of more vigorous competition to customers in this segment, and the combination of replicability and price publication could in fact harm competition.

Option 2 'the same level of pricing freedom as granted with respect to business exchange lines'

Description

- 4.84 Under this option, BT would afford the same level of pricing freedom it enjoyed for exchange business lines following the May 2007 Consent and as recommended in

the Replicability Statement. In particular, it would no longer have to comply with a price publication requirement, provided that:

- bespoke prices do not fall below a price floor which covers transfer charges for network components plus retail FAC; and
- the offer of bespoke prices is limited to customers spending more than £1M across all telecoms services per year with BT.

4.85 In addition, Ofcom would no longer presume that bundles of retail digital low bandwidth leased lines with other SMP and non-SMP products are unduly discriminatory.

Assessment

4.86 Under this option, prices would be set at or above transfer charges for network services plus retail FAC. This means that charges would necessarily be some, possibly a significant way, above the incremental cost of provision. Setting a price floor above LRIC has two disadvantages. Firstly, some consumers that would be willing to buy products at prices above LRIC, that is, above the additional costs which would be incurred to produce them, but below FAC would not be able to do so. Secondly, BT could be at a disadvantage relative to other operators who would not be constrained to price above FAC, and so might lose some contracts even if it was more efficient than rivals.

4.87 In addition, we consider that potentially the impact on competition would be limited to a smaller part of the market because of the threshold: only big spenders (in this case those companies spending more than £1M a year on telecoms services with BT) would enjoy the benefits of bespoke pricing. There could be therefore a negative distributional effect, as low spenders remain on higher prices than larger rivals, perhaps with knock-on effects on other markets.

4.88 We consider that this option still represents an improvement on status quo, but a more limited one than if BT were able to price at incremental costs and to all customers. Further welfare gains could come from additional pressure on costs as BT lowers its prices, forcing competitors to become more efficient. Potentially this could lead to a lowering of the cost of provision across the industry, with additional benefit for consumers.

4.89 In addition, the experience of the consent to bespoke prices for business exchange lines shows that BT has seldom used its additional pricing freedom. In its discussions with Ofcom, BT has stated that, in its view, a combination of the threshold and the FAC floor has acted as a barrier to them making greater use of the additional pricing freedom. This statement is consistent with the evidence reviewed in the RNMR Consultation, which shows that since the consent was granted, there has been limited price decreases for these services. If BT is correct, and the same considerations would apply to leased lines, then the benefits of Option 2 might be disproportionately small relative to options which would give BT greater pricing freedom.

4.90 In conclusion, while this option would provide some welfare gains compared with the status quo, we do not consider that it would best serve the interest of consumers in this market. Firstly, the impact on competition and efficiency is potentially reduced compared with a situation where prices may be set as low as incremental costs. Secondly, the £1M per annum threshold means that there could be negative

distributional effects as only higher spenders enjoy more effective price competition and the advantages of bundled products. From data provided by BT, we know that the percentage of revenues from customers that spend less than £1M per annum is 42% for Kilostream and 32% for Megastream. This represents a substantial portion of the market which would potentially not benefit from discounts. Finally, the experience with the consent given to BT to offer bespoke pricing with respect of business exchange lines shows that, with pricing freedom restricted by an FAC price floor and the £1M threshold, there has been at best limited benefits to consumers in terms of lower prices.

- 4.91 As with option 1, to the extent that there is less competition to supply leased lines at 2Mbit/s and above, there may be a stronger case that the limited freedom available under option 2 is more appropriate to this segment than to the lower bandwidth segment. We accept that there may be some benefits to a cautious approach to the market at and above 2Mbit/s.
- 4.92 However, we do not think there is a good case for a threshold to be imposed in the market at £1m, even in the higher bandwidth segment. The share of Megastream revenues accounted for by customers spending less than £1m, 32%, is sufficient to mean that a substantial number of customers would be denied the benefits of lower prices under this option. However, it is broadly similar to but somewhat lower than the share of kilostream revenues accounted for by such customers. This does not suggest that the apparent difference in competitive conditions between the lower and higher bandwidth segments is related to differences in the extent of supply to smaller customers. In addition the experience of deregulation of business exchange lines appears to be equally relevant to this segment. Accordingly, this is not our preferred option.

Option 3 'more pricing freedom with FAC price floor'

Description

- 4.93 Under this option, BT is afforded additional pricing freedom relative to Option 2 in that it would be able to offer bespoke prices to all customers (i.e. not only those who spend more than £1M a year with BT). However, the maximum discount would, as in Option 2, be limited by a price floor based on wholesale charges plus retail FAC.

Preliminary assessment

- 4.94 Under this option, the market could experience greater levels of efficiency and competition than under Option 2. This is because, without the £1M per annum minimum contract size, competition would be likely to spread more uniformly across all users, with additional welfare gains for lower spenders who would now also benefit from more active price competition.
- 4.95 Removing the £1M per annum threshold is however not free of risks. In the 2005 Consultation, Ofcom set out how it considered that in order for Ofcom and CPs to have sufficient confidence that BT would conduct the appropriate compliance tests on its bespoke offers, BT would have to:
- implement robust management systems; and
 - demonstrate that the authority to approve such bespoke prices was given to an appropriate management level.

- 4.96 In the May 2007 Consent Ofcom addressed those issues by restricting BT's freedom to offer bespoke prices to customers that spend at least £1M per year in telecoms services with BT as recommend in the Replicability Statement. This threshold was imposed because BT had systems in place which would facilitate monitoring of contracts of above £1M per annum in value. However, the threshold limit was not intended to be permanent, and Ofcom signalled that it could be removed once certain conditions had been met, Ofcom therefore stated that this restriction of freedom was to remain in place for at least a year, until Ofcom was satisfied that the application of the monitoring procedures set out in Annex 2 to the May 2007 Consent would also suffice to ensure compliance with the requirements identified in the consent as well as competition law and BT's regulatory obligations more generally. Since the consent was given, the Governance Process has not been tested, as Ofcom as received no complaints on BT's bespoke offers for business exchange lines. The evidence does not strongly suggest that the restriction to contracts of more than £1m was in fact necessary therefore, and it may have limited the benefits of greater pricing freedom.
- 4.97 Moreover, under the proposals of the RNMR Consultation, BT will soon be free of SMP obligations in the market for business exchange lines as a result of the finding that it has no longer SMP in this market. The fact that this market is now effectively competitive strongly suggests that no damage to competition has resulted from the additional freedoms granted in 2007. In addition, we will continue to be able to investigate any complaint that BT had breached its remaining SMP obligations in leased line markets.
- 4.98 We therefore believe that, whilst there may be some risk that, if monitoring procedures are not adequate to deal with large numbers of smaller contracts, BT may be able to engage in anti competitive behaviour, this risk appears sufficiently small that it is outweighed by the potentially greater benefits of extending pricing freedoms to cover a wider range of customers. Overall, we consider that Option 3 is likely to lead to greater benefits than Options 1 and 2.
- 4.99 The benefits of Option 3 are quantified in the following discussion of Option 4, where we compare the relative benefits of these two options.

Option 4 'more pricing freedom with LRIC price floor'

Description

- 4.100 This option would afford BT the greatest additional pricing freedom of the four options. It would be able to set lower prices than with an FAC price floor as in Options 2 and 3.

Assessment

- 4.101 The main difference between Option 3 and Option 4 is that, under Option 3, the price floor would be based on retail FAC whilst under Option 4 it would be based on retail LRIC. We consider the relative benefits of the two in the following paragraphs.
- 4.102 The main benefit of using a retail FAC cost (at least in the short term) is that it would reduce the risk that BT could target customers with discounts which other operators could not match, weakening competition in the market (if competitors are not able to react), and increase its market share. A FAC floor may also help entrants to gain the necessary scale that would allow them to compete effectively with BT.

- 4.103 There are at least two potential downsides of using retail FAC. Firstly, according to economic theory LRIC is generally the price concept that conveys the right signal for efficient entry and investment. Restricting BT's minimum price to retail FAC may encourage inefficient competitors to stay in or enter the market, that is, it could allow operators whose incremental costs were higher than BT's to be profitable.
- 4.104 Secondly, if we assume that competition will drive prices to the price floors, customers will benefit from a smaller price decrease under a retail FAC floor than they would under a retail LRIC floor. LRIC costs are generally lower than FAC and this applies in particular in the product market under consideration. However, given the low proportion of retail costs in the overall cost of the services under consideration and the relatively low difference between BT's LRIC and FAC retail costs, we do not expect the difference between a price floor based on LRIC and one based on FAC to be of a very high magnitude.
- 4.105 However, where, even in the presence of replicability, competitors would not be able to match BT's greater pricing flexibility, due for example to being less able to exploit economies of scale, a FAC floor for retail costs would limit the ability of BT to offer targeted discounts compared to a LRIC floor and better mitigate the strengthening of BT's market power⁴¹. Concerns of this nature led Ofcom to propose a FAC floor when it gave BT additional pricing freedom in business exchange line markets in 2007. These arguments, which were set out in Section 8 of the Replicability Statement, continue to have some force and suggest that some regulatory price floor, above the minimum level (the marginal cost of an individual contract) which might be applied in an ex post competition analysis, continues to be appropriate. However, experience suggests that a FAC floor may now be over-cautious. We have therefore considered whether an appropriate floor might be based on the measure of retail LRIC produced by BT's incremental cost model. This is discussed further below.
- 4.106 We have quantified the relative benefits at a high level. Because of aggregation in the data provided by BT, we are not able to provide estimates for the various digital bandwidths within the economic product market. BT's data is disaggregated between Kilostream and Megastream portfolios. Kilostream leased lines comprise circuits below 2 Mbit/s and the Megastream product line offers leased lines of 2 Mbit/s and above. This is not ideal as the Megastream portfolio also includes services out of the product market under consideration, including sales to MNOs and sales of higher bandwidth leased lines⁴².
- 4.107 Given that retail costs constitute a small part of total costs for these services, the benefits are quite similar in size for the two alternatives. Our quantification⁴³ shows that, at a high level, customers could gain up to £100m in the event that competition drives prices to the FAC floor. This implies price discounts across the board of about 20%. Disaggregated, this implies potential gains of up to £39m for Kilostream customers and up to £61m for Megastream customers or discounts up to 45% and 15% respectively. At a high level, customers can gain up to £113m in the event that

⁴¹ The arguments in favour of FAC were set out in details in paragraphs 8.12 and following in the April 2006 Replicability Statement.

⁴² However, there may be a good reason for the inclusion of sales to mobile operators not affecting too much the estimation of the benefits of option 2 calculated on the Megastream portfolio (see paragraphs 7.63 and following of the BCMR Consultation). Arguably, MNOs have some countervailing buyer power when purchasing low bandwidth leased lines from BT because they are large buyers that have the alternative to purchase such service from BT's competitors or even self-supply it. Therefore, we would expect these MNOs to buy these services at a price closer to cost than other business customers and margins on these transactions to be relatively low.

⁴³ details of the method used to calculate these estimates are set out in annex 8

competition drives prices to the LRIC floor. This implies potential discounts across the board of up to 23%. Disaggregated, this implies potential gains of up to £41m for Kilostream customers and up to £72m for Megastream customers or discounts up to 48% and 18% respectively. Of course, the deregulation we propose is unlikely to result in all prices falling all the way to the price floor. The magnitude of price falls will depend on the increase in the intensity of competition. These figures therefore indicate the potential gains.

- 4.108 A second issue is that, although we expect the benefits (to customers) from BT being able to bundle SMP and non SMP products to be positive, it is quite difficult to quantify those benefits since we do not know exactly with what services outside the product market under consideration BT would bundle its SMP products with.
- 4.109 A third and final issue is that we do not have data regarding the margins made by BT's competitors. These margins would add to the margins made by BT and affect the estimation of the benefits of these options to consumers. However, BT's data alone are enough to estimate the maximal potential price discounts of the two options.
- 4.110 All these issues imply that the size of the benefits which we have quantified is likely to be underestimated, in particular for the benefits with a LRIC price floor.
- 4.111 The above quantification is based on a conservative assumption of a zero price elasticity of demand for low bandwidth leased lines, in other words, an assumption that output will not expand as prices fall. This implies that the benefit to consumers from lower prices is offset by an equivalent loss to suppliers and so the net effect (taking into account the effects on both consumers and producers) is zero. In a conventional cost-benefit analysis, benefits to consumers and producers are generally weighted equally. However, even in this type of analysis, increased competition can still result in significant net benefits if: i) price reductions lead to increases in demand and ii) competition puts greater pressure on operators to reduce costs and become more efficient. Moreover, in certain circumstances it may be appropriate to weight benefits to consumers and producers differently.
- 4.112 If the price elasticity of demand is strictly negative, then reducing prices will cause demand to increase. This will lead to greater benefits to customers than if elasticity is assumed to be zero. Moreover, if initially prices are above cost, the benefit to consumers will also be sufficient to outweigh the effect of the price reduction on producers, resulting in a net gain in efficiency. This is because prices which are above the cost of production prevent some transactions, those where the consumer is willing to pay more than the cost of production but less than the market price, from taking place.
- 4.113 To quantify the net benefit of price reductions, we would need an estimate of the elasticity of demand for leased lines. We currently do not have estimates for price elasticity of demand in the leased lines market. In the absence of directly relevant evidence therefore, we have used estimates of elasticities from other telecoms markets as a proxy.
- 4.114 In the investigation of Fixed to Mobile termination charges, the Competition Commission has assumed a price elasticity of mobile subscriptions of -0.3. Estimates of the price elasticity of demand for fixed narrowband exchange lines tend to be around -0.1 (estimates of price elasticities of demand for "access" services tend to be lower in magnitude than those for calls). We have therefore assumed a price elasticity of demand for leased lines in the range of -0.1 to -0.3. On this basis, the

benefits to customers from reduced prices would range from £101m to £103m under a FAC floor and from £115m to £117m under a LRIC floor.

- 4.115 In this case, the net effect (taking into account the impact on producers) would be strictly positive, varying from £1m to £3m under a FAC floor and from £2m to £4m under a LRIC floor. This is before taking into account any other benefits of increased competition, for example those arising from increased efficiency.
- 4.116 Finally, the considerations set out above for Option 3 with respect to risks linked to the appropriate governance are also relevant when considering this option.

Preliminary conclusion

- 4.117 Based on the assessment above, we consider that Option 4 presents the biggest potential benefits and should provide the basis for our policy. Option 1 provides for the lowest potential benefits, and would be inconsistent with our policy on replicability as set out in the Replicability Statement. Option 2 would provide for some potential gains compared with Option 1, but the benefits could be limited to big customers who spend more than £1M a year with BT. In addition, the experience of the consent given with respect to business exchange lines has shown that while replicability has contributed to greater competition and reduced BT's market shares to the point that it has no longer SMP, it has until now not produced a significant reduction of prices.
- 4.118 Option 4 offers more potential benefits than Option 3. Both carry the potential risks related to identifying right governance system to monitor compliance, to which we will return later. However, if prices can be set on the basis of retail LRIC there could be more potential benefits to consumers in the form of discounts. We estimate that the difference between the two options could be up to £13M in potential savings for consumers. In addition, the ability to price down to LRIC promotes more efficient competition in the long term. Therefore, Option 4 is overall our preferred option.
- 4.119 However, we note that there is some evidence that there is more competition in the supply of retail leased lines at bandwidths below 2Mbit/s than at bandwidths above this level. There may be a case for a more cautious approach to the latter and this may mean that the same degree of deregulation might not appropriate for both segments, at least for a period of time. We do not think that the evidence supports options 1 or 2, even for the higher bandwidth segment. However, there may be some benefit in a price floor of FAC (that is Option 3) in the higher bandwidth segment, until experience of replicability in the market at 2 MBit/s and above has been gained.

Question 2: Do you agree with our assessment of the preferred option?

Question 3: Do you think that a more cautious approach should be adopted for the segment at and above 2Mbit/s than for the lower bandwidth segment?

Governance

- 4.120 We have discussed how there is a risk of BT behaving anti competitively if the right compliance monitoring system is not in place. There is also a risk that BT's retail LRIC cost accounting is not fit for purpose. The first risk can be minimised by setting out a governance that:
- provides some reassurance that BT has some internal compliance; and

- gives Ofcom the ability to test BT's compliance robustness.

- 4.121 In May 2007, we gave BT consent and set up a governance system that addressed these issues in relation to business exchange lines. In the absence of views to the contrary, it seems reasonable to ask BT to implement the same level of governance. This would also minimise the speed and cost of implementing it, as it is already in place. The governance process which forms part of the draft consent is discussed in detail in Annex 1 to the Schedule contained in Annex 5 of this document. BT would have to report quarterly to Ofcom providing a full list of the bespoke offers made in the period. Ofcom would then conduct checks to assert that the quality of the information kept for a particular offer reliably shows that BT is complying with its ex ante obligations.
- 4.122 We have not evaluated BT's proposed methodologies, processes and reporting for meeting these governance arrangements. We are inviting BT to submit detailed proposals with applied examples to show that their governance process will be fit for purpose. We aim to review these proposals and comment on them in our final Statement. This will include a review of the way BT proposes to calculate retail LRIC costs.
- 4.123 In addition, Ofcom would consider removing the consent if, in the future, when conducting checks of particular bids, Ofcom would not be satisfied that the information BT keeps is reliably showing it is complying with its obligations. Equally, should Ofcom consider at any time in the future that BT's lines are no longer replicable it would reconsider this issue and the level of regulation that should apply to BT's prices for retail low bandwidth digital leased lines. This could be triggered for example by a deterioration in the quality of PPCs *vis a vis* BT's retail leased lines. Ofcom will continue to monitor the appropriate KPIs in place in this area through the quarterly report published by BT and available also to CPs.

Question 4: Do you consider the proposed governance is adequate? Should we consider other options or variations?

Section 5

Proposals

Introduction

- 5.1 In this Section, having in Section 4 identified our preferred approach, we set out our proposals in greater details. Our preferred approach consist of two separate policy proposals, that, taken together, will allow, if confirmed, BT to bespoke prices for retail low bandwidth digital leased lines, including in bundles with other non SMP products, for all customers, provided that bespoke prices do not fall below a price floor of the appropriate network charges plus retail LRIC.
- 5.2 The first part of our approach relates to BT's obligation to publish, and adhere to, a standard Reference Offer. Our proposal is to disapply SMP Condition I4 'Requirement to publish a reference offer' for BT's low bandwidth digital retail leased lines.
- 5.3 In addition, in line with the approach adopted when giving consent to BT to offer bespoke pricing for business exchange lines set out in the May 2007 Consent, we would clarify that we no longer regard mixed bundles⁴⁴ of SMP and non-SMP services including leased lines as necessarily unduly discriminatory. This proposed approach would affectour future interpretation of SMP Condition I2 'Requirement not to unduly discriminate'.

Publication of Reference Offer

- 5.4 As explained in Section 3, Ofcom believes that BT's retail low bandwidth digital leased lines can now be replicated by BT's competitors. As a result, Ofcom considers that it should disapply the requirement to publish a Reference Offer for retail low bandwidth digital leased lines. This would allow BT to offer bespoke prices to all its customers. There are certain provisos linked to this proposal:
- That prices do not fall below a price floor which covers tariff charges for wholesale network services plus long run incremental retail costs; and
 - That BT puts in place and maintains appropriate internal management systems to ensure that prices do not go below the price floor and complies with the proposed Governance Process set out in Annex 1 to the Draft Consent published in Annex 5.
- 5.5 Ofcom considers that with the proposed Governance Process it might be expected that BT will be more able to ensure compliance with ex-ante provisos.
- 5.6 Ofcom may conduct *ad hoc* checks that BT's unpublished bespoke prices offering meet the price floor test. Ofcom may reapply the condition in the future should, in its view, a new bar to replicability emerge or an old bar to replicability re-emerge.
- 5.7 The Draft Consent that would give regulatory effect to the above proposals is set out at Annex 5.

⁴⁴ A bundle is said to be "mixed" if the services in the bundle are also available separately.

Mixed service bundles

- 5.8 Ofcom explained in the Replicability Statement that once competitors could replicate BT's retail low bandwidth digital leased lines services using fit for purpose wholesale inputs it would no longer presume that service bundles which mix SMP products with non-SMP products would be discriminatory in an undue manner.
- 5.9 The presumption that service bundles which mix SMP and non-SMP products would be likely to be discriminatory in an undue manner is not expressly set out in an SMP services condition. This policy approach was instead set out in the May 2006 Business Pricing statement⁴⁵.
- 5.10 Given that Ofcom considers that BT's retail low bandwidth digital leased lines services can now be replicated, Ofcom proposes to no longer presume that mixed services bundles are unduly discriminatory. The suggested new interpretation of the no undue discrimination SMP services condition would only relate to service bundles that BT's retail low bandwidth digital leased lines services with products from markets in which BT does not hold SMP. Ofcom considers that it should no longer presume that, in applying the ex ante no-undue discrimination requirement, service bundles involving these products would be likely to be discriminatory in an undue manner⁴⁶. However, Ofcom cannot fetter its discretion in considering these issues on a case by case basis, nor does this suggestion affect Ofcom's consideration of any investigation under the competition law.

Communications Act tests

- 5.11 Ofcom considers that the Draft Consent set out at Annex 5 meets the tests set out in the Act.
- 5.12 Ofcom has considered its duties under section 3 and all the Community requirements as set out in paragraph 2.17 onwards. In particular, the Draft Consent is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefit of retail consumers. In a competitive market place Communications Providers would be able to and need to compete for individual contracts and would therefore need to set prices at the competitive level. They would not be able to simply undercut BT Retail's prices because they would not know the exact level at which they were set. Consenting to the removal of the obligation to publish a Reference Offer would allow the market to set prices and discourage price following whilst still implementing a safety floor for BT's prices. This would strike a balance between addressing the competition concerns identified in the BCMR Statement and intervening only where action is needed⁴⁷. In combination, Ofcom considers that this would help to promote competition in the market for retail low bandwidth digital leased lines services.
- 5.13 Section 49 of the Act requires Ofcom to be satisfied before it gives a consent that to do so is:
- objectively justifiable in relation to the networks, services or facilities to which it relates;

⁴⁵ http://www.ofcom.org.uk/consult/condocs/pricing_business_customers/ofcom_statement/

⁴⁶ See par. 8.6 of the Replicability Statement for an explanation of how Ofcom considers this proposed interpretation to be consistent with the non discrimination guidelines.

⁴⁷ See par. 8.418 and Table 8.17 of the BCMR Statement.

- not such as to discriminate unduly against particular persons or a particular description of persons;
- proportionate to what the condition is intended to achieve; and
- in relation to what it is intended to achieve, transparent.

5.14 Ofcom considers that the Draft Consent meets the requirements above. In particular, we consider that the Draft Consent is:

- objectively justifiable as it is aimed at promoting competition in the provision of BT's retail low bandwidth digital leased lines services as CPs can now replicate services offered by BT Retail using fit for purpose wholesale products;
- not unduly discriminatory to BT because there is no other Communications Provider with SMP in the provision of retail low bandwidth digital leased lines;
- proportionate to what is intended to achieve as it would apply to BT's retail low bandwidth digital leased lines services only as Ofcom considers that BT has resolved satisfactorily the outstanding issues that constituted a bar to replicability; and
- transparent in relation to what it is intended to achieve. Its aims and effect, to disapply the requirement to publish a Reference Offer subject to two provisos set out in paragraph 5.4 above, are clear. The text of the Draft Consent itself has also been published with this consultation and has been drafted so as to secure maximum transparency.

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 4 August 2009**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at http://www.ofcom.org.uk/consult/condocs/low_bandwidth/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 – business.connectivity.review@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.
- Serafino Abate
Floor 4
Competition Division
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- Fax: 020 7981 3333
- 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 X. 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 Serafino Abate on 020 7981 3000.

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 later in 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:
- A1.16 Vicki Nash
Ofcom
Sutherland House
149 St. Vincent Street
Glasgow G2 5NW
- Tel: 0141 229 7401
Fax: 0141 229 7433
- Email vicki.nash@ofcom.org.uk

Annex 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 coversheet 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

	<input type="checkbox"/>		<input type="checkbox"/>
Nothing Name/contact details/job title			
Whole response	<input type="checkbox"/>	Organisation	<input type="checkbox"/>
Part of the response	<input type="checkbox"/>	If there is no separate annex, which parts?	

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

Annex 4

Consultation questions

Question 1: Do you agree with our assessment of the relevant competitive issues? Are there any other issues Ofcom should consider?

Question 2: do you agree with our assessment of the preferred option?

Question 3: Do you think that a more cautious approach should be adopted for the segment at and above 2Mbit/s than for the lower bandwidth segment?

Question 4: do you consider the proposed governance is adequate? Should we consider other options or variations?

Annex 5

Notification of a Draft Consent under section 49(4) of the Act

Draft Consent to disapply conditionally the obligation to publish a Reference Offer in relation to the provision of retail leased lines of up to and including two megabits per second bandwidth capacity as required by SMP Condition I4 set out in Schedule 6 to the Business Connectivity Market Review published on 8 December 2008

Proposals in this Notification

1. Ofcom hereby, in accordance with section 49(4), proposes, in relation to the retail leased lines market identified in the *Business Connectivity Market Review, review of retail leased lines, symmetric broadband origination and trunk markets*⁴⁸ of 8 December 2008 to provide a consent removing the obligation on BT to publish a Reference Offer in relation to the provision of retail leased lines of up to and including two megabits per second bandwidth capacity.
2. The effect of, and Ofcom's reasons for making, these proposals are contained in Section 4 and Section 5 in the accompanying explanatory statement to this Notification.
3. Ofcom considers that the Draft Consent referred to above complies with the requirements in section 49.
4. The Draft Consent is set out in the Schedule to this Notification.

Ofcom's duties

5. 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, and the six community requirements set out in section 4 of the Act.

Making representations

6. Representations may be made to Ofcom about the proposals set out in this Notification by no later than 4 August 2009.
7. In accordance with section 50(4) of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of the other Member State.

Interpretation

8. In this Notification:
 - a) "**Act**" means the Communications Act 2003;

- 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; and
 - c) **"Ofcom"** means the Office of Communications.
9. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them in this Notification and otherwise any word or expression shall have the same meaning as it has in the Act.
10. For the purpose of interpreting this Notification:
- a) headings and titles shall be disregarded; and
 - b) the Interpretation Act 1978 shall apply as if this notification were an Act of Parliament.
11. The Schedule to this Notification shall form part of this Notification.

Gareth Davies



Competition Policy Director, Ofcom

A person duly authorised under paragraph 18 of the schedule to the Office of Communications Act 2002

23 June 2009

Schedule

[Draft] Consent to disapply conditionally the obligation to publish a Reference Offer in relation to the provision of retail leased lines of up to and including two megabits per second bandwidth capacity as imposed on British Telecommunications plc ('BT') under the Communications Act 2003 as a result of the analysis of the market for the provision of traditional interface retail leased lines up to and including a bandwidth capacity of eight megabits per second in which BT was found to have significant market power in the Business Connectivity Market Review, published on 8 December 2008

Background

1. On 12 April 2006, Ofcom published a statement entitled *The replicability of BT's regulated business services and the regulation of business markets*⁴⁹ ('the Replicability Statement') setting out how Ofcom would, once BT had achieved replicability of, among other services from markets where it had Significant Market Power ('SMP'), its retail low bandwidth digital leased lines provided with a traditional interface⁵⁰, Ofcom would consider granting BT the freedom to bespoke prices to its customers.
2. On 8 December 2008, Ofcom published a statement entitled Business Connectivity Market Review, review of retail leased lines, symmetric broadband origination and trunk markets⁵¹ ('the BCMR Statement'). Ofcom concluded that BT had SMP in the retail market for analogue and digital leased lines provided over a traditional interface at speeds up to and including 8 Mbit/s.
3. As a result of the SMP finding, in accordance with section 48(1) of the Act, Ofcom set on BT pursuant to section 45 of the Act, the SMP service conditions set out in Schedule 6 of the BCMR Statement including Condition I4 which imposes obligations on BT with regard to publishing a reference offer as follows:

"I4.1 The Dominant Provider shall be required to publish a Reference Offer in relation to the provision of retail leased lines of up to and including two megabits per second bandwidth capacity except in so far as Ofcom may otherwise consent in writing and act in the manner set out below.

I4.2 Subject to paragraph I4.7 below, the Dominant Provider shall ensure that a Reference Offer in relation to the provision of retail leased lines of up to and including two megabits per second bandwidth capacity includes at least the following:

 - a) the technical characteristics, including the physical and electrical characteristics as well as the detailed technical and performance specifications which apply at the network termination point;
 - b) charges, including the initial connection charges, the periodic rental charges and other charges. Where charges are differentiated, this must be indicated;
 - c) information concerning the ordering procedure;

⁴⁹ <http://www.ofcom.org.uk/consult/condocs/busretail/statement/>

⁵⁰ These are leased lines of speeds up to and including 2 Mbit/s provided with an SDH/PDH interface.

⁵¹ <http://www.ofcom.org.uk/consult/condocs/bcmr08/>

- d) the contractual period, which includes the period which is in general laid down in the contract and the minimum contractual period which the user is obliged to accept;
- e) any refund procedure.

14.3 The Dominant Provider shall, within one month of the date that this Condition enters into force, publish a Reference Offer in relation to retail leased lines of up to and including two megabits per second bandwidth capacity that it is providing as at the date that this Condition enters into force.

14.4 The Dominant Provider shall update and publish the Reference Offer, in relation to any amendments, or in relation to any further retail leased lines of up to and including two megabits per second bandwidth capacity provided after the date that this Condition enters into force, on the same day as such amendments take effect or further retail leased lines are offered.

14.5 Publication referred to above shall be effected by:

- a) placing a copy of the Reference Offer on any relevant website operated or controlled by the Dominant Provider; and
- b) sending a copy of the Reference Offer to Ofcom.

14.6 The Dominant Provider shall send a copy of the current version of the Reference Offer to any person at that person's written request (or such parts which have been requested).

14.7 The Dominant Provider shall make such modifications to the Reference Offer as Ofcom may direct from time to time.

14.8 The Dominant Provider shall provide retail leased lines of up to and including two megabits per second bandwidth capacity at the charges, terms and conditions in the relevant Reference Offer and shall not depart there from either directly or indirectly, unless Ofcom otherwise directs. In addition, where, in response to a particular request, the Dominant Provider considers it unreasonable to provide a retail leased line of up to and including two megabits per second bandwidth capacity at the charges, terms and conditions set out in the relevant Reference Offer, it may only depart from its Reference Offer with the consent of Ofcom.

14.9 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition."

- 4. In November 2008, BT wrote to Ofcom to set out how it considered that it had addressed the pending replicability issues identified in the Replicability Statement.
- 5. 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 or facilities to which it relates;
 - b) not such as to discriminate unduly against particular persons or a particular description of persons;

- c) proportionate to what the condition is intended to achieve; and
 - d) in relation to what it is intended to achieve, transparent.
6. 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.
7. Ofcom has considered every representation about the Draft 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

8. Ofcom hereby, pursuant to section 49 of the Act and under Condition I4.1 gives consent to BT, subject to paragraph 9 below, so as to BT no longer being required to publish a Reference Offer in relation to the provision of retail leased lines of up to and including two megabits per second bandwidth capacity
9. The disapplication of Condition I4 as set out above will only apply where:
- (a) prices do not fall below a price floor which covers transfer charges for network components plus long run incremental retail costs; and
 - (b) BT puts in place and maintains appropriate internal management systems to ensure that prices do not go below the price floor and complies with the Governance Process set out in Annex 1 of this Consent.

Interpretation

10. In this Consent:
- a) “**Act**” means the Communications Act 2003;
 - b) “**BT**” and “**Dominant Provider**”, respectively, means British Telecommunications plc, whose registered company number is 1800000 and any British Telecommunications plc subsidiary or holding company, or any subsidiary of that holding company, all as defined by section 736 of the Companies Act 1985 as amended by the Companies Act 1989; and
 - c) “**Reference Offer**” means the terms and conditions on which the Dominant Provider is willing to enter into an agreement for the provision of a retail leased line.
11. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them in this Consent and otherwise any word or expression shall have the same meaning as it has in the Act.
12. For the purpose of interpreting this Consent:
- a) headings and titles shall be disregarded; and
 - b) the Interpretation Act 1978 shall apply as if this Notification were an Act of Parliament.

Effective date

13. This Consent shall take effect on [date].

Gareth Davies

Competition Policy Director, Ofcom

A person duly authorised under paragraph 18 of the schedule to the Office of Communications Act 2002

[Date]

Annex 1

The Governance Process

1. This document outlines BT's internal governance processes as an annex to the Consent.
2. This Governance Process will ensure that BT will put in place and maintain appropriate internal management systems to ensure that bespoke prices offered to customers are not less than the 'price floor'.
3. In turn, this Governance Process should alert Ofcom if and where BT does not offer bespoke prices which are below a 'price floor'. The price floor represents the sum of the charges for the wholesale input into the product plus the retail costs of the product calculated on a long-run incremental cost (LRIC) basis.
4. Ofcom further notes that BT's prices, of course, should not breach competition law or any regulatory obligations.
5. BT will retain the necessary contractual and associated financial documentation for a minimum of two years or for the life of the contract, whichever is the shorter.
6. Ofcom's proposal is that the governance will be built on existing processes, in two parts. The first part is to calculate minimum prices that can be used for this bespoke pricing. The second part is to retain the necessary documentation for audit purposes.

Calculating the minimum price

7. The minimum price that can be offered to a customer on a bespoke basis is the 'price floor'. BT will use a retail LRIC model satisfactory to Ofcom in addition to wholesale tariff inputs to determine the price floors for leased lines for business customers. BT's model should separately identify costs for leased line connection and rental charges. The model includes:
 - i) The published prices for PPC connections and rentals, as published in the BT Price List; and
 - ii) The retail costs involved in the supply of a leased line. These costs are calculated on a LRIC basis using relevant and robust data sources such as BT's most recent published RFS. The retail cost methodology and cost stack model will then be used by the BT Global Services and BT Retail pricing teams to calculate the minimum prices that BT will be able to offer to prospective customers on a bespoke basis. These minimum prices will be revised in line with the updated information from the cost stack model, to ensure that the bespoke prices offered to customers are not below the 'price floor'.

Process for Standalone Business Leased Line Bespoke Pricing

8. This process applies where BT offers a customer bespoke prices for leased lines on a stand-alone basis (i.e. not in conjunction with other services or products).
9. A salesperson will engage with business customers for sales opportunities, as normal. As part of the customer engagement process, the salesperson will establish sales opportunities where the customer may be able to receive leased lines that are priced on a bespoke basis.

10. The details of the process described are generally applicable and may vary depending on the specific circumstances.
11. If a sales opportunity arises the salesperson will then negotiate prices with the customer. The salesperson will ensure that the final prices offered are at or above the 'price floor'.
12. The proposed price offer for the customer will then be processed and authorised using the existing sign-off processes within BT Global Services and BT Retail.
13. The approved offer will then be made to the customer.
14. If the customer accepts the offer, a contract will be signed by BT and the customer. If the customer does not accept the offer, negotiations will either cease or continue (in which case the negotiation process described above will be repeated).
15. BT will bill the customer for leased lines using the relevant billing system. If the price points for leased lines, as set out in the customer contract, do not already exist in the relevant billing system, then the new price points will be added.
16. BT will be required to provide evidence of compliance with the Consent at any given time to Ofcom. This will entail providing high-level evidence of compliance on the portfolio of leased line products and occasional evidence of compliance on individual contracts picked randomly.
17. The nominated member of the regulatory team will be responsible for liaising with Ofcom for audit purposes.

Single Price Process - For Leased Lines sold together with another, unregulated product

18. Where a single price is required for a combination of leased lines and non-SMP elements or products, the Governance Process is different from the stand-alone standard process described above.
19. In this case, additional cost information will be required for the non-SMP elements (whether a bespoke element or another product) for the purpose of calculating a new 'price floor'. The costs of the additional elements will be added to the bespoke leased line 'cost stack' model, retail costs of the non-SMP elements will be calculated on an long run incremental cost (LRIC) basis.
20. An analysis will be prepared to demonstrate that the combined single price for the leased lines and the non-SMP elements is above the 'price floor' over the term of the contract.
21. The financial analysis provided to the nominated member of the regulatory team will specify separately the price and costs associated with the non-SMP elements or products as well as the leased lines.

Annex 6

Review of the replicability issues identified in the Replicability Statement

1. This annex discusses the Replicability Statement issues, what has happened since and Ofcom's views on whether BT has resolved each of the issues.
- 1. Addressing cost disparities between retail leased lines and PPCs as a result of the PPC pricing model**
2. In the Replicability Statement, Ofcom identified a number of accounting and modelling changes that could collectively be described as addressing cost disparities between retail leased lines and PPCs as a result of the PPC pricing model. Following further analysis, our concerns were set out in more detail in a paper initially published in 2007 and reproduced as Annex 13 of the January 2008 BCMR Consultation.
3. During the course of further analysis and investigative work a major error was discovered in the revenue data for TI markets. We found that the methodologies and practice for calculating revenues used by BT to prepare its regulatory accounting information (a key source of data for demonstrating no undue discrimination and providing transparency to stakeholders) had been significantly overstating revenues. BT subsequently corrected this error and restated the 2006/07 revenues in the 2007/08 RFS.
4. The net adjustment of this error to circuit revenues was a reduction of £269m. This was offset by the inclusion of revenues previously omitted from the RFS of £144m giving an overall net restatement of £125m. Given these material corrections we commissioned an independent consultant (Analysys Mason) to review the new methodologies used by BT and assess the accuracy of the restated data. Analysys Mason's main finding is that the current calculation methods used by BT appear reasonable although we believe it is important that we continue to improve the reliability of the data.
5. We set out further details of the 2006/07 restatement and the Analysys Mason report on our Leased Lines Charge Control consultation⁵². In developing our charge control proposals we took full account of the revised volume information including:
 - 1) a revision to circuit length calculations that now uses the location of the local serving exchange;
 - 2) the removal of non-revenue earning bearer circuits which were included in error in the revenue base; and
 - 3) a revision of local end counts.
6. On all of the issues raised, there were a series of meetings and information exchanges with BT resulting in a range of further actions and improvements. Where these improvements required changes to the regulatory reporting framework then we have directed BT to make changes to the reporting of PPC's in its regulatory Financial Statements ('Changes to BT's 2007/08 Regulatory Financial Statements')

⁵²Leased lines charge control consultation <http://www.ofcom.org.uk/consult/condocs/llcc>

published on 26 June 2008 and 'Changes to BT and KCOM's regulatory financial reporting 2008/09' published on 15 June 2009)⁵³.

7. There were a range of diverse reporting issues set out in our Replicability Statement. We believe most of the substantive issues have been fully resolved although there remains some ongoing activity with BT to finalise a few outstanding issues. The regulatory financial reporting framework is in any case subject to ongoing review and improvement.

Progress and conclusions on the main reporting issues:

ii) External revenue reconciliations

8. Our analysis of external PPC revenues disclosed in the RFS identified differences from the amounts actually billed. In order to understand the reasons for these differences and enhance the reliability of BT revenue calculations, we have put in place a requirement on BT to prepare supplementary reconciliations at a disaggregated level. This information was prepared for 2007/08 at an aggregated level however we believe the further disaggregation required in 2008/09 will provide a more robust reconciliation process.
9. It was this reconciliation analysis that provided the main lead to the discovery of the material overstatement of TI market revenues. BT does not prepare internal transfer charges using similar billing systems to external supplies. The regulatory accounting calculation relies on robust volume data applied to published product tariffs. This reconciliation showed that the volume data was not reliable and further investigations by BT showed that the sourcing of these volumes was deficient.
10. BT has now put in place new processes to extract and verify the volume data it uses for regulatory accounting purposes. We have also highlighted this matter to BT's external auditor in advance of their audit of BT's 2008/09 RFS.
11. These reconciliations will put in place a mechanism to monitor and follow up on potential inconsistencies in the way BT discloses internal revenues. This will be in addition to other follow up work flagged in the Analysys Mason report, identified by BT's own internal scrutiny or found by our ongoing improvement reviews.

iii) Reporting of excess construction charges (ECC's)

12. BT confirms that ECC revenues are now fully recognised in the RFS.

iv) Reporting of resilience services

13. We have confirmed with BT that these services are now calculated separately. Where material for disclosure purposes these services would normally be identified as 'protected path variants and resilience'.

v) Third party equipment (and infrastructure) sales

⁵³ See footnote 10 and 11.

14. BT provided further analysis and explanations of the way it calculates internal sales. BT's assumptions and estimates used for these calculations appear reasonable and would not lead to a material distortion of the reported information.

vi) *Transparency of regulatory accounting methods*

15. We found that the accounting documentation that supports and explains the preparation of the RFS (in particular the calculation of BT's internal transfer charges and external PPC revenues) fell short of our transparency requirements. This documentation (in this case the 'Detailed Attribution Methods') has subsequently been updated by BT.

16. Additionally, BT has also agreed to include in the documentation that supports the 2008/09 RFS a description of the principles and mechanics of the logical pricing model with regard to the pricing of per km element of PPC circuits.

vii) *Reporting of CLZ and non-CLZ charges*

17. Revenues for relevant PPC services are now calculated and disclosed separately for the Central London Zone (CLZ) and non CLZ zone.

viii) *Local end adjustment*

18. BT has agreed to improve the assumptions used in its 2008/09 RFS to better reflect the local end adjustment. This reporting disclosure will be further reviewed in light of our price control statement for PPC's to be published after this consultation.

ix) *Payment terms*

19. For reporting purposes, a generic payment terms period has been agreed at 43 days. This is a significant reduction from the previous arrangement of 59 days. However, for price control purposes, this assumption is reviewed and a bespoke period is used where the payment terms specific to that control is materially different from a BT average.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

20. BT has made a number of improvements to its regulatory reporting since the Replicability Statement and has substantially addressed the issues raised. However, having found a material error requiring a restatement of BT's 2006/07 RFS, we recognise the importance of remaining vigilant in monitoring BT's performance in preparing and publishing reliable regulatory financial information. For example, there is ongoing work, particularly on the calculation and reconciliation of PPC revenues, between the Ofcom competition finance team and BT that could result in proposals for further improvements to BT's 2009/10 RFS. Given the progress made on these issues and the relatively low significance of any outstanding work to the aims of Replicability, our view is that the regulatory financial reporting issues are no longer a barrier to a finding of replicability.

2. Implementation of revised forecasting penalties

21. In order to address this issue and meet replicability, Ofcom requested that BT recalculate penalties based on the most recent cost data, rather than using the model

for determining penalties that was described in Annex D of the PPC Phase two Direction.

BT action to address this issue:

22. BT subsequently updated the costs in the model as specified in Annex D, using the most recent data available from the 06/07 year Accounting Separation system. BT now claims that the penalty charges now reflect BT's incurred costs.
23. BT met with Ofcom on 20 February 2008 to explain the changes and data sources used. Ofcom's view at the meeting was that it recognised that the model had now been updated with recent cost data and that BT would implement the changes as soon as practicable. It was also agreed that in future, BT would review the costs annually.
24. The new charges came into effect on 1 April 2008 and an industry briefing was sent on 14 March 2008.
25. BT believes that it has fully addressed the concerns outlined in the Replicability Statement on the implementation of revised forecasting penalties and that penalty charges are now based on BT's up-to-date costs.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

26. Ofcom also asked BT to provide appropriate documentation to show that BT Retail pays forecasting penalties in the same way as external customers. In its response, BT indicated that internal customers do not follow the same process as external customers, in that there are no internal transfer charges for forecasting penalties. However, BT confirmed that the costs which the forecasting penalties are designed to recover are included in the regulatory accounts, and are allocated between BT's downstream businesses and external customers on the basis of volumes. BT has estimated, if an internal transfer charges were to be levied for forecasting penalties to BT retail, it would be in the region of £65k per annum⁵⁴.
27. Ofcom is satisfied that the forecasting penalties have been amended in an appropriate manner. In addition, we do not consider that the absence of comparable internal transfer charges should be regarded as an obstacle to replicability, given the inclusion of the related costs in the regulatory accounts and their small scale relative to BT's annual spend of £200m on PPCs. We therefore consider that this issue should no longer be considered as a barrier to replicability.

⁵⁴ BT has stated in a submission to Ofcom that "These costs, however, are allocated to BT's downstream businesses in the regulatory accounts. The costs are initially allocated to the various 'plant group' cost categories. These costs are then apportioned to a number of 'network component' cost centres. These components include the various network activities relating to both CP's and BT's downstream customers. These costs are apportioned to services based on volumes. These services are separately defined for CP's services and BT's downstream services. The use of the volume cost driver means that the costs are allocated to CP's and BT's downstream services on an equitable basis and means that whilst there is no explicit transfer charge, BT's downstream business do get an equitable allocation of these costs."

3. Implementation of an option to re-designate/grandfather muxes on cost-oriented terms

28. In the Replicability Statement, Ofcom concluded that until BT had made available grandfathering/re-designation of muxes on cost-oriented terms, this would continue to be a bar to replicability.

Grandfathering

29. Grandfathering is the process whereby a CP can nominate retail Plesiochronous Digital Hierarchy ('PDH') multiplexer equipment (16x2 & 4x2) as a PPC PoH. Once Grandfathered, any spare capacity on the equipment can be used for both PPC and retail leased lines.

BT action to address this issue:

30. BT claim that PDH is obsolete technology and PDH equipment is becoming difficult and expensive to maintain. It is increasingly being replaced with Synchronous Digital Hierarchy ('SDH') equipment when faults develop as limited spare parts are available. PDH equipment is resource-hungry in terms of maintenance and cost, with manual systems needed to support it. The accepted industry interface is SDH STM-1, which is the standard interface for existing and new users of the PPC and Radio Backhaul Station (RBS) services.
31. Following the introduction of PPCs, it had been possible to Grandfather PDH equipment from late 2002 to mid 2003. BT has not provided any new PDH PoH equipment since August 2001.
32. BT claim that although some CPs continue to use PDH equipment as a PoH, its obsolescent nature makes it unrealistic to continue supplying this equipment going forward and there are less than 200 PDH multiplexers now in use.
33. In view of the low installed base of PDH units, BT believed that Grandfathering did not make economic sense, given the obsolescent nature of the equipment. For means of comparison, they stated that the costs of re-designation were approximately one sixth that of Grandfathering.
34. BT therefore decided not to re-introduce Grandfathering, as they felt that with less than 200 units that might require it, it would be disproportionately expensive. BT claimed that, furthermore, industry had not raised this with BT as an issue since re-designation had been launched.
35. BT agreed with Ofcom to send a briefing to industry setting out their position and inviting responses, and if there were no objections, then the replicability requirement would be satisfied. A briefing was sent to industry on 27 March 2008.
36. BT only received one response to this briefing, from Cable and Wireless who raised a separate issue about the requirement for having one set of PoH infrastructure for both PPC and RBS products, but which did not ask for the re-introduction of Grandfathering.
37. Therefore, in relation to Grandfathering, BT found that the ability to migrate retail leased lines to PPCs and re-designate any associated retail muxes on cost-based charges now enables CPs to readily migrate customers in all but the very small number of instances where PDH muxes exist. BT consulted with industry and

received no responses disagreeing with the proposal not to re-introduce Grandfathering that would have enabled the PDH muxes to be migrated.

38. For this reason, BT believes that it has fully addressed the concerns relating to the ability to migrate retail private circuits to PPCs where retail multiplexers are being used.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

39. Ofcom is now satisfied that BT does not need to re-introduce Grandfathering in order to meet replicability and this requirement has now been met.
40. Ofcom agreed with BT that if it sent a briefing to industry setting out their position not to re-introduce Grandfathering and inviting responses and if there were no objections then the replicability requirement would be satisfied.

Re-designation

41. Ofcom stated in the Replicability Statement that BT had to make re-designation available on cost-oriented terms and that, until it had done so, this would continue to be a bar to replicability.
42. Re-designation is the process whereby a CP can nominate certain retail multiplexer equipment as a PPC Point of Handover (PoH). This applies to SMA-1, SMA-4, SMA-16 or MSH equipment.

BT action to address this issue:

43. On 6 September 2006, BT re-launched re-designation of muxes. Charges were cost-oriented and the detailed costing information was shared by BT with Ofcom.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

44. Ofcom therefore believes that BT is now replicable with regards to re-designation of multiplexes.

4. Successful conclusion of the Master services Agreement or PPC contract review process

45. The Replicability Statement noted that concerns had been expressed by operators in relation to the complexity of the PPC contracts, and the reasonableness of some of its terms. CPs would have preferred to see the multiple contracts that existed replaced by a single contract with different schedules for different products to make them less complicated. They also expressed concerns about some of BT's policies on credit vetting, payment terms, and the penalties for late payment, arguing that the current contractual terms in these areas were onerous when compared with other wholesale products.
46. Ofcom believed that the existing contractual framework was onerous and a bar to replicability. Ofcom further believed that the Master Services Agreement (MSA) represented the best mechanism for solving this issue and believed that both BT and other CPs had an incentive to reach a satisfactory conclusion to these discussions.

47. Ofcom concluded in the Replicability Statement that the complexity of the PPC contract, together with the reasonableness of some of its terms, was a bar to replicability.

BT action to address this issue:

48. BT has had extensive discussions with industry on revising the PPC Contract and 426 separate issues were raised. 28 of these were not agreed at the conclusion of the review period. Broken down by section, these issues were:
- Main Annex – 154 issues raised; 14 not agreed
 - Annex A - 108 issues raised; all actioned
 - Annex B – 12 issues raised; 3 not agreed
 - Annex C – 44 issues raised; all actioned
 - Annex D – 34 issues raised; all actioned
 - Annex E - 68 issues raised; 11 not agreed
 - Annex F – 6 issues raised; all actioned
49. The review culminated in February 2008 with the publication on the BT Wholesale PPC website of a revised PPC Contract that was agreed with the PPC Customer Group. CPs who were not involved in the detailed discussions were invited, by means of an external PPC briefing to review the draft contract and respond with their comments within 14 days. There were no responses by the closing date of 24 February 2008.
50. The customers directly involved with the contract review were C&W, Thus, Virgin Media, Verizon Business Services, Kingston and Global Crossing. To date (November 2008), a number of customers have signed the new contract including the following major CPs: C&W, Thus, Verizon, Virgin Media and Global Crossing. BT claims that the fact that not all customers have yet signed the new contract is not unusual and that they would not generally expect or demand that contracts are signed.
51. The changes to the contract amount to 398 of the 426 issues which were considered and BT claims that these have also addressed the issue of complexity. Whilst the total number of clauses in the contract is relatively unchanged, some new clauses were introduced where it was agreed that they would help with clarity. Other clauses were revised to similarly improve the clarity and reduce complexity. BT therefore believes that the contract has been simplified, in agreement with industry, as a result of these changes.
52. In the Replicability Statement, Ofcom believed that the Master Services Agreement represented the best mechanism (but not the only one) for solving the issue. However, BT claim that the PPC Contract will not become a schedule of the MSA primarily because it covers 21CN products, whereas PPCs are 20CN products and the exact specification of PPCs or equivalents in the 21CN world have yet to be finalised. Therefore, for reasons concerning the ongoing discussions around future PPCs, BT claims that it would not be appropriate to include the contract in the MSA at the moment.

53. The final version of the revised contract was notified to industry on 25 March 2008 advising of a supplemental agreement containing the revised PPC Reference Offer (as amended by the PPC Contract Review).
54. In relation to the reasonableness of the PPC contract terms, these were addressed but BT accepts that in some instances there were issues where it was unable to reach agreement with CPs, which, they claim, is normal in any negotiation.
55. However, given that the PPC contract is subject to regular review, these reviews ensure that the reasonableness of the PPC contract continues, on an ongoing basis, to take account of the reasonable CP requirements. With regard to the specific issues raised, BT made the following comments:
- **Credit Vetting:** the discussions about the Credit Vetting process were taken out of the contract review and dealt with separately, as not all CPs felt that BT's position was unreasonable. In October 2006, THUS and Fibernet agreed that no changes were required in the credit vetting document. These were the only two CPs who chose to join the call although all participants in the contract Review were invited. THUS and Fibernet both accepted that the additional provisions regarding deposit/guarantees were critical for BT to protect its commercial interests and as such should be included in the contractual terms.
 - **Payment Terms:** the payment terms for PPCs were amended following a dispute raised by THUS on 22 August 2006. Ofcom's statement published on 25 January 2007 on 'Determination of a dispute between THUS and BT about payment terms for PPCs, IECs and IBCs' led to changes in the terms so that PPC customers are now offered billing monthly in advance, with 30 days to pay.
 - **Penalties for Late Payment:** after consideration, BT decided not to make changes in terms of payment of interest as it did not want to jeopardise its commercial position.
56. BT believes that it has fully addressed the concerns relating to successfully concluding the contract review process and reducing complexity and improving the reasonableness of the terms.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

57. Ofcom is satisfied that BT and Industry engaged actively in the negotiation of a revised PPC contract and that, as a result, this issue has been resolved

5. Billing accuracy and bill verifiability

58. CPs expressed concerns in relation to the quality and accuracy of bills raised by BT for PPC products. The billing system that was in use for PPCs was a retail billing platform and some CPs questioned whether this was fit for purpose for a wholesale product like PPCs.
59. UCKTA was also concerned that the issue was not just one of accuracy, but also of verifiability, stating that its members incurred significant costs in verifying BT's bills and that these were costs which BT Retail did not incur.
60. Ofcom urged BT to work with its customers to improve not only the accuracy but also the verifiability of its bills as without the provision of accurate bills, CPs were unable

to accurately bill their own retail customers, leaving them at a commercial disadvantage to BT. Ofcom found that until both accuracy and verifiability had been satisfactorily improved, this would continue to be a bar to replicability.

BT action to address this issue:

61. BT held a series of meetings to capture industry requirements out of which two billing options were produced.
62. CPs were then provided with sample bills based on the two options and were given the choice of selecting the billing option best suited to their needs. Copies of the two options were posted to the PPC Reference Offer website at www.btwholesale.com/ppc on the Billing Handbook page.
63. Billing forums were held throughout the life of the project, beginning with the 'requirement capture' workshops (above) to agree customer requirement and to agree the bill template designs.
64. BT informed Ofcom that as the project progressed, they had held further meetings and technical workshops in order to explain how the bill template would work and to keep customers up to date on the development progress. This was later followed with fortnightly conference calls and regular email updates on the progress of the project.
65. BT's improvements to the billing systems involved moving the billing from the Private Circuits New Billing System (PCNBD) platform to the Wholesale Strategic Billing System (Geneva). BT states that the main reason for this was to bill PPC customers via BT Wholesale's billing system (PCNBS is a BT Retail billing system) which had the key advantage of enabling the billing and formats to be more easily customised for PPC billing.
66. Prior to the billing migration from PCNBS to Geneva, PPC customers were given the opportunity of testing the new bill format by having a duplicate of their April 2008 PCNBS bill produced in the Geneva format. Only 4 customers (C&W, Thus, Global Crossing & Verizon Business Services) chose to participate in the testing.
67. BT has informed Ofcom that closer to the cut-over date, they distributed weekly email updates to industry and held bi-lateral meetings to discuss any customer concerns. The test bills were followed up by bi-lateral meetings with the test customers to discuss their findings and address any issues they had with the test bills. The four customers who participated in the testing confirmed that they identified no significant issues to prevent the move from PCNBS to Geneva and the move was implemented on 1 October 2008.
68. The move to Geneva meant that PPC customers received two bills in October 2008: a final PCNBS bill which contained Connection and Single Payment Charges only (with a cut-off date of 30 September 2008 for these charges); and a first Geneva bill containing rental charges only that were incurred from 1 September to 30 September 2008 for monthly billed customers, and incurred from 1 July to 20 September 2008 for quarterly billed customers. There was a gap between the distribution of the PCNBS bills and the Geneva bills so that PPC customers could reconcile this 'old style' bill before moving to the new format.
69. For monthly billed customers, their first full Geneva PPC bill was issued in November 2008, containing Connection, Single Payment and Rental charges. Quarterly billed customers received their first full Geneva bill in January 2009.

70. An industry briefing was sent by BT on 30 September 2008 announcing BT's intention to move PPC billing on to the Geneva billing system.
71. BT has informed Ofcom that they have not received any major customer concerns following the distribution of final PCNBS and initial Geneva bills. BT intended to continue to work to ensure that any concerns were addressed to the satisfaction of both customers and BT Wholesale until after the quarterly bills were issued in January 2009.
72. BT believes that these changes address the concerns raised about accuracy and verifiability. The new PPC billing process, processed on the Geneva platform, was developed to customers' specifications and BT feel that as such, this provides them with their required billing information in their preferred format. Improvements in accuracy include providing appropriate level and quality of information to the customer on charges for equipment, any adjustments, credits etc, and ensuring charges are correctly associated with parent circuits and correctly detailed on the bills.
73. BT highlight that a key change has been to improve the ability of customers to verify their bills. For reasons stated above, including the close customer involvement in developing and testing the desired bill formats, BT now believes that future bills from the Geneva platform will meet the concerns on the ability to verify charges.
74. BT believes that it has fully addressed the concerns relating to proving adequate billing accuracy and bill verifiability.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

75. Ofcom notes the steps taken by BT to consult with its customers in the development and testing of the new PPC bills using the Geneva billing system. Ofcom is satisfied that this is no longer a barrier to replicability.

6. Implement relevant price changes for ISH extension circuits

76. In July 2006, some CPs expressed their concern that In-Span Handover (ISH) extension services and path protected services were excluded from the scope of the PPC charge control.
77. Ofcom concluded that although ISH extension services and path protected services were not specifically included in the PPC charge control, a number of the network component used to provide these products were identical to network components included in PPC products that were included in the charge control.
78. Ofcom was therefore of the view that the network components should be charged for in a consistent manner across all PPC products so as not to unduly discriminate, in order for BT's retail leased lines to be considered replicable in this respect.

BT action to address this issue:

79. ISH pricing is reviewed annually by BT as part of the Network Charge Control.
80. The ISH extension pricing had not been reviewed as part of this exercise and, as a result, did not reflect the ISH component pricing in the overall price of the extension

circuits. BT has informed Ofcom that the ISH extension prices for both connections and rentals has now been revised using the ISH rental and connection costs.

81. In future, BT have said that the ISH component of ISH extension services will continue to be aligned with that used in ISH pricing, so if ISH connections and/or rentals are changed, ISH extension pricing will be changed accordingly.
82. The revised pricing was notified to industry on 25 October 2007 and came into effect on 23 January 2008.
83. BT believes that it has fully addressed the concerns relating to consistent charging for network components across all PPC products.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

84. Ofcom stated in the Replicability Statement that network components should be charged in a manner consistent across all PPC products so as not to unduly discriminate, in order for BT's retail leased lines to be considered replicable in this.
85. BT has since reviewed the pricing of ISH extension services and revised them using ISH rental and connection costs. BT has also committed that in the future, this ISH component of ISH extension services will continue to be aligned with that of ISH pricing.
86. For this reason, Ofcom is now satisfied that BT has addressed the concerns relating to consistent charging for network components across all PPC products and no longer believes that this is a bar to replicability.

7. Introduce KPIs to allow the performance of the BT Retail CMC to be compared to the wholesale CMCs

87. The issue in this case was that the existing KPIs were insufficient to be able to determine the level of performance within the BT Retail CMC as opposed to the CMCs used by CPs. As a result, it was not possible to establish whether the level of service provided to external CPs was comparable with that provided to BT's own downstream business. Ofcom considered that it might be appropriate to impose additional Key Performance Indicators (KPIs) on BT was in the area of CMC performance.

BT action to address this issue:

88. BT wrote to Ofcom setting out the background and issues relevant to the issue of CMC performance and explained the nature and scope of Wholesale Assist.
89. In this letter, BT explained the role of the Job Controller within the wholesale and retail CMCs. They explained how both BT's Retail businesses and other CPs worked with Job controllers in a similar way during the provisioning process. They also explained how BT's retail businesses carry out their own project management using their own resources and take these costs into account when preparing bids.
90. BT had suggested that there was no KPI that could be identified over and above those already produced that would provide any meaningful data to measure the relative performance of the CMCs. BT also highlighted existing KPIs which showed the delivery performance of PPCs to be better than retail leased lines and queried

whether this would be the case if there were issues affecting the performance of the CMCs dealing with PPCs.

91. Ofcom referred the matter to OTA2 to consider as part of the wider review of PPC KPIs. The OTA2 had extensive discussion with BT and looked in depth at CMC processes and raised the matter with industry. Their assessment was that there were no convenient or common touch points to measure when comparing the different processes in the CMCs.
92. The OTA2 informed Ofcom of their conclusions – namely that there are no common processes or touch points that can be measured and that they are unable to identify any additional KPI that would add value over and above those that already exist.
93. The Quarterly Report of BT's PPC Service Performance for March to June 2008 shows that performance of PPCs is at a higher level than that for retail private circuits for both provision and repair.
94. From this quarterly report, for provision, the PPC CDD (Committed Delivery Date) performance (98.96%) was marginally better than the retail CDD performance of 98.21%.
95. For repair, PPC performance was 90.40%, which is better than the retail performance of 87.10% and exceeds the 90% internal target. BT claim that repair times continue to perform inside the 5 hour clear target with an average of 2 hours 41 minutes.
96. BT and the OTA agreed that they would make available an automated process for accessing Quality of Service stats via "Netview Plus". This facility was launched in July 2008 and notified to industry on 30 July 2008. It was also demonstrated at the PPC Industry Forum on 4 September 2008.
97. BT has extensively reviewed the processes within the CMCs and shared this in detail with the OTA. The OTA's opinion is that there are no convenient or common touch points to measure when comparing the two different processes. The OTA has also led a review of PPC KPIs and the results from the delivery KPI shows that end-to-end delivery of PPCs continues to outperform retail leased line provision with nearly 99% of circuits delivered by the agreed date.
98. BT does not believe that there are any performance differences between the Wholesale and Retail CMCs and that the ongoing KPIs show that the original underlying concerns are not supported by this evidence for BT's findings.
99. BT believes that it has fully addressed the concerns to demonstrate that CPs are not receiving an inferior services from their CMCs compared to the retail CMCs and that the actual performance of PPC delivery continues to outperform the delivery of retail leased lines.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

100. Ofcom is satisfied that there are no additional KPIs that can be introduced to compare CMC performance. As a result we have concluded that this should not be perceived as a barrier to a finding of replicability.

8. Availability of Priority Prompt and Total Care SLAs on PPCs designated for use in safety of life or defence of the realm applications

101. CPs had raised concerns that BT offered enhanced SLAs to some of its retail customers which they were unable to replicate, given the existing SLAs available on PPCs. Based on the information available at the time, this was identified as an obstacle to replicability.
102. Ofcom was of the view that BT should make a comparable Priority Care service available for PPCs that fall in the category of being essential for the preservation of human life and/or defence of the realm as is available for BT's retail leased lines in order for retail leased lines to be considered replicable in this respect.

BT action to address this issue:

103. Subsequent investigation revealed that there was a misleading entry in the BT's retail price list⁵⁵ that implied Priority Prompt/Total care was available. Priority Prompt/Total Care was not available on retail Leased Lines as the standard Priority Care is the highest repair service available. The entry in the retail price list was removed in 2007.
104. The retail price list was amended and the misleading reference to Priority Prompt/Total Care for retail leased lines was removed on 4 July 2007.
105. BT believes that it has fully addressed the concerns relating to the possibility of BT's retail business having the availability of a higher level of Priority Care based upon service levels at the underlying network layer than is available to CPs, but this is not the case.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

106. Ofcom accepts that as Priority Prompt/Total Care was not available on retail leased lines, as previously thought, there is no need for BT to make a comparable Priority Care service available for PPCs in order to be replicable.

9. Potential double payment for equipment cancelled after the firm order confirmation (FOC) point and subsequently deployed in fulfilment of another order

107. Ofcom understood that BT might receive full payment for equipment not subsequently used for the original order if that order was cancelled after the FOC point, and hence there was the possibility of BT receiving payment twice for the same equipment if it was subsequently used to fulfil another order. It is Ofcom's view that it would be inappropriate for BT to be paid more than once for the same equipment when that equipment is not used in fulfilment of the original order and that BT should work with industry to determine an appropriate mechanism for avoiding such a situation. Until an agreed mechanism was in place Ofcom would regard this as a bar to replicability.
108. In addition, Ofcom asked BT to provide evidence to show whether BT Retail pays 3rd party equipment cancellation charges, in order to assess whether internal and

⁵⁵ BT's retail price list <http://www.serviceview.bt.com/list/public/zdocs/index.htm>

external customers are treated in an even-handed manner. BT confirmed that its downstream services do not follow the same processes in so far that there is no explicit internal transfer charge made to BT's downstream businesses in either BT's management accounts or the BT regulatory accounts. However, BT also confirmed that the costs which the cancellation charges are designed to recover are included in the regulatory accounts, and are allocated between internal and external services on an equitable, volume-related basis. In addition, BT estimated that, if a transfer charge were to be levied on BT's downstream leased line business for 3rd party equipment cancellation, that charge would be in the region of £150k per annum. This would represent a very small fraction of BT's total spend on PPCs, which is around £200m per annum.

BT action to address this issue:

109. BT informed Ofcom that previously PPC cancellation charges based on a proportion of the connection charge had been applied if the equipment was cancelled before provision. The proportion charged increased the closer the cancellation point was to the provision date.
110. BT subsequently reviewed the charges and calculated the actual costs incurred in the provision process for equipment (including for example CMC/Planning time involved prior to placing the order, the ordering process itself, transport, warehousing etc.) and how these costs were incurred and build up during the time when the order was placed to when it was fulfilled.
111. The cancellation charges were changed in order to reflect these actual costs incurred at different stages in the process following the order placement and were no longer related to connection charges. BT set up a meeting with industry to explain the revised charges, which C&W and Global Crossing attended.
112. BT then sent notification to industry on 27 December 2007 and the revised prices came into effect from 31 March 2008.
113. BT believes that it has fully addressed the concerns relating to agreeing a mechanism with industry for the fair charging of equipment orders cancelled after the FOC point.

Ofcom's analysis of whether or not this issue has been removed as a barrier to replicability:

114. Ofcom is satisfied that the 3rd party equipment charges have been amended in an appropriate manner. In addition, we do not consider that the absence of an explicit internal transfer charge for 3rd party equipment cancellation should be regarded as a barrier to replicability, given the inclusion of the related costs in the regulatory financial statements and the likely scale of such a charge, were one to be introduced. On this basis, we consider that this issue should no longer be regarded as a barrier to replicability.

Annex 7

Quantification

1. This annex provides the methodology employed for deriving the benefits of Option 3 and Option 4 reported in section 4 at paragraph 4.105 and following, should prices fall to the price floor.
2. The figures were derived under two scenarios. In the first scenario, we assumed a price elasticity of demand for retail low bandwidth digital leased lines equal to zero. In the second scenario, we used a less conservative assumption and derived the benefits under strictly negative price elasticities. In the absence of elasticity figures for leased lines, we used estimates from other telecom markets as a proxy. In the investigation of Fixed to Mobile termination charges, the Competition Commission has assumed a price elasticity of mobile subscriptions of -0.3. Estimates of the price elasticity of demand for fixed narrowband exchange lines tend to be around -0.1 (estimates of price elasticities of demand for "access" services tend to be lower in magnitude than those for calls). We have therefore assumed a price elasticity of demand for leased lines in the range of -0.1 to -0.3.

Perfectly inelastic demand

3. In our initial quantification, we assume a price elasticity of demand for low bandwidth leased lines equal to zero (perfectly inelastic demand). This implies that any price effect from greater competition will have no impact on output. In this case, the gain for consumers from the market becoming competitive and prices falling to the price floor will equal the loss incurred by producers.
4. We currently have data about the surplus (profit) of BT only. We could estimate the total producer surplus in the market using BT's surplus and BT's market share. However, we only have BT's market share in terms of volume as Ofcom was not able to calculate robust revenues market shares in the BCMR Statement. Furthermore, other firms may have different costs than BT, although we would expect costs to converge to the most efficient cost in a competitive market. Using BT's surplus (rather than total producers' surplus) makes our quantification even more conservative and implies that, should there be a case for deregulation on the basis of our estimates, such case would in reality be even stronger.
5. As noted above, if there is no increase in demand, the gains to customers from prices falling to the cost floor⁵⁶ would equal the current producers (restricted in this exercise to BT) surplus, that is, its current economic profit. This is given in the BT's P&L account.

⁵⁶ In reality, the deregulation we propose is unlikely to result in prices falling all the way to the price floor. The magnitude of price falls will depend on the increase in the intensity of competition but, even in the most competitive markets, firms would want to ensure a minimal return on sales (1.5% would be reasonable where capital intensity is low, based on precedent). However, in order to estimate an expected percentage price decrease, we shall assume a zero ROS. The reason is that any positive ROS would require us to have information about current level of output and prices. We currently have turnover figures but because these are for different products, using current quantities or prices in our quantification would make our estimates less robust. Instead, by assuming a zero ROS (which would have very little effect on the figures we derive compared to a ROS of 1.5%), we can use only turnover and return figures.

6. We now estimate the expected percentage price decrease if prices fall to the cost floor.
7. In equilibrium (and if prices fall to the cost floor), we assume economic profits will equal zero.
8. Denote by p , q , T , R the BT's current price, output, turnover and profit and denote by p' the BT's price that will prevail in equilibrium.
9. Let also c denote the unit average cost of production (at the zero-profit equilibrium $p'=c$).⁵⁷
10. Total cost is cq . We assume that c remains constant.
11. The expected percentage price decrease (discount) is:

$$d = -(p'-p)/p = (c-p)/p = -(p-c)q/pq.$$

12. Therefore:

$$d = -(p'-p)/p = R/T.$$

13. In other words, BT's expected discount is obtained by dividing current profits by current turnover.

Allowing for prices to affect demand

14. In practice, price falls are likely to cause an increase in the quantity of leased lines purchased. This will lead to a larger increase in consumer surplus and a smaller reduction in producer surplus than in the case of perfectly inelastic demand, so that the overall net effect on welfare is positive.
15. As we have said in paragraph 4.112, we currently do not have estimates for price elasticity of demand in the leased lines market. In the absence of directly relevant evidence therefore, we have used estimates of elasticities from other telecoms markets as a proxy.
16. If the elasticity of demand is strictly negative, consumers will gain more than producers will lose as prices fall. This is because output will expand as prices fall. Denote by q' the equilibrium output when prices fall to the cost floor. If prices fall to the cost floor, customers would gain all the existing "deadweight loss" created by current prices being above costs. In order to quantify the surplus gains for customers, we therefore need to estimate the deadweight loss under the current prices. This deadweight loss would add to the customers gains estimated under the assumption of a perfectly inelastic demand here above.
17. Let e denote the price elasticity of demand:

$$e = (p/q) \cdot ((q'-q)/(p'-p)) < 0$$

18. We know that:

⁵⁷ At the (perfectly) competitive equilibrium, prices should equal marginal cost and firms produce at the minimum of average cost.

$$R=(p-c)q=(p-p')q.$$

19. Therefore:

$$(p-p')/p=R/(p*q) =R/T$$

20. We know that, because $p'=c$, if the demand curve is a straight line, then:

$$\text{Deadweight Loss} = \frac{1}{2} (p-p').(q'-q)$$

21. Using the formulas above at paragraph 18, we get:

$$(p-p').(q-q')=(R/q)*(q-q')=R*(q-q')/q=R*e*(p-p')/p=R*e*R/T$$

22. Therefore:

$$\text{Deadweight Loss} = - \frac{1}{2}(p-p').(q-q')= - \frac{1}{2} e*R^2/T$$

23. We have applied the formulas to BT's data and summarised in the table below the results of our quantification.

Table A7.1 Quantification results on data provided by BT

			Kilostream	Megastream	Total ⁵⁸
	Turnover (T)		85	401	486
FAC	Profits (R)		39	61	100
	Deadweight loss	e=-0.1	1	0.5	1.5
		e=-0.3	2.6	1.4	4.0
LRIC	Profits (R)		41	72	113
	Deadweight loss	e=-0.1	1	0.65	1.65
		e=-0.3	3	2	5

⁵⁸ We have assumed zero cross price elasticities between kilostream and Megastream.

Annex 8

Glossary

Alternative interface symmetric broadband origination (AISBO)

A form of symmetric broadband origination service providing symmetric capacity between two sites, generally using an Ethernet IEEE 802.3 interface

Bandwidth

The physical characteristic of a telecommunications system that indicates the speed at which information can be transferred. In analogue systems, it is measured in cycles per second (Hertz) and in digital systems in bits per second (Bit/s).

Current Cost Accounting (CCA)

An accounting convention, where assets are valued and depreciated according to their current replacement cost whilst maintaining the operating or financial capital of the business entity.

Customer Sited Handover (CSH)

Interconnection occurs at a communications provider's premises.

Customer Premises Equipment (CPE)

Sometimes referred to as customer apparatus or consumer equipment, being equipment on consumers' premises which is not part of the public telecommunications network and which is directly or indirectly attached to it.

Digital Local Exchange (DLE)

The telephone exchange to which customers are connected, usually via a concentrator

Digital Subscriber Line (DSL)

A technology for bringing high-bandwidth information to homes and small businesses over ordinary copper telephone lines

Electronic Communications Network (ECN)

A network that enables intercommunication between users of that network

Excess Construction Charge (ECC)

A charge levied where additional construction of duct and fibre or copper is required to provide service to a customer premise

In Span Handover (ISH)

Interconnection occurring at a point between BT's premises and a communications provider's premises

kbit/s

kilobits per second. A measure of speed of transfer of digital information

LAN Extension Service (LES)

A communications service that enables the connection of two Local Area Networks together

Leased line

A permanently connected communications link between two premises dedicated to the customers' exclusive use.

Local Loop Unbundling (LLU) backhaul circuit

A circuit provided by BT that enables the connection of a communications provider's DSLAM to a communications provider's point of connection with BT's SDH network.

Long Run Incremental Cost (LRIC)

The cost caused by the provision of a defined increment of output given that costs can, if necessary, be varied and that some level of output is already produced.

Mbit/s

Megabits per second. A measure of speed of transfer of digital information

Partial Private Circuit (PPC)

A generic term used to describe a category of private circuits that terminate at a point of connection between two communications providers' networks. It is therefore the provision of transparent transmission capacity between a customer's premises and a point of connection between the two communications providers' networks. It may also be termed a part leased line

Plesiochronous Digital Hierarchy (PDH)

An older method of digital transmission used before SDH which requires each stream to be multiplexed or de-multiplexed at each network layer and does not allow for the addition or removal of individual streams from larger assemblies

Points of Connection (POC)

A point where one communications provider interconnects with another communications provider for the purposes of connecting their networks to 3rd party customers in order to provide services to those end customers

Synchronous Digital Hierarchy (SDH)

A method of digital transmission where transmission streams are packed in such a way to allow simple multiplexing and de-multiplexing and the addition or removal of individual streams from larger assemblies

Symmetric Broadband Origination (SBO)

A symmetric broadband origination service provides symmetric capacity from a customer's premises to an appropriate point of aggregation, generally referred to as a node, in the network hierarchy. In this context, a "customer" refers to any public electronic communications network provider or end user

Traditional Interface Symmetric Broadband Origination (TISBO)

A form of symmetric broadband origination service providing symmetric capacity from a customer's premises to an appropriate point of aggregation in the network hierarchy, using a CCITT G703 interface.